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Welcome by the President

As president of Central Piedmont Community College, I am pleased to present the 2015-2016 online catalog.

Since 1963, CPCC has served as a valuable community resource that helps students attain their academic and career goals. Whether they are just beginning an educational journey or learning new skills, this catalog gives immediate information about the more than 300 certificate, diploma and degree programs, as well as numerous services that the college offers.

CPCC provides exceptional learning experiences that transform students’ lives through faculty and staff who are dedicated to student success within a supportive learning environment. We are here to ensure our students achieve their personal and professional goals.

Thank you for considering Central Piedmont Community College.
CPCC President, Dr. Tony Zeiss

Disclaimer: Please Note

Information in the catalog is verified as correct at the time of publishing. However, readers should be aware that the programs, regulations, policies and other information contained in the catalog are subject to change without notice. If you are a CPCC student and have questions, please contact your faculty advisor, program chair, or instructor.

Information about Central Piedmont Community College’s graduation and transfer rates are available upon written request from the Office of the Associate Vice President of Institutional Research at 704.330.6268.

Campus crime statistics are available for review on the College website, in the student handbook and at the campus security office on each campus.

For other inquiries or clarifications, please contact the Office of the Vice President for Learning and Workforce Development at 704.330.6730 or by mail at CPCC, P.O. Box 35009, Charlotte, NC 28235-5009.
About CPCC

Central Piedmont Community College has been a part of the Charlotte landscape for more than 50 years and is focused on becoming the national leader in workforce development.

Over the years, CPCC has expanded its footprint to eight campus locations in Mecklenburg County and online education. CPCC also has expanded its academic programs. The college offers more than 300 degree, diploma, and certification programs, customized corporate training, market-focused continuing education courses, and special interest classes that respond to the needs of the community. As a result, CPCC serves more than 70,000 individuals each year as a vital community partner to business and industry leaders and residents throughout Mecklenburg County and beyond.

Academic Calendar

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<td>Monday, Aug. 17 - Friday, Oct. 9</td>
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<td>Labor Day Holiday</td>
<td>Monday, Sept. 7</td>
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<td>Fall Break (CPCC Open)</td>
<td>Monday, Oct. 12 - Tuesday, Oct. 13</td>
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<td>Second Short Session</td>
<td>Wednesday, Oct. 14 - Friday, Dec. 11</td>
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<td>Thanksgiving Holiday</td>
<td>Thursday, Nov. 26 - Sunday, Nov. 29</td>
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<td>Final Exam Period</td>
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<td>Martin Luther King, Jr. Holiday</td>
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<td>Spring Break (CPCC Open)</td>
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<td>Independence Day Holiday</td>
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<td>Monday, Aug. 15</td>
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</tbody>
</table>

Spring Semester 2017

<table>
<thead>
<tr>
<th>Classes Begin</th>
<th>Monday, Jan. 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Short Session</td>
<td>Monday, Jan. 9 - Friday, March 3</td>
</tr>
<tr>
<td>Martin Luther King, Jr. Holiday</td>
<td>Monday, Jan. 16</td>
</tr>
<tr>
<td>Spring Break (CPCC Open)</td>
<td>Monday, March 6 - Sunday, March 12</td>
</tr>
<tr>
<td>Second Short Session</td>
<td>Monday, March 13 - Tuesday, May 9</td>
</tr>
<tr>
<td>Spring Holidays</td>
<td>Friday, March 24 - Sunday, March 26</td>
</tr>
<tr>
<td>Semester Ends</td>
<td>Tuesday, May 9</td>
</tr>
<tr>
<td>Final Exam Period</td>
<td>Wednesday, May 3 - Tuesday, May 9</td>
</tr>
<tr>
<td>Graduation</td>
<td>Thursday, May 11</td>
</tr>
</tbody>
</table>

Summer Term 2017 (8 weeks)

<table>
<thead>
<tr>
<th>Classes Begin</th>
<th>Wednesday, May 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memorial Day Holiday</td>
<td>Monday, May 29</td>
</tr>
<tr>
<td>Independence Day Holiday</td>
<td>Tuesday, July 4</td>
</tr>
<tr>
<td>Term Ends</td>
<td>Thursday, July 13</td>
</tr>
</tbody>
</table>

CPCC is closed on holidays listed above. Advisement week and registration dates for each term are announced on the CPCC website.

Corporate and Continuing Education registration is ongoing throughout each term.

For additional information, call the CPCC Information Center at 704.330.2722.

The calendar is subject to change. For the most current version, consult the online calendar at www.cpcc.edu.

Accreditations / Performance Measures

Central Piedmont Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate degrees, diplomas and certificates. For questions about the accreditation of Central Piedmont Community College, contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call 404.679.4500, or visit the association website at: http://www.sacscoc.org. Inquiries regarding programs and services of Central Piedmont Community College should be directed to the College. The Commission on Colleges should be contacted only for questions relating to the College’s accreditation.

The College is also accredited and approved by the following organizations:
Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-03449; (301) 652-AOTA; www.acoteonline.org

- Occupational Therapy Assistant

American Bar Association

- William K. Diehl Jr. Paralegal Technology Program

American Culinary Federation Foundation Accrediting Commission

- Culinary Arts
- Baking and Pastry Arts

American Heart Association

- Cardiopulmonary Resuscitation
- Advanced Cardiac Life Support
- Pediatric Advanced Life Support

American Society of Health-System Pharmacists (ASHP)

- Pharmacy Technology

American Welding Society – Accredited Welder Test Facility

Association of Nutrition & Foodservice Professionals (ANFP); www.anfponline (http://www.anfponline.org); 800.323.1908

- Certified Dietary Managers (CDM)
- Certified Food Protection Professionals (CFPP)
- CFP® Board of Standards, Inc.

Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM); www.cahiim.org; (http://www.cahiim.org)

- Health Information Technology

Commission on Accreditation for Respiratory Care (CoARC), 1248 Harwood Rd., Bedford, TX 76021; http://www.coarc.com; 817.283.2835

- Respiratory Therapy

Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association (APTA), The Commission on Accreditation in Physical Therapy Education, Department of Accreditation, APTA, 1111 North Fairfax Street, Alexandria, VA 22314; www.capteonline.org (http://www.apta.org/CAPTE); 703.706.3245

- Physical Therapist Assistant

Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Accreditation Review Committee on Surgical Technology and Surgical Assisting (ARC/STSA), ARC/STSA, 6 W. Dry Creek Circle, Suite #110, Littleton, CO 80120; http://www.caahep.org; 303.694.9262

- Surgical Technology

Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Joint Review Committee on Education in Cardiovascular Technology (JRC-CVT) at the associate degree level in the Non-Invasive Cardiology (Adult Echocardiography) concentration and the Invasive Cardiology (Invasive Cardiovascular Technology) concentration; CAAHEP, 1361 Park Street, Clearwater, FL 33756; www.caahep.org (http://www.caahep.org); 727.210.2350

- Non-Invasive Cardiology (Adult Echocardiography)
- Invasive Cardiology (Invasive Cardiovascular Technology)

Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Medical Assisting Education Review Board (MAERB). Commission on Accreditation of Allied Health Education Programs, 1361 Park Street, Clearwater, FL 33756; 727.210.2350; www.caahep.org (http://www.caahep.org)

- Medical Assisting

Commission on Dental Accreditation (CODA), American Dental Association (ADA)

- Dental Hygiene
- Dental Assisting

Commission on Allied Health for Ophthalmic Medical Personnel (COAOMP)

- Ophthalmic Medical Assisting

Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (COAEMSP)

- Emergency Medical Services

Commission on Accreditation for American Health Informatics and Information Management Education (CAHIIM); www.cahiim.org

- Health Information Technology

North Carolina State Board of Cosmetic Arts, 1207 Front Street, Suite 110, Raleigh, North Carolina, 27609

- Licensed Cosmetology Program
- Cosmetology Program, Pivot Point International Academy


- Civil Engineering Technology
- Computer Engineering Technology
- Electrical Engineering Technology
- Electronics Engineering Technology
- Mechanical Engineering Technology

National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Rd., Suite 720, Rosemont, IL 60018-5119; www.naacls.org (http://www.naacls.org); 847.939.3597/773.714.8880

- Medical Laboratory Technology

National Association for the Education of Young Children

- Early Childhood Education Associate Degree Program

National Automotive Technician Education Foundation

- Automotive Technology Program
- BMW-Associate Degree Program

In Spring 2013, new performance measures took effect for the 58 community colleges in North Carolina. Three benchmarks were set for each measure: the mean (system average), the goal (one standard deviation above the mean) and the baseline (two standard deviations below the mean). Colleges receive some funding if they score at or above the mean and receive additional funding if they score at or above the goal. The eight measures are as follows (benchmarks = mean/goal/baseline):

1. Progress of Basic Skills students:

The percentage of 2013-2014 students who progress as defined by an educational functioning level (44.8% / 51.2% / 20.6%). The passing rate for CPCC was 49.8%.

2. Passing rates for licensure and certification examinations:

The 2013-2014 aggregate institutional passing rate of first-time test-takers on licensure and certification exams. Exams included in this measure are state mandated exams which candidates must pass before becoming active practitioners. (84.4% / 91.7% / 71.0%). The passing rate for CPCC was 84.3%.

3. College Transfer Performance:

Transfer students who completed associate degrees in 2012-2013 plus those who completed 30+ credits who earned a GPA of 2.0 or greater within the academic year at the transfer institution (88.3% / 93.8% / 71.2%). The transfer success rate for CPCC was 86.6%.

4. Success Rate of Developmental Students in Subsequent College-level English Courses:

The percentage of previous developmental English students who successfully complete a credit English course with a C or better upon first attempt (63.4% / 74.9% / 44.2%). The passing rate for CPCC was 76.9%.

5. Success Rate of Developmental Students in Subsequent College-level Math Courses:

The percentage of previous developmental math students who successfully complete a credit math course with a C or better upon first attempt (63.0% / 75.4% / 47.5%). The passing rate for CPCC was 63.3%.

6. First Year Progression:

The percentage of first-time, fall semester, credential-seeking students attempting at least 12 hours within their first academic year who successfully complete (C or better) at least 12 of those hours (67.1% / 74.6% / 53.2%). The success rate for CPCC was 69.8%.

7. Curriculum Completion:

The percentage of first-time, fall semester, full-time credential-seeking students who graduated, transferred or were still enrolled with 36 hours after six years (42.9% / 45.6% / 28.6%). The success rate for CPCC was 41.0%.

8. GED Diploma Passing Rate:

The percentage of 2013-2014 students who took at least one GED test during a program year who received a GED diploma during the program year (78.2% / 82.0% / 49.3%). The passing rate for CPCC was 81.8%.
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WALKER, GARY L., Instructor, English and Humanities, B.A., University of North Carolina-Charlotte, M.A., University of North Carolina-Charlotte

WALKER, JEROME E., Academic Advisor, Transfer Resource Center, B.A., M.S., Shippensburg University

WALKER, TAUREAN M., Instructor, Criminal Justice Technology, B.S., Appalachian State University, M.S., North Carolina Central University; Federal Aviation Administration Licensed Pilot

WALLS, CHRISTOPHER B., Infrastructure Security Analyst I, Distributed Technology Service, A.A., Nassau Community College, B.S., St. John's University

WALTERS, JOSEPH G., Instructor, Adult Basic Education, B.A., McGill University, M.Ed., Boston University

WALTON, CALVIN W., Instructor, Developmental Disabilities, B.A., Oberlin College, M.Ed., Coppin State University

WANKADIYA, KHURSHEED F., Instructor, Sciences, B.S., St. Xavier's College & Institute of Science, M.S., Brown University


WARLICK, MARY M., Executive Director Marketing Services, Community Relations and Marketing, B.A., University of North Carolina-Chapel Hill

WARNKE, MATTHEW P., Instructor, Mechanical Engineering Technology, B.A., University of North Carolina-Charlotte, M.S., University of North Carolina-Charlotte

WASHINGTON, SHERRY L., Program Coordinator Senior, Customized Training Program, A.A.S., Central Piedmont Community College, B.A., Winston Salem State University, M.S., North Carolina A&T State University

WATKINS, KATHY C., Instructor, Sciences, B.S., Augusta State University, M.Ed., Capella University

WATSON, ROXANNE H., Instructor, Music, B.M., SUNY-Potsdam, M.M., Indiana University, D.M.A., University of North Carolina-Greensboro

WATSON, SHANE, Assistant Director of Campus Security-Mercancas, College Security, A.A., Florida State College

WEATHERS, SHAWN D., Campus Coordinator-Harris, Student Financial Aid, B.A., University of North Carolina-Charlotte, M.S., Capella University

WEAVER, FLOYD K., Instructor, Health Information Technology, A.A.S., Central Piedmont Community College, B.S., Pfeiffer University; Registered Health Information Technician

WEBB, MICHAEL J., Instructor, Sciences, M.Phil., University of Leicester, M.Ed., University of Cambridge

WEBBER, TRACY M., Campus Registrar Central, Registrar/Admissions, B.S., Appalachian State University

WEINER, ILENE S., Instructor, Physical Therapist Assistant, B.S., Northeastern University, M.S., Boston University; Licensed Physical Therapist

WEINERT, DANIELA, Instructor, German, M.A., Friedrich-Alexander-Universitaet Erlangen-Nuernberg

WELLS, DENISE H., Director, Institutional Effectiveness and Quality Assurance, A.A.S., Monroe Community College, B.S., State University of New York at Brockport, M.S., North Carolina State A&T State University

WELLS, KATHRYN B., Instructor, Behavioral and Social Sciences, B.A., University of North Carolina-Charlotte, M.A., University of North Carolina-Charlotte

WEST, ELIZABETH M., Instructor, English and Humanities, M.Ed., University of North Carolina-Charlotte

WHICKER, LEESA G., Instructor, Medical Assisting, B.A., High Point College; Certified Medical Assistant

WHITE, ADRIENNE P., Instructor Cardiovascular Technology, Health and Human Sciences, A.A.S., Central Piedmont Community College; Registered Diagnostic Cardiac Sonographer (RDCS)

WHITE, KATHLEEN A., Facilities Accounting Supervisor, Facilities Services, B.S.B.A., East Carolina University

WHITE, LASHAWN P., Director Administrative Services-Cato and Merancas Campus, Business Office, B.A., State University of New York-Buffalo

WHITE, LINDA J., Professor, Communications, B.A., University of North Carolina-Greensboro, M.Ed., University of North Carolina-Greensboro

WHITE, WANDA D., Associate Professor, English and Humanities, B.A., Winston-Salem State University, M.A., University of North Carolina-Charlotte, Ed.D., University of North Carolina-Charlotte

WHITEHEAD, CARIE M., Instructional Developer II, eLearning, B.S., Syracuse University

WHITEMAN, MICHAEL W., Associate Vice President, Financial Services, B.S., Penn State; Certified Public Accountant

WIGHTMAN, GEORGE E., Instructor, Construction Occupations, A.B., East Carolina University
WILDE, SARAH M., Activity Coordinator, First Year Experience, B.S., University of Mary Washington, M.A., University of North Carolina-Greensboro

WILDS, DELOIS A., Coordinator Administrative Support Services, Learning and Workforce Development, A.S., Horry-Georgetown Technical College, B.S.DeVry University

WILLIAMS, ALYSSA B., Instructor, Academic Related, B.A., Tusculum College, M.A., Trinity Washington University

WILLIAMS, ANDREW J., Instructor, Electrical Systems Technology, A.A.S., Central Piedmont Community College

WILLIAMS, ANNE K., Director Marketing Services, Community Relations and Marketing, B.A., Queens University of Charlotte

WILLIAMS, CHRISTIE L., Instructor, Mathematics, B.S., University of North Carolina-Charlotte


WILLIAMS, TAMARA S., Dean Merancas Campus, Public Safety and Transport Technologies, B.A., The University of Toledo, M.Ed., The University of Toledo

WILLIAMS, WILLIE D., Bridge Coordinator, Community Service Programs, B.A., University of Toledo, M.O.L., University of Lourdes

WILLIAMS, ZINA J., Academic Advisor QEP-STAR, Student Success Services, B.A., University of North Carolina-Charlotte, M.S., Pfeiffer University

WILLIS, LINDSAY E., Instructor, Paralegal Technology, B.A., University of Tennessee-Knoxville, J.D., University of Georgia School of Law


WILSON, JOAN B., Academic Advisor/Transcript Analyst, Student Success Centers, B.A., University of Maryland-College Park


WILSON, MICHELLE D., Project Manager, Center for Applied Research, B.A., North Carolina A&T State University, M.A., University of Maryland

WINCHESTER, CHRIS A., Instructor Diesel and Heavy Equipment Technology, Transport Systems Technologies, Diploma in Diesel Vehicle Maintenance, Central Piedmont Community; Automotive Service Excellence (A.S.E.) Certified Master Medium/Heavy Truck Technician; Mobile Air Conditioning Society (MACS) Certified CFC-12 Refrigerant Recycling and Service Procedures

WOODEL, BEVERLY F., Instructor, Interpreter Education, B.S., Gallaudet University, M.A., Gallaudet University; American Sign Language Teachers Association (ASLTA) Certification

WOODRUFF, HOLLY S., Instructor, Sciences, A.S., Central Piedmont Community College, B.S., Appalachian State University, M.S., Mississippi State University

WRIGHT, CHARLES E., Senior Director, College Security, A.A.S., Central Piedmont Community College

WRIGHT, KELLY B., Instructor, Associate Degree Nursing, B.S.N., University of North Carolina-Chapel Hill, M.S.N., University of North Carolina-Greensboro; RN License from the North Carolina Board of Nursing; National Certification Corporation (NCC) certified RNCOB

WRIGHT, VIVIAN N., Instructor, Economics, B.S., State University of New York-Oswego, M.A., State University of New York-Albany

WRIGHT-GWINN, VALERIE D., Instructor, Mathematics, B.S., Presbyterian College

XIONG, YUEPENG, Programmer Analyst I, Enterprise Information Service, B.A., University of North Carolina-Charlotte

YAMAMOTO, ALAN H., Division Director, Art and Communication, M.M., University of Michigan-Ann Arbor, D.M.A., University of Colorado-Boulder

YARBROUGH, PHILIP L., Instructor, Information Systems, B.A., Barton College, M.S., North Carolina AT&T State University, M.F.A., University of North Carolina-Greensboro

YEKTOPARAST, MAHBUBEH, Instructor, Behavioral and Social Sciences, B.A., University of Texas-Austin, M.A., University of Zurich; Certified Hypnotist by NGH

YEN, WEN, Instructor, Business Administration, B.A., Pomona College, J.D., Columbia University-New York

YOWELL, JANAE, Academic Advisor Specialized, Transfer Resource Center, B.A., University of North Carolina-Chapel Hill

ZAREMBA, ELLEN J., Administrative Assistant to the President, President’s Office, A.A., University of Akron

ZEHRRUNG, SHERI N., Instructor, Mathematics, B.A., Clemson University

ZEISS, PAUL A., President, President's Office, B.S., Indiana State University, M.S., Indiana State University, Ed.D., Nova University

ZIETLOW, DAVID P., Instructor, Human Resources Management, B.A., Michigan State University, M.S., Michigan State University

ZOGG, KEVIN A., Account Executive, Harris Conference Center, B.S., State University of NY-Cortland

ZOLLINGER, RICHARD K., Vice President, Learning and Workforce Development, B.A., School of Commerce-Zurich, Switzerland, B.A., East Carolina University, M.A., East Carolina University

ZORN, BRADLEY J., Instructor, Accounting, B.S.B.A., Appalachian State University, M.Acc., Gardner-Webb University

Campuses, Addresses, Maps

General College Information
704.330.2722 • 704.330.CPCC
TTY 704.330.6131
Mondays – Thursdays: 7 a.m. to 6 p.m.
Fridays: 7 a.m. to 5 p.m.
Hours vary during the College’s summer term.
Emergency Information Hotline Number: 704.330.6888
College Mailing Address
CPCC, P.O. Box 35009, Charlotte, NC 28235-5009

College Package Delivery
CPCC, 1325 E. 7th Street, Charlotte, NC 28204

College Internet Address
http://www.cpcc.edu

College Locations
Ballantyne Center (https://www.cpcc.edu/campuses/ballantyne) — 704.330.4223 — 11430 N. Community House Road, Charlotte, NC 28277
Cato Campus (http://www.cpcc.edu/campuses/cato) — 704.330.4800 — 8120 Grier Road, Charlotte, NC 28215
Central Campus (http://www.cpcc.edu/campuses/central) — 704.330.2722 — 1201 Elizabeth Avenue, Charlotte, NC 28204
City View Center (https://www.cpcc.edu/campuses/cityview) — 704.330.5455 — 1609 Alledgey Street, Charlotte, NC 28028
Harper Campus (http://www.cpcc.edu/campuses/harper) — 704.330.4400 — 315 West Hebron Street, Charlotte, NC 28273
Harris Campus (http://www.cpcc.edu/campuses/harris) — 704.330.4600 — 3210 CPCC Harris Campus Drive, Charlotte, NC 28208
Levine Campus (http://www.cpcc.edu/campuses/levine) — 704.330.4200 — 2800 Campus Ridge Road, Matthews, NC 28105
Merancas Campus (https://www.cpcc.edu/campuses/merancas) — 704.330.4100 — 11930 Verhoeoff Drive, Huntersville, NC 28078
WTVI PBS Charlotte (https://www.cpcc.edu/campuses/wtvi) — 704.330.5942 — 3242 Commonwealth Avenue, Charlotte, NC 28205

Cato Campus
Cato Campus 704.330.4800
www.cpcc.edu/campuses/cato

History
Cato Campus is located in the University area of Charlotte at the corner of W.T. Harris Boulevard and Grier Road. Among CPCC campuses, it has the third largest number of students with diverse services for a diverse student body. General education classes are offered along with Corporate & Continuing Education (CCE) and College & Career Readiness (CCR) classes. Curriculum classes are offered for Associate in Arts and Associate in Science degree transfer programs, as well as for Associate in Applied Science degree programs. The campus also is home to the Professional Careers Division which includes 4 programs of study: Paralegal, Interpreter Education and American Sign Language, Horticulture and Turfgrass, and Office Administration.

Cato I Building, identified by its prominent dome, opened in 2002 with classrooms, offices, student services, computer labs, a bookstore and a law library. Also included was a horticulture building and greenhouse. With state bond monies, Cato II opened in 2007, doubling the number of classrooms and offices at the campus and adding a general library to campus amenities. Also in 2007, Charlotte-Mecklenburg Schools and CPCC opened the county’s first middle college high school at Cato, providing access to college classes for 200 high school juniors and seniors. The CPCC Paralegal program at Cato received a substantial gift from William K. Diehl, Jr. in June 2010 and was subsequently named in his honor. In 2011, Cato II was renovated to add a learning lounge, café, student life center and expanded Barnes & Noble bookstore.

The next growth phase for Cato began in Spring 2014 after Mecklenburg County voters approved a bond referendum to support growth at CPCC. For the Spring 2016 semester, a new building will be ready which will double the size of the campus and add needed classrooms, offices, a new library, College & Career Readiness center, Interpreter Education/ American Sign Language center, student life and community space, plus a new theater. Also included in the Cato III project, is expanded parking and an addition to the horticulture compound to hold a small engine repair program.

CMS Middle College High School at Cato
Cato Middle College High School reached its legislated capacity of 100 juniors and 100 seniors each of the past several years, with a wait list generated annually. Cato Middle College students, under Principal Alicia Johnson since 2014, earned distinctions, scholarships and college acceptances beyond their Mecklenburg County peers. Starting with the Fall 2014 entering class, students have the opportunity to remain with CMS and at Cato Middle College for a 13th year to continue to complete college credits at no cost. Several Cato Middle College graduates have received CPCC associate degrees along with their CMS diplomas.

Major Programs/Courses Offered
College & Career Readiness
- Adult ESL-English as a Second Language
- High School Equivalency Preparation
College Transfer and General Education
Corporate and Continuing Education
Horticulture Technology (A.A.S. Degree, Certificates, Career & College Promise Certificate)
Interpreter Education (A.A.S. Degree, American Sign Language Certificate, Career & College Promise Certificate)
Paralegal Technology (A.A.S. Degree, post-baccalaureate Diploma)
Turfgrass Management Technology (A.A.S. Degree, Certificates)

Services/Facilities
Cato Campus facilities include Cato I and Cato II with student services, financial aid, registration and cashiering, college and career readiness intake, offices and classrooms. The horticulture compound includes classrooms, offices, a greenhouse, an equipment storage building plus outdoor horticulture and turfgrass classrooms and ball fields for design training. Landscape design projects enhance several areas of the campus.

CATS Services
Public transportation is provided at Cato Campus by the Charlotte Area Transportation Service (CATS). Route 3 (east/west) and Route 29 (north/south) run regularly Monday through Saturday. Both services stop on Grier Road at the entrance to Cato Campus.

Dean
The dean of the Cato Campus is Janet Malkemes.

Services offered on this campus
<table>
<thead>
<tr>
<th>Service</th>
<th>Offered Here</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Learning Center (tutoring)</td>
<td>Y</td>
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</tbody>
</table>
Central Piedmont Community College

History

In 1963, the North Carolina General Assembly passed the Community college Bill. Opening as a fully integrated institution, Central Piedmont Community College combined the programs of the Central Industrial Education Center (CIEC) on Elizabeth Avenue and Mecklenburg College on Beatties Ford Road. The College sold its property on Beatties Ford Road and developed a campus around the old Central High School complex located at Elizabeth Avenue and Kings Drive. As the College acquired surrounding property, demolished buildings and closed streets, the original 3.94 acres expanded into a beautiful, tree shaded, 31-acre Central Campus. This campus, the largest in the College’s multi-campus system, serves more than 25,000 students annually. Central Campus houses: an Advanced Technologies Center, Levine Information Technology Building, Pease Auditorium, the Christa and Reece A. Overcash Academic and Performing Arts Center, which houses the Dale F. Halton Theater, the Bank of America Center for Military Veterans and Families and many other facilities. Recent renovations and newly completed buildings include the Elizabeth Classroom Building, housing the Math Emporium, the Giles Building with new science labs and the Allen Tate Clock Tower.

High Schools Near the Campus

High Schools near Central Campus are Garinger, Harding University, Myers Park, Philip O. Berry Academy of Technology and West Charlotte.

Majors Divisions/Programs Offered

 Allied Health Sciences
 Arts: Visual, Performing & Interior Design
 Broadcasting and Production Technology
 Business Administration
 College & Career Readiness
 College Transfer
 Corporate & Continuing Education
 Digital Media, Journalism & Communication
 Engineering Technologies
 Entrepreneurship and Small Business
 Health and Physical Education
 Hospitality Education
 Human Services
 Information Technology
 International Services and Foreign Languages
 Nursing
 Science, Technology, Engineering and Math
 Simulation and Game Development
 Sustainability Technologies

Food Services

Bojangles’ food service is available on first floor of the Overcash Building. Chicot Cafe food service is available on first floor of the Hagemeyer Learning Resource Center. Subway food service is available on first floor of the Levine Information Technology Building.

Dean

The dean of the Central Campus is Dr. Paul Koehnke.

Services offered on this campus

<table>
<thead>
<tr>
<th>Service</th>
<th>Offered Here</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Learning Center (tutoring)</td>
<td>Y</td>
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<tr>
<td>Admissions</td>
<td>Y</td>
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<tr>
<td>Advising</td>
<td>Y</td>
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<tr>
<td>Bookstore</td>
<td>Y</td>
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<tr>
<td>Career Services</td>
<td>Y</td>
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<tr>
<td>Cashier</td>
<td>Y</td>
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<tr>
<td>Center for Military Families &amp; Veterans</td>
<td>Y</td>
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<tr>
<td>CLEP Examinations</td>
<td>Y</td>
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<tr>
<td>College and Career Readiness</td>
<td>Y</td>
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<tr>
<td>Copy Machines</td>
<td>Y</td>
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<tr>
<td>Counseling</td>
<td>Y</td>
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<tr>
<td>Disability Services</td>
<td>Y</td>
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<tr>
<td>Financial Aid / Veterans Affairs</td>
<td>Y</td>
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<tr>
<td>Fitness Center</td>
<td>N</td>
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<tr>
<td>Graduation Services</td>
<td>N</td>
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<tr>
<td>Human Resources*</td>
<td>Y</td>
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<tr>
<td>Law Library</td>
<td>Y</td>
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<tr>
<td>Library</td>
<td>Y</td>
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<tr>
<td>Orientation for New Students</td>
<td>Y</td>
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<tr>
<td>Outreach &amp; Recruitment</td>
<td>N</td>
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<tr>
<td>Placement Testing</td>
<td>Y</td>
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<tr>
<td>Public Transportation (CATS routes 3 and 29)</td>
<td>Y</td>
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<tr>
<td>Registration</td>
<td>Y</td>
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<tr>
<td>Service-Learning*</td>
<td>Y</td>
</tr>
<tr>
<td>Student Computer Labs</td>
<td>Y</td>
</tr>
<tr>
<td>Student Life / SGA</td>
<td>Y</td>
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<tr>
<td>Student Records</td>
<td>Y</td>
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<tr>
<td>Student Success Advisor</td>
<td>Y</td>
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<tr>
<td>Student Success Center</td>
<td>Y</td>
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<tr>
<td>Student Support Services</td>
<td>N</td>
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<tr>
<td>Tour for Prospective Students</td>
<td>Y</td>
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<tr>
<td>Transfer Resource Assistance*</td>
<td>Y</td>
</tr>
<tr>
<td>Vending Machines</td>
<td>Y</td>
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</tbody>
</table>

(asterisk denotes part-time service)
Harper Campus

704.330.4400
www.cpcc.edu/campuses/harper

History
Designed for teaching Applied Technology and Construction programs, the Harper Campus provides specialized, state-of-the-art labs for hands-on training in addition to classroom instruction. The campus has a full offering of classes that transfer to a college or university, pre-college programs, and Corporate and Continuing Education classes. Opened in 1999 as the Southwest campus, it was rededicated in September 2004 as Harper Campus. Conveniently located in the Arrowood and Westinghouse business corridor, Harper Campus functions as a training partner with local business and industry.

High Schools Near the Campus
The high schools near Harper Campus are EE Waddell Language Academy, Myers Park, Olympic and South Mecklenburg.

Harper Middle College High School
This partnership between CPCC and Charlotte-Mecklenburg Schools is designed for high school juniors and seniors who want to complete their high school graduation requirements while earning college credit through CPCC.

Major Programs/Courses Offered
Advertising + Graphic Design
Air Conditioning, Heating and Refrigeration
College and Career Readiness
Construction Management
Construction Trades
Corporate and Continuing Education
Crowder Construction Institute
Courses designed to transfer to a college or university:
- English, Math, Reading, Communications, Behavioral and Social Sciences, Humanities and Fine Arts.
- Electrical Systems Technology
- English as a Second Language (ESL)
- Graphic Arts and Imaging Technology
- Harper National Flexographic Center
- High School Equivalency Preparation
- Non-Destructive Examination
- Pathways to Employment
- Pre-College programs
- Welding Technology

Facilities
Harper Campus is a comprehensive facility with nine computer labs (5 PC, 4 Mac) and 23 technology labs (Construction, Air Conditioning, Heating, and Refrigeration, Welding Technology, Electrical Systems Technology, Graphic Arts, Flexography, Advertising + Graphic Design, Non-Destructive Examination). The campus houses 23 classrooms, an auditorium, conference rooms, a science lab, an English as a Second Language (ESL) lab, an Adult Basic Literacy Program (ABLE) and General Educational Development (GED) lab, a testing center, a library, a bookstore and a student life center.

Dean
The dean of the Harper Campus is Jay Potter.

Services offered on this campus

<table>
<thead>
<tr>
<th>Service</th>
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<tbody>
<tr>
<td>Admissions</td>
<td>Y</td>
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<tr>
<td>Advising</td>
<td>Y</td>
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<tr>
<td>Bookstore</td>
<td>Y</td>
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<td>Career Services</td>
<td>Y</td>
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<td>Cashier</td>
<td>Y</td>
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<tr>
<td>CLEP Examinations</td>
<td>N</td>
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<tr>
<td>Cooperative Education</td>
<td>Y</td>
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<tr>
<td>Copy Machines</td>
<td>Y</td>
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<td>Counseling</td>
<td>Y</td>
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<td>Disability Services</td>
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<td>Financial Aid/Veterans Affairs</td>
<td>Y</td>
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<td>Fitness Center</td>
<td>N</td>
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<td>Graduation Services</td>
<td>Y</td>
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<td>Hot Food</td>
<td>Y</td>
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<td>Library</td>
<td>Y</td>
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<td>Outreach &amp; Recruitment</td>
<td>Y</td>
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<td>Placement Testing</td>
<td>Y</td>
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<td>Public Transportation</td>
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<td>Registration</td>
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<td>Student Computer Labs</td>
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<td>Student Life</td>
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<td>Student Support Services</td>
<td>Y</td>
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<tr>
<td>Tour for Prospective Students</td>
<td>Y</td>
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</tbody>
</table>
Vending Machines Y

Harris Campus
704.330.4600
www.cpcc.edu/campuses/harris

History
The Harris Campus first opened in 2001 and expanded in 2005 with the addition of Building II and the Harris Conference Center. Located near the intersection of Billy Graham Parkway and Morris Field Drive, the Harris Campus provides a multi-purpose auditorium, classrooms and various labs to support the learning needs of students and business clients.

The Harris Conference Center occupies the first floor of Building II and primarily serves business and industry clients. Corporate and Continuing Education classrooms on the second floor serve adults in various career-focused courses and certification programs. The Corporate Learning Center, the James R. Worrell Sr. Financial Services Institute and the CPCC Re-Careering Services Center also are located on Harris Campus.

High Schools Near the Campus
The high schools nearest to the Harris Campus are Harding University, West Charlotte, West Mecklenburg and Philip O. Berry Academy of Technology.

Major Programs/Courses Offered
Baking and Pastry Arts
Charlotte CooksTM
College and Career Readiness
Computer Training
Corporate and Continuing Education
Corporate Learning Center
Customized Training
Dental Assisting
Dietary Managers Training Program
Early Childhood Education
Economic Development and Career Readiness
Fire Protection Technology
Foundational Skills including STAR Reading Program
General Education and College Transfer
High School Equivalency Preparation
Human Resources Development
Insurance
James R. Worrell Sr. Financial Services Institute
Lateral Entry Teacher Education
Mortgage Banking
Management and Leadership Development
Notary
Personal Enrichment
Process Improvement, Lean, Six Sigma
Project Management and Business Analysis
Real Estate, Appraisal and Property Management
Sustainability
Teacher License Renewal

Services
Services include day/evening/weekend classes, admissions, advising, career services, cashier, counseling, financial aid, placement testing, registration, student computer labs, student life, student records, copy machines, public transportation, vending machines, Aspire Bistro and convenient parking. The Harris Campus library is in Room 2100 of Building I.

Facilities
The Harris Campus has two separate buildings. Building I (H1) includes 22 classrooms which serve the bulk of general education and curriculum classes. The first floor of Building II (H2) consists of the Harris Conference Center and the second floor has 11 classrooms to serve students and clients in Corporate and Continuing Education.

Dean
The dean of the Harris Campus is Mary Vickers-Koch.

Services offered on this campus

<table>
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<tr>
<th>Service</th>
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<tbody>
<tr>
<td>Admissions</td>
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</tr>
<tr>
<td>Advising</td>
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<td>Career Services</td>
<td>Y</td>
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<td>Cashier</td>
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<td>CLEP Examinations</td>
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<td>Copy Machines</td>
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<td>Counseling</td>
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<td>Disability Services</td>
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<td>Placement Testing</td>
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<td>Public Transportation</td>
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<td>Student Success Advisor</td>
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<td>Student Success Center</td>
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<td>Student Support Services</td>
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<td>Tour for Prospective Students</td>
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<td>Vending Machines</td>
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Levine Campus
704.330.4200
www.cpcc.edu/campuses/levine

History
The Levine Campus of CPCC opened for classes in fall 1998. It was the second full-service campus to open away from the Central Campus. It is a 230,000 square foot mall-type design, with all services under the
same roof. Serving more than 12,000 students, the current facility is near maximum capacity with classes running seven days per week.

High Schools Near the Campus

The high schools close to the Levine Campus are Ardrey Kell, Butler, East Mecklenburg, Independence and Providence.

Levine Middle College High School

This partnership between CPCC and Charlotte-Mecklenburg Schools is designed for high school juniors and seniors who want to complete their high school graduation requirements while earning college credit through CPCC. The program opened in spring 2014. Applications for admission may be obtained from the Principal, Mr. Joey Burch at joey.burch@cms.k12.nc.us.

Major Programs/Courses Offered

Classes offered on Levine Campus are approximately half curriculum courses and half continuing education courses. Most of the curriculum courses are for students seeking transfers to four-year colleges or for students seeking two-year degrees in business administration. A wide array of Corporate and Continuing Education non-degree courses and programs are available for those who do not intend to transfer to other colleges. These CCE classes have various starting and ending dates, course lengths and subjects. They are designed to meet the needs of the community at large and range from mandatory licensure updates to personal enrichment, recreation and leisure classes.

Services

Services on Levine Campus include: admissions, counseling and advising, registration, placement testing, career services, cashiering, evening and weekend classes, financial aid/veteran’s services affairs, center for military families & veterans, student life, disabilities counseling, parking, security, college and career readiness, and cooperative education workplace learning (Co-op and Internships). Food service during the week is provided by Subway. The Levine Campus Library, with a group study area, is in room 3120 of the LV 1 Building.

Facilities

Located beside a small lake, the Levine Campus has 1,497 adjacent parking spaces. The campus houses 110 full-time faculty and staff plus more than 150 part-time faculty and staff. It has more than 72 classrooms with capacities from 20 to 95 seats, including 42 state-of-the art “smart classrooms.” About 25 percent are computer instruction classrooms with more than 700 computer stations. The student commons area features a cyber café. The facility also includes two art rooms, two biology and three chemistry flex labs, two student technology centers, two dance/aerobics room, a fitness/weight room, a transfer resource center and an academic learning center for tutoring, a language lab, and testing and course placement service.

Joe Hendrick Center for Automotive Technology

The Joe Hendrick Center for Automotive Technology on the Levine Campus was made possible by a generous donation from Mr. Rick Hendrick. The center is a 34,000 square foot high-tech instructional facility that houses BMW, General Motors and Honda automotive curriculum programs and the GM regional training center. Annually, the Joe Hendrick Center serves more than 3,000 students who aspire to be automotive technicians, as well as technicians who seek updated automotive technical skills. The Joe Hendrick Center’s electrical and fuel labs feature cutting edge automotive system simulators that can be programmed and diagnosed. The computer lab offers students the most current repair data from automotive manufacturers who partner with CPCC for training. More than 40 late model vehicles are used as training aids in the labs. The Joe Hendrick Center is truly a state-of-the-art training facility.

Dean

The dean of the Levine Campus is Dr. Edith Valladares McElroy.

Services offered on this campus

<table>
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<tr>
<th>Service</th>
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<tr>
<td>Academic Learning Center</td>
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<td>Admissions</td>
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<td>Advising</td>
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<td>Bookstore</td>
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<td>Career Services</td>
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<td>Cashier</td>
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<td>Center for Military Families &amp; Veterans</td>
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<td>CLEP Examinations</td>
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<td>College &amp; Career Readiness</td>
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<td>Copy Machines</td>
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<td>Counseling</td>
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<td>Disability Counseling</td>
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<td>Financial Aid/Veterans Affairs</td>
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<td>Fitness Center</td>
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<td>Outreach &amp; Recruitment</td>
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<td>Public Transportation</td>
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<td>Student Support Services</td>
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<td>Student Technology Centers</td>
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<td>Tour for Prospective Students</td>
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<td>Transfer Resource Center</td>
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<td>Vending Machines</td>
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<td>Workplace Learning (Co-op and Internships)</td>
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Merancas Campus

704.330.4100
www.cpcc.edu/campuses/merancas
History

Merancas Campus (formerly North Campus) was the first area campus of Central Piedmont Community College.

The Claytor Building (CL), named for former Chairman of the CPCC Board of Trustees, Bill Claytor, was dedicated as the North Center in October 1990. The North Center became North Campus with the addition of the Public Safety Building six years later. In May 2011, North Campus became Merancas Campus, named for the Merancas Foundation, Inc. of Charlotte, N.C.

The Public Safety Building, funded with local bond money, is the result of a collaborative effort that included area law enforcement professionals, community college leaders and relevant public groups. Groundbreaking ceremonies were held in October, 1995 and the Public Safety Building was occupied in December 1996. On November 3, 2000, this building became the Claudia Watkins Belk Center for Justice (CJ), named after one of Charlotte’s most prestigious and prominent citizens.

The Transport Systems Technology Building (TS), occupied in the fall of 2006, was funded by a state bond referendum. The TS Building houses the Automotive Technology, Autobody Repair and Heavy Equipment Technology programs, as well as a variety of other general education classes and instructors’ offices.

High Schools Near the Campus

The high schools near the Merancas Campus are North Mecklenburg, Hopewell, Lake Norman Charter, Hough and Mallard Creek.

Major Programs/Courses Offered

General Education
- Classes leading towards A.A./A.S. degrees
- College and Career Readiness
- College Transfer classes
- Corporate and Continuing Education classes
- High School Equivalency Preparation

Public Safety
- Basic Law Enforcement Training
- Criminal Justice Technology
- Emergency Medical Training
- Forensics Institute: American Academy of Applied Forensics
- Public Safety (Corporate and Continuing Education)

Transport Systems
- Automotive Systems Technology
- Collision Repair and Refinishing Technology
- Heavy Equipment and Transport Technology
- Motorsports Related Offerings
- Race Car Technology Certificate (under Automotive Systems Technology Degree Program)

Facilities

Claytor Building is a single-story, 10,000 square foot building comprised of a computer classroom, a testing center, a bookstore, a staff lounge, administrative offices, a conference room, an admissions/registration/cashiering office, a student success center, an academic counseling office, a security office, a financial aid office and faculty touchdown stations.

The Claudia Watkins Belk Center for Justice Building is a single-story, 37,000 square foot building which contains eight classrooms, a computer lab, a science lab/classroom, a forensics lab/classroom, a fitness room, a courtroom, a tutoring area, 11 offices, a student lounge, a staff lounge, a 200-seat auditorium and a conference room. In 2005, a 2,000 square foot crime scene simulation facility was added.

The two-story, 110,000 square foot Transport Systems Technology building houses Automotive Technology, Collision Repair and Heavy Equipment Technology programs, a student lounge, a library, a student technology center, three computer classrooms, five general education classrooms, plus faculty and administrative offices. The Merancas Campus Library is in Room 243 of the Transport Systems building.

Dean

The dean of the Merancas Campus is Tamara Williams.

Services offered on this campus

Service | Offered Here
--- | ---
Admissions | Y
Advising | Y
Bookstore | Y
Career Services | Y
Cashier | Y
CLEP Examinations | N
Copy Machines | Y
Counseling | Y
Disability Services | Y
Financial Aid/Veterans Affairs | Y
Fitness Center | Y
Graduation Services | N
Hot Food | Y
Library | Y
Outreach & Recruitment | N
Placement Testing | Y
Public Transportation | Y
Registration | Y
Student Computer Labs | Y
Student Life | Y
Student Records | Y
Student Success Advisor | Y
Student Success Center | Y
Student Support Services | Y
Tour for Prospective Students | Y
Vending Machines | Y

College Administration

Board of Trustees
- Edwin A. Dalrymple — Chairman
- Judith N. Allison — Vice Chairman
- P. Anthony Zeiss — Secretary

Appointed by the Governor
- Marshall L. Coble
- Edwin A. Dalrymple
- Caldwell Rose
Appointed by the Mecklenburg County Board of Commissioners

Judith N. Allison
Benton S. Bragg
Madelyn L. Caple
Dr. Wilhelmenia I. Rembert

Appointed by the Charlotte-Mecklenburg Schools Board of Education

Student Government Association President, Ex Officio Member

Alvan Makoundi-Tchibinda

College President and Cabinet

P. Anthony Zeiss  President
Marcia Conston  Vice President for Enrollment and Student Services
Michael Moss  Vice President for Finance and Administrative Services
David Kim  Vice President for Information Technology and Research Services/Chief Information Officer
Kevin McCarthy  Vice President for Institutional Advancement
Richard Zollinger  Vice President for Learning and Workforce Development
Jeff Lowrance  Public Information Officer and Assistant to the President for Community Relations and Marketing Services

Tracie Clark  Executive Assistant to the President

Associate Vice Presidents

Ian Brice  Associate Vice President, Administrative Services
Brenda Leonard  Associate Vice President, Compliance and Audit
Vicki Saville  Associate Vice President, Facilities and Construction
Michael Whiteman  Associate Vice President, Financial Services
Michael Horn  Associate Vice President, Government Relations, Resource Development, and Grants
Paul Santos  Associate Vice President, Human Resources
Terri Manning  Associate Vice President, Institutional Research
Debbie Bouton  Associate Vice President, Learning and Workforce Development
Rita Dawkins  Associate Vice President, Student Success Services

James Hillier  Associate Chief Information Officer

College Deans

Janet Malkemes  Dean, Cato Campus / Professional Careers
Paul Koehnke  Dean, Central Campus / Culinary, Digital Media, Journalism, Communication and Fine Arts
Jay Potter  Dean, Harper Campus / Applied Technologies and Construction Institute
Mary Vickers-Koch  Dean, Harris Campus / Business and Industry Learning Services
Edith McEiroy  Dean, Levine Campus / Business, International and General Studies
Tamara Williams  Dean, Merancas Campus / Public Safety and Transport Technologies
Kathi McLendon  Dean, College and Career Readiness
Daniel McEachern  Dean, Enrollment Management
April Jones  Dean, Enrollment Services
Ruth Hedgpeth  Dean, Health Sciences, Human Services, Medical Careers, Early Childhood Education and Cosmetology
Gloria Kelley  Dean, Library Services
Karen Merriman  Dean, Professional Development and eLearning
Clint McEiroy  Dean, Retention Services
Chris Paynter  Dean, Science, Technology, Engineering and Math
Mark Helms  Dean, Student Life and Service Learning

CPCC Broadcasting

CPCC Home to WTVI PBS Charlotte

Celebrating its 50th year of service to the Charlotte region, WTVI PBS Charlotte is home to high-quality, award-winning, commercial-free programming which educates, inspires and entertains. PBS Charlotte reaches more than 1.1 million households across its 13-county service area which includes North and South Carolina. Some of PBS Charlotte's locally-produced programs include "Carolina Impact (http://www.wtvi.org/carolina-impact)," "Off the Record (https://www.youtube.com/playlist?list=PLwlZN2KhlbMcMnLbwuZa1BEhBx73rQQ)" and "Trail of History (https://www.youtube.com/playlist?list=PLwlZN2KhlbMeqVSmSx1qkb_4NvbAbOxyKWFW)." PBS Charlotte does more than just broadcast engaging local and national programs. Its educational outreach literacy program (http://www.wtvi.org/education-outreach) serves more than 19,000 at-risk children. Nearly 2,600 parents and early childhood professionals have participated in more than 600 workshops and more than 7,000 disadvantaged children across our region received free new books thanks to this service of CPCC. For the second year in a row, PBS Charlotte has hosted its annual STEM Awards (http://youtu.be/rPp2yF8Md3I) recognizing some of the best students and teachers in the areas of science, technology, engineering and math. For information about the station, visit http://www.wtvi.org/. College students who wish to be considered for an internship should apply at http://
Program Listing
PBS Charlotte regularly has new and exciting initiatives underway to greater serve the region. See the program listing at http://www.wtvi.org/tv-schedule/ for more details.

CPCC Cable Channel
WTVI PBS Charlotte also produces high-quality content for the CPCC cable channel. Time Warner Cable Channel 17 plays host to signature programs like "Charlotte: A City of International Success," "Charlotte Cooke™," "Perfiles Latinos de Charlotte" and our regional "Trail of History" show. All of these programs are available on demand at https://www.youtube.com/user/CPCCTV.

Digital Media Programs of Study for Students
PBS Charlotte supports the College's community service outreach goals, but also its commitment to learning. The station has collaborated with the College Learning unit to develop a new division for digital media studies that gives students more access to PBS Charlotte. Course information is available at http://www.cpcc.edu/digital-media-comm.

CPCC Foundation / Institutional Advancement
The CPCC Foundation exists solely for the benefit of the College and its students. The Foundation solicits gifts from individuals, corporations and foundations. These gifts are used for student scholarships, instructional equipment, capital projects, new program funds, innovation and recognition awards, endowment funds and a variety of other needs not met through traditional funding sources.

The annual CPCC Charlotte Skyline Run and a clay shooting sporting event are sponsored by the Foundation to raise support and visibility for the College. The Foundation also works to engage College alumni in the life of their alma mater.

Ways to support the work of the Foundation include gifts of cash or securities, bequests, estate plans, honorariums and memorial funds. Contributions may be designated for specific programs and projects and may be given outright or through a pledge extended over a period of time.

All donations for the College should be directed to the Central Piedmont Community College Foundation, a 501(c)(3) organization, qualified to receive tax-deductible contributions.

The address is:
The CPCC Foundation, Inc.
Post Office Box 35009
Charlotte, NC 28235-5009

For more information, call 704.330.6869 or visit www.cpcc.edu/foundation.

Glossary
The explanations below define terms frequently used at Central Piedmont Community College.

Academic of Faculty Advisor: a member of the faculty for a specific program who works with students in that program to help them reach their educational goals

Academic Certificate: a program comprised of 12-18 semester hours of courses designed to provide entry-level employment training

Academic Intervention: the status of students working for a degree, diploma, or certificate when their program GPA in any semester is below Standards of Progress required for the number of semester hours they are taking

Academic Suspension: the status of students working for a degree, diploma, or certificate after they have been on Academic Probation and their program GPA remains below Standards of Progress

Adult High School (AHS): a program offered in cooperation with the public school system; A diploma is awarded upon program completion and passing of the North Carolina Competency Test.

Advisement Week: a week each semester, prior to registration, when students are encouraged to meet with their faculty advisors and program counselors

Associate Degree: a document awarded to a student signing successful completion of a two-year curriculum program

Associate in Arts (A.A.): a degree granted for successfully completed programs of study consisting of a minimum of 64 semester hours and a maximum of 65 semester hours of college transfer courses

Associate in Applied Science (A.A.S.): a degree granted for successfully completed programs of study consisting of a minimum of 64-76 semester hours of coursework to provide entry-level employment education; An A.A.S. program must include a minimum of 15 hours of general education and a minimum of 49 hours of major courses with numbers 110-199 or 210-299.

Associate in Fine Arts (A.F.A.): a degree granted for successfully completed programs of study consisting of a minimum of 64 semester hours and a maximum of 65 semester hours of college transfer courses, with an emphasis on the arts

Associate in Science (A.S.): a degree granted for successfully completed programs of study consisting of a minimum of 64 semester hours and a maximum of 65 semester hours of college transfer courses, with emphasis on the natural sciences

BioNetwork: a statewide initiative that connects community colleges across North Carolina, providing specialized training, curricula and equipment to develop a world-class workforce for the biotechnology, pharmaceutical and life science industries

Career and College Promise: a program that provides seamless dual enrollment educational enhancement for eligible North Carolina high school students in order to accelerate completion of college certificates, diplomas and associate degrees that lead to college transfer or provide entry-level job skills

College and Career Readiness: pre-college courses that include Adult English as a Second Language (Adult ESL), Adult High School Diploma (HSD), Foundational Skills, High School Equivalency, Human Resource Development, Pathways to Careers and Special Learning Needs

College Transfer Programs: programs intended for transfer to senior institutions including the Associate in Arts, Associate in Science and Associate in Fine Arts

College Visitation Day: usually held annually in November when representatives from many four-year colleges and universities and
representatives of the armed services are available to CPCC students to provide information

**Combined Course Library (CCL):** the set of statewide uniform courses from which North Carolina community colleges must choose their curriculum course offerings

**Common Core Courses:** courses that have been identified as part of a guaranteed transfer articulation with the University of North Carolina system. See Comprehensive Articulation Agreement

**Comprehensive Articulation Agreement (CAA):** an agreement between the North Carolina Community College System and public and private universities to facilitate transfer between community colleges and four-year universities

**Continuing Education Unit (CEU):** a unit of credit toward specific certification awarded for continuing education courses in collaboration with the certifying agency

**Core Competency:** a complex ability essential to lifelong learning that is developed over time; CPCC has identified four core competencies critical to the success of every CPCC graduate: 1) Communication, 2) Critical Thinking, 3) Personal Growth and Responsibility, and 4) Information Technology and Quantitative Literacy; All CPCC graduates are expected to demonstrate proficiency in each of the competencies which go beyond simple content mastery.

**Co-requisite:** a course that must be taken during the same term as the course that requires the co-requisite

**Corporate and Continuing Education:** a division of CPCC that offers continuing non-degree education courses, programs and services for employers, organizations and individuals; Codes for these courses have 7000-8000 numbers. Some offer professional CEUs and meet certification and licensing requirements.

**Corporate Learning Center (CLC):** a unit of CPCC that works directly with business and industry client companies to provide services, custom course content and exclusive programming, often on site and at preferred times for employers

**Course Description:** a brief description of learning objectives and what the student should be able to do upon completion; Classroom hours, laboratory hours, clinic or co-op hours, credits earned and prerequisite/co-requisite (if needed) are listed.

**Credit:** the number of units earned upon completing a curriculum course, measured in semester hours

**Curriculum (also called a program):** a set of courses designed to prepare a student either to enter the workforce immediately upon completion or to transfer to a degree program at a four-year college or university; Depending upon the length of the program, a degree, diploma, or certificate is awarded upon completion.

**Developmental Studies Courses:** pre-college courses (identified by code numbers beginning with zero) that prepare students for college-level courses

**Diploma:** a program comprised of 36-48 semester hours, including a minimum of 6 hours general education, which provides entry-level employment training

**Distance Learning (DL):** organized delivery by means other than face-to-face classroom contact, such as via the Internet or telecourse.

**Drop/Add:** a period during the first week of classes each term when students may change their class schedules without penalty; See Schedule Adjustment

**Elective Course:** a course that the student may choose to take to meet diploma/degree requirements, as distinguished from required courses; Some electives are specified within areas, such as Technical Electives or Humanities/Art Electives; others are Free Electives.

**Fall Break:** a short break in the middle of fall semester when the College is open but classes are suspended

**Final Examination Week:** a period of time at the end of each semester when instructors may schedule final examinations; The examination schedule is published with the Class Schedule so students know at the time of registration when examinations will be.

**Full-Time Equivalency (FTE):** the number of hours equivalent to the hours one student is enrolled for the normal academic year of spring and fall terms; This method enables colleges to recognize the impact of part-time students as an aggregate.

**Full-Time Student:** a student enrolled for 12 or more credits during fall and spring terms and for 9 or more credits during summer term

**General Education Courses:** courses required in all degree programs to ensure graduates have the necessary general knowledge, abilities and intellectual skills commensurate with their degrees

**Grade Point Average (GPA):** the total number of grade points earned \((A=4; \ B=3; \ C=2; \ D=1; \ F=0)\) divided by the total number of semester hours attempted by the student

**High School Equivalency:** a program which provides instruction and testing for adults to complete their high school equivalency

**In-State Student:** a student who is a legal resident of North Carolina

**Lab Fee:** an additional charge for some classes that have labs as part of the course structure; Lab fees are used exclusively by the division to purchase supplies and equipment for the lab to which the fees are applied.

**Lateral Entry Teachers:** professionals who have a bachelor’s degree, have met state qualifications and hold K-12 teaching positions while seeking initial teaching licensure

**Out-of-State Student:** a student who is a legal resident of a state other than North Carolina, or a legal resident of a foreign country

**Part-Time Student:** a student enrolled for fewer than 12 credits during fall and spring terms and for fewer than 9 credits during summer term

**Prerequisite:** a course that must be completed first to become eligible to enroll in subsequent courses that require the prerequisite

**Program Description:** information about a program including the official definition, degree/diploma/certificate awarded, admissions processing and a list of courses in that curriculum

**Program GPA:** the grade point average of a student in the courses required to complete a program; To remain in good academic standing, students must maintain a program GPA in accord with the hours for which
they enroll, as prescribed by the CPCC Grading Policy. Students must have a final program GPA of 2.0 (C) in order to graduate.

**Program of Study (POS):** a listing of the exact courses the college offers to fulfill the requirements of a curriculum program

**Schedule Adjustment:** dropping or adding classes without penalty during the first week of each term

**Semester Hours Credits (SHC):** credit assigned to a course that represents contact hours in a normal 16-week semester, based on formulas for class, lab, work and clinical methods of instruction

**Spring Break:** a short break in the middle of spring semester when the College is open but classes are suspended

**Standards of Progress:** guidelines that are part of the CPCC Grading Policy which include requirements for students in degree, diploma and certificate programs to maintain good academic standing; These standards include completion of courses, minimum program GPA and minimum semester GPA. When students do not meet these standards, they are placed on Academic Probation or Academic Suspension, and they work more closely with their faculty advisor or program counselor in order to reach their educational goals.

**State Board of Community Colleges (SBCC):** the governing body of the North Carolina Community College System

**Transcript:** an official student academic record

**Transferability:** the acceptability of credit for a course or program from or to another college or university

**Tuition:** the amount of money a student must pay at the time of registration for each hour of academic credit based on the student’s residency classification

**Virtual Learning Community (VLC):** a service of the North Carolina Community College System that provides courses for the colleges in the system to use for distance education

**Workplace Learning:** a program that integrates classroom studies with practical experience in business, industry, public and community agency work situations; Students are partnered with employers for mutually beneficial work-based learning experiences through programs such as Apprenticeship Charlotte, Work-based Learning (formerly Co-op) and internships

**Disclosure**

Central Piedmont Community College reserves the right to change its regulations, policies, procedures, fees, and programs without notice.

**Corporate and Continuing Education Course Schedule**

Courses offered in Corporate and Continuing Education are listed each term in the printed Corporate and Continuing Education Course Schedule available at www.cpcc.edu/cce or at any campus.

**Equal Opportunity**

Central Piedmont Community College is committed to equal opportunity and non-discrimination based on any legally protected classification, including race, color, national origin, religion, gender, sexual orientation, disability, age, genetic information, and political affiliation. The college does not discriminate in education or in employment. For more information about our non-discrimination policies, visit www.cpcc.edu/administration/policies-and-procedures or call 704.330.2722 ext 3534.

Central Piedmont Community College provides access, equal opportunity and reasonable accommodation in services, programs, activities, education and employment for individuals with disabilities. Reasonable accommodations will be provided to individuals with disabilities upon request 10 business days in advance of the activity. To request accommodation, call 704.330.6631.

Students or employees who wish to report a concern or complaint relating to Title IX, sexual misconduct, may do so by reporting the concern to the College’s Executive Director of Institutional Equity or the Deputy Coordinator assigned to their campus. Inquiries concerning the application of Title IX may also be referred to the College’s Executive Director of Institutional Equity or to the U.S. Department of Education’s Office for Civil Rights. Central Piedmont Community College’s Executive Director of Institutional Equity is Leon Matthews, whose office is in the Hall Building, Room 218. This office can be contacted by phone at 704-330-6524 or by email at leon.matthews@cpcc.edu.

Individuals with complaints of this nature also have the right to file a formal complaint with the United States Department of Education:

Office for Civil Rights
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202-1475
Telephone: 202-453-6020
FAX: 202-453-6021; TDD: 800-877-8339
Email: OCR.DC@ed.gov
Web: http://www.ed.gov/ocr

**Open Door Policy**

CPCC has an open-door admission policy for applicants who are high school graduates or are at least 18 years of age and whose admission eligibility conforms to State Board of Community Colleges Code 1D SBCCC 400.2 (http://www.nccommunitycolleges.edu/sbcccode) and North Carolina Community College System directives. Admission to the College is open to any student who meets the age and graduation requirements without regard to race, creed, disability, national origin, gender, or age.

Some degree programs have specific requirements for admission. These requirements are available from the division director or a program counselor.

**Tuition**

Tuition is set by the North Carolina State Board of Community Colleges and is subject to change without notice.

**Accreditation**

Central Piedmont Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate degrees, diplomas and certificates. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404.679.4500 or see http://www.sacscoc.org for questions about the accreditation of Central Piedmont Community College. Inquiries regarding the programs and services of Central Piedmont Community College
should be directed to the College; the Commission on Colleges should be contacted only for questions relating to the College's accreditation.

**Gainful Employment Disclosure Information**

Institutions are required to report certain information about students who enrolled in Title IV eligible educational programs that lead to gainful employment in a recognized occupation (GE programs). Institutions must release certain information about its GE programs to prospective students.

To qualify for federal aid, federal law requires that colleges and training programs prepare students for gainful employment in recognized occupations. The Department of Education defines whether a program successfully prepares students for gainful employment using a two-part test: measuring the relationship between the debt students incur and their incomes after program completion; and measuring the rate at which all enrollees, regardless of completion, repay their loans on time. If a program graduated a large share of students with excessive debt-to-earnings ratios, it would be required to clearly disclose debt burdens to current and prospective students. The program could also become ineligible to participate in federal student aid programs.

Defining gainful employment is one of the best ways to increase student access to quality, affordable education and training. The rule has no impact on student eligibility for federal grants and loans. It affects only which programs are eligible, preventing programs from continuing to profit from federal aid at the expense of students and taxpayers.

For a list of these programs, please visit our website at: http://www.cpcc.edu/gainfulemployment.

**History of the College**

The history of Central Piedmont Community College centers not so much on bricks and mortar, but rather on the many people who have played a role in developing the College. So many unsung heroes--from secretaries to faculty to administrators--have dedicated themselves to building the great College that CPCC is today.

Standouts on the CPCC roster include a Pulitzer Prize winner, a Metropolitan Opera star, an Olympic gold medalist, a Congressional Medal of Honor winner, a television actress, and a professional football player. Countless other chefs, health care providers, technicians, real estate brokers, paralegals, firefighters, law enforcement officers, and trades people serve our community and share CPCC’s proud tradition.

CPCC has been providing educational opportunities since 1963, the year that the North Carolina General Assembly passed the community college bill. Opening as a fully integrated institution under founding president Dr. Richard H. Hagemeyer, the College combined the programs of Central Industrial Education Center on Elizabeth Avenue and Mecklenburg College on Beatties Ford Road.

Since its beginning, the College has been a national pacesetter in education. Innovative in its teaching methods, CPCC garnered national recognition for its individualized and computer-assisted instruction. The College was invited to join the prestigious League for Innovation in the Community College and has been a member since 1970.

After Dr. Richard Hagemeyer’s retirement in 1986, Dr. Ruth Shaw was selected as the College’s second president. Under her leadership, the College added both the Advanced Technologies Center and the Center for Automotive Technology and began acquiring land for additional campuses.

Dr. Tony Zeiss, CPCC’s third president, has led the College since December 1992. He is devoted to CPCC’s vision and mission of serving students and the community through customized training and workforce development. Under his direction, CPCC became a multi-campus community college in 1996 with the conversion of the North Area Learning Center to the North Campus. Four other campuses subsequently opened: the Levine Campus in 1998, the Harper Campus in 1999, the Harris Campus in 2001, and the Cato Campus in 2002. In May 2011, North Campus was renamed the Merancas Campus. CPCC now has six full-service campuses across Mecklenburg County as well as the City View Center for Cosmetology and the WTVO PBS Charlotte facility on Commonwealth Avenue.

CPCC has grown from a small college with a dozen programs serving 1,600 students to one with more than 300 degree, diploma and certificate programs serving approximately 70,000 people in an array of credit and non-credit offerings. The College is the county’s premier workforce development resource, offering its educational programs and services throughout the area.

As always, the College’s goal is to serve the community. The citizens of Mecklenburg County know that their investment in CPCC is changing their lives for the better.

**Memberships, Professional Associations**

Central Piedmont Community College is a member of the following educational associations and agencies:

- Accreditation Council for Business Schools and Programs
- AIGA, the Professional Association for Design
- American Association for Paralegal Education
- American Association for Sustainability in Higher Education
- American Association for Women in Community Colleges
- American Association of Collegiate Registrars and Admissions Officers
- American Association of Community Colleges
- American Culinary Federation
- American Heart Association
- American Institute of Architecture Students
- American Payroll Association
- American Sign Language Honor Society
- American Sign Language Teachers Association
- American Society for Industrial Security
- American Society for Nondestructive Testing
- American Society of Echocardiography
- American Society of Mechanical Engineers
- Association for Information Communications Technology Professionals in Higher Education
- Association for Student Conduct Administration
- Association of Accountants and Financial Professionals in Business
- Association of America’s Public Television Stations
- Association of Builders and Contractors
- Association of Certified Fraud Examiners
- Association of College & University Auditors
- Association of College and University Printers
- Association of Collegiate Schools of Architecture
- Association of Community College Facility Operations
- Association of Community College Trustees
Association of Nutrition and Foodservice Professionals
Association of Professionals in Business Management
Association of Surgical Technologists
ATIXA: The Association of Title IX Administrators
Blackboard Analytics Client Advisory Board
Board of Certified Safety Professionals
Business Continuity Planners Association
Carolina Associated General Contractors
Carolina Consortium
Carolinas Association of Collegiate Registrars and Admissions Officers
Carolinas Home Improvement Professionals
CASEnergy Coalition
Center for Energy Workforce Development
Charlotte Area Compensation Council, Inc.
Charlotte Area Education Consortium
Charlotte Area Liaison Group
Charlotte Chamber of Commerce
Charlotte Chapter of the American Payroll Association
Charlotte Regional Collaborative for a Global Economy
Cisco Networking Academy
Collaborative Services Working Group
College and University Professional Association for Human Resources
College Board, The
College News Association of the Carolinas
COMBASE
Community College Business Officers
Community Colleges for International Development, Inc.
Conference of Interpreter Trainers
Council for Advancement and Support of Education
Council for Resource Development
Culinary Hospitality Tourism Educators Alliance
Diversity Council of the Carolinas
E4
Early Music America
Economic Research Institute
EDUCAUSE
EDUCAUSE Southeast Regional Board
Ellician User’s Group
Emergency Care and Safety Institute
Enactus
Executive Women International
Federated Identity Management North Carolina Committee
Flexographic Technical Association
Global Corporate College
Google Advisory Board – Educational Clients
Home Builders Association of Charlotte
Hospitality Tourism Alliance
Innovative Interfaces User Group
In-Plant Printing and Mailing Association
Institute for Internal Auditors, The
In-plant Printing and Mailing Association
Instructional Technology Council
International Association of Administrative Professionals
International Association of Campus Law Enforcement Administrators
Lake Norman Chamber of Commerce
Latin American Chamber of Commerce
League for Innovation in the Community College
Lyrasis
Manufacturing Institute
Master Calendar
Matthews Chamber of Commerce
Metrolina Association of Volunteer Administrators
Metrolina Theatre Association
Microsoft IT Academy
Monterey Institute National Repository of Online Courses Network
Mu Alpha Theta
NAFSA--Association of International Educators
National Academic Advising Association
National Association for College Admission Counseling
National Association of Broadcasters
National Association of College and University Business Officers
National Association of College Auxiliary Services
National Association of Colleges and Employers
National Association of Student Financial Aid Administrators
National Association of Student Personnel Administrators
National Association of the Deaf
National Association of the Remodeling Industry
National Association of the Remodeling Industry-Charlotte
National Association of Veterans Administrators
National Association of Women in Construction
National Center for Construction Education and Research
National Center for Women & Information Technology Academic Alliance
National Coalition of Advanced Technology Centers
National Community College Council for Research and Planning
National Council for Marketing and Public Relations
National Council for Workforce Education
National Direct Student Loan Coalition
National Educational Broadband Services Association
National Educational Television Association
National Fire Protection Agency
National Institute for Staff and Organizational Development
National Institute of Metal Working Skills
National League for Nursing
National Organization for Associate Degree Nursing
National Organization for Human Services
National Registry of Interpreters for the Deaf
National Restaurant Association
National Safety Council
National Student Employment Association
National Technical Honor Society
NC Live
New Media Consortium
North American Council of Automotive Teachers
North Carolina American Sign Language Teachers Association
North Carolina Area Health Education Centers
North Carolina Association of Campus Law Enforcement Administrators
North Carolina Association of Community College Business Officers
North Carolina Association of Community College Presidents
North Carolina Association of Community College Trustees
North Carolina Association of Respiratory Educators
North Carolina Association of Surgical Technology Educators
North Carolina Association of the Deaf
North Carolina Association on Higher Education and Disability
North Carolina Campus Compact
North Carolina College and University Professional Association for Human Resources
North Carolina Community College Association of Distance Learning
North Carolina Community College Chief Information Officer Association
North Carolina Community College Institutional Information Processing System User’s Group
North Carolina Community College Student Development Professionals Association
North Carolina Comprehensive Community College Student Government Association
Mission, Values, Goals

Core Competencies (p. 48)
Governing Values (p. 47)
Learning College (p. 48)
Mission and Vision (p. 46)
Strategic Goals (p. 46)

Mission Statement for Central Piedmont Community College

Central Piedmont Community College is an innovative and comprehensive College that advances the life-long educational development of students consistent with their needs, interests and abilities while strengthening the economic, social and cultural life of its diverse community.

The College accomplishes this purpose by providing high quality, flexible pre-baccalaureate and career-focused educational programs and services which are academically, geographically and financially accessible. This purpose requires a fundamental commitment to student success through teaching and learning excellence within a supportive environment.

Vision

Central Piedmont Community College intends to become the national leader in workforce development.

Strategic Goals

Goal 1 Student Learning and Success

Ensure student learning and success by promoting an innovative and supportive learning environment.

1. Engage students as responsible partners in the learning process.
2. Offer and promote a variety of programs and services that improve college readiness and support comprehensive learning experiences.
3. Enhance the learning environment by the increased use of innovative teaching techniques, interactive technologies, learning options and assessment data.
4. Facilitate successful student transitions to CPCC, colleges and universities, the workforce and an increasingly global community.
5. Enhance communication and cross-functional collaboration to support student learning and completion to meet student success targets.

Goal 2 Organizational Learning and Development

Foster an organizational culture that maximizes individual growth through expanded learning opportunities.

1. Recruit, retain, develop, reward and empower employees who share responsibility for student learning and success.
2. Ensure part-time employees are engaged and supported in the learning environment at the College.
3. Facilitate a more collaborative and cohesive learning environment in line with the College’s vision, mission and values.
4. Prepare employees to anticipate and respond appropriately to regional issues within a global framework.

5. Encourage the understanding, analysis and interpretation of data to inform decision making.

**Goal 3 Community Catalyst**

Be a catalyst for the educational and socio-economic development of the community through partnerships, coalitions, life-long learning and civic engagement.

1. Expand partnerships with business and industry to determine the skills needed for future high-demand job growth areas.
2. Initiate and maintain relationships with business, industry and educational partners to ensure program relevance.
3. Support workforce development by responding to the training and academic needs of an increasingly diverse community.
4. Provide expanded opportunities for high school students to pursue certificates and degrees that accelerate their learning and goal completion.
5. Increase public knowledge of the educational opportunities and services at CPCC.
6. Provide collegiate experiences for students that foster community involvement and a global perspective.

**Goal 4 Organizational Capacity to Serve**

Plan and manage human, physical, fiscal and technological resources so that College programs, services and infrastructure meet student and community needs.

1. Create and implement a strategic plan to enhance access, enrollment, retention and completion.
2. Create and implement funding strategies to establish and sustain new educational programs.
3. Plan and manage renovation and construction to provide needed infrastructure.
4. Collaborate with business, education and other organizations to secure needed levels of public and private support to provide educational opportunities for students.
5. Promote the effective and efficient use of human, physical, fiscal and technological resources to reinforce public trust.
6. Expand and manage facilities and operations in an environmentally and fiscally responsible manner.
7. Communicate the value and benefits of the College to increase community awareness and support.

**Goal 5 Organizational Excellence and Innovation**

Promote and sustain innovation, entrepreneurship and excellence throughout the organization.

1. Expand the use of collaborative and cross-functional teams to respond with innovation to emerging needs.
2. Increase the use of assessment strategies that measure outcomes and analyze results that improve organizational effectiveness and excellence.
3. Engage employees in continuous improvement through a culture of evidence that effectively measures efforts, increases positive outcomes, and supports learning.

4. Meet or exceed all State Accountability/Performance Measures.

**College Values**

Shared values and clear expectations affect how well CPCC succeeds in accomplishing its mission and fulfilling its commitment to student success. Based upon this belief, we hold the following values:

**Learning**

- How do we provide a supportive environment that is student-centered and promotes life-long learning?
- How do we place the needs of learners first?
- How do our resource allocations match the needs for student learning?
- How do we work together across the College to meet learners’ needs?

**Inclusiveness**

- How do we encourage collaborative partnerships that enhance the economic vitality and quality of life in our community?
- How do we honor and promote diversity through our people, curricula and processes?
- How do we foster community within the College?
- How do we provide a welcoming and accepting environment?

**Responsiveness**

- How do we act upon learners’ feedback on their learning experiences at the College?
- How do we create a work environment that fosters learning?
- How do we anticipate and respond to the needs of our students, community and business partners?

**Excellence**

- How do we deliver quality processes, services and learning experiences?
- How do we encourage faculty and staff to enhance their skills and knowledge?
- How do we demonstrate that we expect excellence for all students, faculty and staff?
- How do we recognize and celebrate achievements?

**Integrity**

- How do we provide an ethical and respectful environment?
- How do we foster honest and fair relationships?
- How do we recognize our obligation to be good stewards of our resources?
- How do we continue to earn the public’s trust through principled leadership?

**Accessibility**

- How do we reduce financial, environmental, social and educational barriers to promote student learning and success?
- How do we ensure that a range of choices in programs and services is accessible to diverse learners?
• How do we create a positive environment that expands opportunities and experiences for all members of our community?

Innovation
• How do we foster an environment that encourages an open exchange of ideas?
• How do we encourage and reward exploration, inquiry, risk-taking and entrepreneurship?
• How do we anticipate change and respond with innovative programs and service to internal and external trends?

Learning College
In 2003, Central Piedmont Community College launched an institutional initiative to transform the College into a more learning-centered organization. A learning college places learning first in all decisions and focuses on documenting learning outcomes. We consider the entire College a community in learning and we work collaboratively to create substantive change in all of our learners - students, employees, and the organization as a whole. Success is achieved when improved learning can be documented.

Core Competencies
In support of the Learning College initiative, four core competencies have been identified as important to the success of CPCC graduates. All graduates of associate degree programs are expected to demonstrate proficiency in each of the following competencies as evidenced through learning activities within the program:

• Communication: the ability to read, write, speak, listen and use nonverbal skills effectively with different audiences
• Critical Thinking: the ability to think using analysis, synthesis, evaluation, problem solving, judgment and the creative process
• Personal Growth and Responsibility: the ability to understand and manage self, to function effectively in social and professional environments, and to make reasoned judgments based on an understanding of the diversity of the world community
• Information Technology and Quantitative Literacy: the ability to locate, understand, evaluate and synthesize information and data in a technological and data-driven society

Policies and Procedures
Policies and Procedures for Central Piedmont Community College are accessible on the College’s website at http://www.cpcc.edu/administration/policies-and-procedures. Questions about the College’s policies and procedures can be directed to the Office of the Executive Assistant to the President.

College policies and procedures are organized into seven categories with three appendices:
1. The Equal Opportunity Program (http://www.cpcc.edu/administration/policies-and-procedures/7-students)
2. The Board of Trustees
3. The College Organization
4. Personnel
5. Education Programs
6. College Operations

7. Students
Appendices
A. Constitution: Classified Staff Council (http://www.cpcc.edu/student_life/sga/constitution/view)
B. Constitution: College Senate
C. Constitution: Student Government Association

Frequently requested policies pertaining to students are listed below. Descriptions and information about them can be accessed by the navigation menu to the left of this page:

Course Credit and Placement
Advanced Placement Examination Course Credit Guidelines
College-Level Examination Program (CLEP)
Course Credit Guidelines for Military Service
Course Substitution
Course Waiver
Credit by Examination
International Baccalaureate Course Credit Guidelines

Registration
Auditing Courses
Course Load Regulation
Repeating Courses
Student Records (Transcripts)
Transcript Evaluation Process

Class Participation
Attendance
Changing Grades
Grading Policy
Late Entry
Student Academic Integrity Policy

Graduation
Academic Honors Graduation
Graduation

Student Conduct
Student Code of Conduct
Student Grievance Procedure
Readmission from Suspension

Academic Honors
Graduation Ceremony Honors
The Graduation with Honors designation (which entitles one to wear cords at a graduation ceremony) is determined by program grade point average (GPA). If a student simultaneously graduates from two or more programs with an honors level GPA in one program and not in the other, the student will graduate with honors. If a student is eligible for honor cords in both programs, the student will wear only the cord designating the highest honor.

President’s List
To honor students for outstanding academic achievement, the College publishes a President’s List at the end of each term recognizing students enrolled in curriculum programs who meet the following requirements:

• In a given term, completed at least 12 hours of credit in courses numbered 100 through 299.
• In a given term, achieved a 4.0 grade point average with no "Incomplete" or "Withdrawn" course status.

**Dean’s List**

To honor students for outstanding academic achievement, the College publishes a Dean’s List at the end of each term recognizing students enrolled in curriculum programs who meet the following requirements:

• In a given term, completed at least 12 hours of credit in courses numbered 100 through 299.
• In a given term, achieved a 3.50 or higher grade point average with no "Incomplete" or "Withdrawn" course status.

**Advanced Placement Examination Course Credit Guidelines**

Students must request that official Advanced Placement Test results be sent to:

Office of Admissions
Central Piedmont Community College
PO Box 35009
Charlotte, NC 28235

<table>
<thead>
<tr>
<th>AP Examinations</th>
<th>Score Required</th>
<th>Hours Granted</th>
<th>College Courses Credited</th>
</tr>
</thead>
<tbody>
<tr>
<td>American (US) History</td>
<td>3</td>
<td>6</td>
<td>HIS 131 &amp; HIS 132</td>
</tr>
<tr>
<td>Amer Politics</td>
<td>3</td>
<td>3</td>
<td>POL 120</td>
</tr>
<tr>
<td>Art History</td>
<td>3</td>
<td>3</td>
<td>ART 111</td>
</tr>
<tr>
<td>Art Studio Drawing</td>
<td>0</td>
<td>0</td>
<td>No Credit</td>
</tr>
<tr>
<td>Art Studio General</td>
<td>0</td>
<td>0</td>
<td>No Credit</td>
</tr>
<tr>
<td>Biology</td>
<td>3</td>
<td>4</td>
<td>BIO 110 or BIO 111</td>
</tr>
<tr>
<td>Chemistry</td>
<td>5</td>
<td>8</td>
<td>BIO 111 and BIO 112</td>
</tr>
<tr>
<td>Chemistry</td>
<td>3</td>
<td>4</td>
<td>CHM 151</td>
</tr>
<tr>
<td>Computer Science A</td>
<td>3</td>
<td>3</td>
<td>CIS 115</td>
</tr>
<tr>
<td>Computer Science AB</td>
<td>3</td>
<td>3</td>
<td>CSC 193</td>
</tr>
<tr>
<td>Economics Macro</td>
<td>3</td>
<td>3</td>
<td>ECO 252</td>
</tr>
<tr>
<td>Economics Micro</td>
<td>3</td>
<td>3</td>
<td>ECO 251</td>
</tr>
<tr>
<td>English Language</td>
<td>3</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>English Lit</td>
<td>3</td>
<td>3</td>
<td>ENG 241</td>
</tr>
<tr>
<td>Environmental Science</td>
<td></td>
<td>Do Not Offer</td>
<td></td>
</tr>
<tr>
<td>European History</td>
<td>(3)</td>
<td>(6)</td>
<td>Do Not Offer (HIS 121, HIS 122)</td>
</tr>
<tr>
<td>French Language</td>
<td>3</td>
<td>8</td>
<td>FRE 111, FRE 181, FRE 112, FRE 182</td>
</tr>
<tr>
<td>German Language</td>
<td>3</td>
<td>8</td>
<td>GER 111, GER 181, GER 112, GER 182</td>
</tr>
<tr>
<td>German Lit</td>
<td>3</td>
<td>8</td>
<td>GER 211, GER 281, GER 212, GER 282</td>
</tr>
<tr>
<td>Government (see American Pol.)</td>
<td></td>
<td>Do Not Offer</td>
<td></td>
</tr>
<tr>
<td>Comp Politics</td>
<td>3</td>
<td>3</td>
<td>POL 210</td>
</tr>
<tr>
<td>Human Geography</td>
<td>3</td>
<td>3</td>
<td>GEO 111</td>
</tr>
<tr>
<td>Latin Catullus/Horace</td>
<td></td>
<td>Do Not Offer</td>
<td></td>
</tr>
<tr>
<td>Calculus AB</td>
<td>3</td>
<td>4</td>
<td>MAT 271</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>3</td>
<td>8</td>
<td>MAT 271 &amp; MAT 272</td>
</tr>
<tr>
<td>Music Listening/Lit</td>
<td>3</td>
<td>3</td>
<td>MUS 110</td>
</tr>
<tr>
<td>Music Theory</td>
<td>3</td>
<td>4</td>
<td>MUS 121</td>
</tr>
<tr>
<td>Physics B</td>
<td>3</td>
<td>8</td>
<td>PHY 151 and PHY 152</td>
</tr>
<tr>
<td>Physics C Mechanics</td>
<td>3</td>
<td>4</td>
<td>PHY 251</td>
</tr>
<tr>
<td>Physics C Electricity</td>
<td>3</td>
<td>3</td>
<td>PSY 150</td>
</tr>
<tr>
<td>Spanish Language</td>
<td>3</td>
<td>8</td>
<td>SPA 111, SPA 181, SPA 112, SPA 182</td>
</tr>
<tr>
<td>Spanish Lit</td>
<td>3</td>
<td>8</td>
<td>SPA 211, SPA 281, SPA 212, SPA 282</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
<td>4</td>
<td>MAT 155 and MAT 155A</td>
</tr>
<tr>
<td>World History</td>
<td>3</td>
<td>8</td>
<td>HIS 111, HIS 112</td>
</tr>
</tbody>
</table>

**Attendance**

Absences seriously disrupt a student’s orderly progress in a course and a close correlation often exists between the number of absences and the final grade. Although an occasional absence might be unavoidable, the absence does not excuse a student from meeting the requirements of the missed class. The student is responsible for preparing all assignments for the next class and for completing work missed. Instructors are responsible for establishing appropriate course attendance requirements and for informing students of those requirements on course syllabi distributed at the beginning of the academic term.

A student who, for any reason, cannot complete a course must take the responsibility to formally withdraw (W) in order to avoid a failing grade. To
receive a "W" grade, a student must withdraw prior to the 35 percent date of the class. Final dates for withdrawing from classes are available from class instructors. The request for official withdrawal must be processed online through MyCollege or at a registration office. The instructor also may assign a "W" at the end of the term when circumstances warrant such action. A "W" will remain on the transcript. A "W" does not count as credit hours attempted. To receive credit, a student who received a "W" must re-register and pay for the course in a subsequent term. Withdrawals may affect financial aid and veteran students.

A student may withdraw by contacting registration personnel on any CPCC campus by telephone or in person, or through myCollege student account accessed on the College’s homepage at www.cpcc.edu. Financial Aid students need to contact the Financial Aid/VA Office before withdrawing from courses. In addition, veteran students need to contact the college’s Veterans Affairs Certifying Official if withdrawing from any course. Reductions may result in overpayments to the US Department of Education and the US Department of Veterans Affairs.

Students at Central Piedmont Community College may take two days each academic year of excused absences for religious observances required by their faith. For more information, go to Policy 5.11 Attendance Regulation (http://www.cpcc.edu/administration/policies-and-procedures/5-11-attendance-regulation).

Auditing Courses

Students who wish to audit a course must complete an Audit Agreement form, have it signed by the course instructor and submit the Audit Agreement to Registration Services at any CPCC campus within the date ranges below:

- After the first four weeks of a 16-week term (28 calendar days including the first day of the term)
- After the first two weeks of an eight-week term (14 calendar days including the first day of the term)
- After the first week of a four-week term (seven calendar days including the first day of the term)

Registration procedures and fees for an audited class are the same as those for regular and non-credit enrollment. Certain courses, however, may be designated as inappropriate for audit. Non-credit courses may not be audited without permission from the Dean of Corporate and Continuing Education. No student is allowed to change from an audit to a credit designation or from a credit to an audit designation after the audit deadline.

The hours of an audited course are counted as part of a student’s load and are subject to overload restrictions. A student may audit a course only once and all those doing so must adhere to the instructor’s classroom policies. A record of the audit is entered on the student’s transcript as “AU.” The “AU” carries no college credit and is not converted to a letter grade. Audited courses are not covered by financial aid or veterans affairs. For more information, go to Policy 5.12 Audits (http://www.cpcc.edu/administration/policies-and-procedures/5-12-audits-substitutions-and-waivers), Substitutions and Waivers.

Changing Grades

The instructor of record is the individual authorized and responsible for personally changing grades for his/her students. In an instructor’s absence, the program chair, division director, or dean of the appropriate curriculum area may change a grade for that instructor after consulting with the instructor. In circumstances when the instructor cannot be located for an extended period of time, and valid reasons exist for changing the grade, the division director or dean is authorized to make the appropriate change. The procedures below are to be followed when a grade change is appropriate:

1. The instructor (or division director) will log into WebAdvisor, select the Faculty tab, then select Grade Change Request Form, then Grade Change Request.
2. An electronic notification will be sent to the College Registrar/Associate Dean, Admissions, Records, Registration and Graduation or a designee, who will also electronically approve the change request and personally change the grade on the student’s electronic record. The change request will be electronically filed in Student Records.
3. Financial Aid and Veterans Affairs students should notify the Financial Aid/Veterans Affairs Office of any grade changes.

College-Level Examination Program (CLEP)

Central Piedmont Community College is a national test center for administering computer-based CLEP exams. CPCC students, as well as the general public, may take CLEP exams. The examinations are administered by appointment at the Central Campus Testing Center in Room 248 of the Central High Building. Advance registration is required. Applicants may register online at www.cpcc.edu/testing_assessment or call 704.330.6886 (http://catalog.cpcc.edu/aboutcpcc/collegepoliciesprocedures/collegelevelexaminationprogram/tel:704.330.6886) for additional information.

CPCC students who perform satisfactorily on CLEP exams receive a grade of “X.” The “X” grade carries no quality points, but credit hours are awarded identical to the number normally assigned to that course at CPCC. Each academic department is responsible for determining the maximum amount of CLEP credit awarded within their respective program. CLEP credit is based on the policy used at the time the exam is completed. Students are encouraged to verify all CLEP requirements, including transferability, prior to taking a CLEP exam. CLEP fees and policies are subject to change.

Central Piedmont Community College grants CLEP credit according to the following guidelines:

<table>
<thead>
<tr>
<th>Examination</th>
<th>Credit Granting Score</th>
<th>Credits Granted* (Sem. Hrs.)</th>
<th>Equivalent CPCC Course(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting, Financial</td>
<td>50</td>
<td>4</td>
<td>ACC 120</td>
</tr>
<tr>
<td>Algebra, College</td>
<td>50</td>
<td>4</td>
<td>MAT 171</td>
</tr>
<tr>
<td>American Government</td>
<td>50</td>
<td>3</td>
<td>POL 120</td>
</tr>
<tr>
<td>American Literature</td>
<td>50</td>
<td>6</td>
<td>ENG 231, ENG 232</td>
</tr>
<tr>
<td>Biology**</td>
<td>50</td>
<td>4</td>
<td>BIO 110</td>
</tr>
<tr>
<td>Business Law, Introductory</td>
<td>50</td>
<td>3</td>
<td>BUS 115</td>
</tr>
<tr>
<td>Calculus</td>
<td>50</td>
<td>4</td>
<td>MAT 271</td>
</tr>
<tr>
<td>Chemistry***</td>
<td>50</td>
<td>4</td>
<td>CHM 151</td>
</tr>
<tr>
<td>College Composition</td>
<td>50</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>Course</td>
<td>Credit</td>
<td>Hours</td>
<td>Notes</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>--------</td>
<td>-------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>College Mathematics</td>
<td>50</td>
<td>3</td>
<td>MAT 110</td>
</tr>
<tr>
<td>English Literature</td>
<td>50</td>
<td>6</td>
<td>ENG 241, ENG 242</td>
</tr>
<tr>
<td>French, Level I</td>
<td>50</td>
<td>6</td>
<td>FRE 111, FRE 112</td>
</tr>
<tr>
<td>French, Level II</td>
<td>59</td>
<td>12</td>
<td>FRE 111, FRE 112 &amp; FRE 211, FRE 212</td>
</tr>
<tr>
<td>German, Level I</td>
<td>50</td>
<td>6</td>
<td>GER 111, GER 112</td>
</tr>
<tr>
<td>German, Level II</td>
<td>60</td>
<td>12</td>
<td>GER 111, GER 112 &amp; GER 211, GER 212</td>
</tr>
<tr>
<td>History of the U.S. I: Early Colonizations to 1877</td>
<td>50</td>
<td>3</td>
<td>HIS 131</td>
</tr>
<tr>
<td>History of the U.S. II: 1865 to the Present</td>
<td>50</td>
<td>3</td>
<td>HIS 132</td>
</tr>
<tr>
<td>Human Growth and Development</td>
<td>50</td>
<td>3</td>
<td>PSY 241</td>
</tr>
<tr>
<td>Humanities</td>
<td>50</td>
<td>6</td>
<td>HUM 211, HUM 212</td>
</tr>
<tr>
<td>Macroeconomics, Principles of</td>
<td>50</td>
<td>3</td>
<td>ECO 252</td>
</tr>
<tr>
<td>Management, Principles of</td>
<td>50</td>
<td>3</td>
<td>BUS 137</td>
</tr>
<tr>
<td>Marketing, Principles of</td>
<td>50</td>
<td>3</td>
<td>MKT 120</td>
</tr>
<tr>
<td>Microeconomics, Principles of</td>
<td>50</td>
<td>3</td>
<td>ECO 251</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>50</td>
<td>3</td>
<td>PHY 110</td>
</tr>
<tr>
<td>Precalculus</td>
<td>50</td>
<td>4</td>
<td>MAT 175</td>
</tr>
<tr>
<td>Psychology, Introductory</td>
<td>50</td>
<td>3</td>
<td>PSY 150</td>
</tr>
<tr>
<td>Sociology, Introductory</td>
<td>50</td>
<td>3</td>
<td>SOC 210</td>
</tr>
<tr>
<td>Spanish, Level I</td>
<td>50</td>
<td>6</td>
<td>SPA 111, SPA 112</td>
</tr>
<tr>
<td>Spanish, Level II</td>
<td>63</td>
<td>12</td>
<td>SPA 111, SPA 112 &amp; SPA 211, SPA 212</td>
</tr>
</tbody>
</table>

* Recommended by the American Council on Education (ACE)
** Subject to satisfactory performance in any other laboratory science course at CPCC
*** Subject to completion of CHM 152 with a minimum grade of “C”

## Course Credit Guidelines for Military Service

CPCC will approve academic credit for military basic training equivalent to specific physical education activity courses. Other military training that is deemed to be college level will be evaluated and academic credit may be awarded when it is considered equivalent to specific course(s) in the North Carolina Community College System’s Common Course Library. Documentation of the training must be presented to Student Records in the form of the student’s original discharge papers (DD Form 214 - Member 4 copy) or an official military transcript.

## Course Load Regulation

Students registered for at least 12 hours of credit during the fall and spring terms, and for at least 9 hours of credit during the summer term, are considered full-time students. Students are advised that overload status may be required as a result of registrations that exceed 18 course hours during the fall and spring terms and over 13 hours during the summer.

Students must identify the overload course(s) and then secure approval from the faculty advisor, or the appropriate program or discipline chair, division director, or instructional dean.

Students taking a full load of EFL-English as a Foreign Language (Academic ESL), which includes skill-based courses in composition, grammar, listening/speaking and reading for a total of 20 credit hours, are not required to obtain overload permission in order to take these four courses.

Students must obtain overload approval for 19 to 20 hours during fall and spring terms and for 14 to 15 hours during the summer term from a faculty advisor, program chair, division director, or appropriate instructional dean. The dean of the student’s program of study area must approve overloads of 21 to 28 hours during fall or spring terms and 16 to 20 hours during summer term. Students are not allowed to register for more than 28 hours during fall or spring terms and 20 hours during summer term. For more information, go to Policy 5.07 Course Load (http://www.cpcc.edu/administration/policies-and-procedures/5-07-course-load).

## Course Substitution

Course substitutions are permitted with final approval by the Division Director of the academic area in which the substitution is sought. For students in Associate in Applied Science (A.A.S.) programs, substitution requests should originate with the advisor of the students’ active program of study. For students in College Transfer programs [Associate in Arts (A.A.), Associate in Science (A.S.) and Associate in Fine Arts (A.F.A.)], requests should originate with the advisor of the related academic area.

Substitutions are approved and applied toward specific degrees, diplomas, or certificates; therefore, it is necessary for a student to be officially enrolled in the appropriate program of study and catalog year before a substitution can be given.

Students with questions about this process may consult with their faculty advisor or contact Counseling and Advisement Services at 704.330.6433. (http://catalog.cpcc.edu/aboutcpcc/collegepoliciesprocedures/coursesubstitution/tel:704.330.5013) Veterans Affairs students are approved only by the North Carolina State Approving Agency for two course substitutions per program. For more information, go to Policy 5.12
Course Waiver

Audits, Substitutions and Waivers (http://www.cpcc.edu/administration/policies-and-procedures/5-12-audits-substitutions-and-waivers).

Course Waiver

Course waivers for graduation are permitted upon the recommendation of the division director of the student's Associate in Applied Science (A.A.S.) Degree program or the dean who has responsibility for the specific course in the Associate of Arts (A.A.), Associate of Science (A.S.), Associate of Fine Arts (A.F.A.) or Associate in General Education (A.G.E.) Degree. (The AGE program is discontinued for new students. Currently enrolled students may complete the program). No credit hours are granted. General Education requirements may not be waived for any reason. For more information, go to Policy 5.12 Audits, Substitutions and Waivers (http://www.cpcc.edu/administration/policies-and-procedures/5-12-audits-substitutions-and-waivers).

Credit By Examination

To receive credit by examination, a student must show convincing evidence of special aptitude or knowledge in the course material. A written, oral, and/or performance examination will be developed and administered by an instructor of the course. The examination is subject to the approval of the division director. If the student achieves satisfactory performance on the examination, a grade of "X" is recorded on the transcript. The "X" grade earns no quality points, but credit hours are given identical to the number of credit hours normally assigned to that course at Central Piedmont Community College.

For further information, see policy 5.02 Credit by examination at http://www.cpcc.edu/administration/policies-and-procedures/5-02-credit-by-examination.

Credit by examination is not covered by Financial Aid or Veterans Affairs.

Grading Policy

Student Grade Point Average

Students are graded according to the following grade point system:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Point Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>Excellent</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>Very Good</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>Poor</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
<td>Failing</td>
</tr>
</tbody>
</table>

The following grades are not used in computing the grade point average:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AU</td>
<td>Audit</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete</td>
</tr>
<tr>
<td>P</td>
<td>Passing*</td>
</tr>
<tr>
<td>R</td>
<td>Repeat*</td>
</tr>
<tr>
<td>S</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>U</td>
<td>Unsatisfactory</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawal</td>
</tr>
<tr>
<td>WN</td>
<td>Withdrawal/Never Attended</td>
</tr>
<tr>
<td>X</td>
<td>Credit by Examination</td>
</tr>
</tbody>
</table>

* P/R grades are to be used in special situations only (e.g. Math Modules, DRE Courses) Effective January 1, 2012

Student Attendance

Attendance may affect a student’s grade in an individual course as well as financial aid eligibility. Consult individual course syllabi for information on how attendance may affect a course grade.

Student Grade Point Average (GPA)

Students are graded according to the following grade point system.

Example:

MAT 175, 4 credits, Grade A = 4 points, 4 X 4 = 16
ENG 113, 3 credits, Grade D = 1 point, 3 X 1 = 3
SPA 111, 3 credits, Grade B = 3 points, 3 X 3 = 9
SPA 181 lab, 1 credit, Grade B = 3 points, 1 X 3 = 3
ACA 118, 2 credits, Grade C = 2 points, 2 X 2 = 4
Total Credits: 13 Total Points: 35
Divide 35 points by 13 credits = 2.692 GPA (Grade Point Average)

Three GPA’s will appear on the student’s academic record:

1. cumulative GPA
2. cumulative program GPA
3. term GPA

Grades earned under the quarter system will retain their same value in calculating the GPA. The computer converts the GPA from quarter hours to semester hours for students’ combined GPA.

Semester Credit Hours

• 16 contact hours of classroom work equals 1 semester credit hour.
• 32 or 48 contact hours of laboratory work equals 1 semester credit hour.
• 48 contact hours of clinical work equals 1 semester credit hour.
• 160 contact hours of work experience equals 1 semester credit hour.

Withdrawal

Whenever students determine they are unable to complete courses in which they are currently enrolled, it is their responsibility to initiate procedures leading to a formal withdrawal (W) in order to avoid a failing (F) grade. To receive a “W” grade, students must withdraw prior to the 35 percent date of the class. Final dates for withdrawing from a course are announced in the instructor's syllabus. Instructors also may assign a “W” at other times when circumstances warrant such action. A “W” status remains on the transcript and does not count as credit hours attempted. To receive credit, students who receive a “W” must re-register and pay for the course in a subsequent term.

Financial aid recipients need to refer to the financial aid satisfactory progress policy to determine if schedule adjustments will affect financial aid. Additionally, financial aid students may be required to repay the US Department of Education any of their tuition/fees and/or book charges. Withdrawing from any class may create an overpayment status for Veterans Affairs students. The last day of attendance must be verified for all Financial Aid/VA students.
Incomplete

An “I” (Incomplete) may be assigned when a student has persisted through the course and has completed at least 90 percent of the requirements for passing the course or when the instructor has determined extenuating circumstances exist. When an “I” is assigned, the instructor must fill out an “Incomplete Grade Form” and submit to the Division Office. A student must resolve an “I” (Incomplete) grade within the time frame specified by the instructor or the division, but no later than six months from the end of the term for which the grade was assigned. When an “I” grade has been resolved, the final grade will be recorded with the “I” (e.g., I/B) and the GPA will be recomputed. An “I” which is unresolved will be changed to the grade of “I/F” after the specified expiration date. For veterans affairs students, the last day of attendance must be verified for any incomplete grades.

Standards of Academic Progress

Academic Warning

Students enrolled in a program whose grade point averages for the term fall below 2.0 will be placed on Academic Warning. Students placed on Academic Warning are blocked from registering until they contact their faculty advisors or other designated individuals. Student who improve their GPA the end of the next term are placed back into good standing.

Academic Probation

Students are placed on Academic Probation if their term GPA does not improve by the end of the next semester. Students must contact their faculty advisors and are not able to register until grades are posted. While on Academic Probation, students are limited to registering for the number of courses approved by their faculty advisors. If their GPA does not improve by the end of the term of probation, students are placed on Academic Suspension.

Academic Suspension

Students who do not raise their term GPA to the required level by the third term of not meeting Standards of Progress, are placed on First Academic Suspension. While on First Academic Suspension, students are referred for academic advisement to student counselors who work with them to develop an academic course of action. If students fail to make appropriate progress during the term of First Academic Suspension, they are placed on Final Suspension and are suspended from enrolling in any curricular classes at CPCC for one term. During that term, students have the option to take developmental classes, ESL, Career Development, Continuing Education classes or no classes.

Students who raise their GPA the next term following any of the above interventions are returned to good standing. However, after Academic Suspension, students must see a counselor to have their registration block removed before registering for the next term. For more information, go to Policy 5.10 Grading Policy (http://www.cpcc.edu/administration/policies-and-procedures/5-10-grading-policy).

Graduation

The CPCC Graduation Office awards degrees, diplomas, certificates and Adult High School diplomas to eligible students. In order to receive a credential, potential graduates first must submit the appropriate graduation application according to the following dates:

<table>
<thead>
<tr>
<th>Potential Graduates</th>
<th>Begin Submitting Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring</td>
<td>January 1</td>
</tr>
<tr>
<td>Summer</td>
<td>May 1</td>
</tr>
<tr>
<td>Fall</td>
<td>August 1</td>
</tr>
</tbody>
</table>

There is no application deadline; however, spring applications submitted by March 1 are guaranteed to be processed in time to participate in the graduation ceremony.

Graduation Process for Degrees & Diplomas

(Students pursuing the Cytotechnology certificate should also follow this process.)

- **Meet with an Advisor** – Students should meet with their advisor prior to applying for graduation. Advisors check that all transcripts have been received, that students are admitted to the correct program and under the correct catalog year of requirements, that any course substitutions and waivers are submitted and that students have a course of study for the remainder of their program.

- **Submit a Graduation Application** – Potential graduates should submit a Graduation Application to the Graduation Office during the time frame published. Applications should be submitted online through a MyCollege student account.

- **Receive a Degree Audit Status Update** – Graduation analysts review records and email degree audit status updates to students approximately eight weeks after an application is submitted. These evaluations cannot be completed at the time the application is submitted.

- **Receive a copy of your Degree or Diploma** – After completion of all requirements, including successful completion of final courses required for graduation, a notation of the degree/diploma and the date of graduation is entered on students’ CPCC transcripts. If ordered, degrees/diplomas are mailed to students approximately eight weeks after graduation. A student’s date of graduation is the term when all documents needed for graduation certification are complete.

Graduation Process for Certificates

- **Meet with an Advisor** – Students should meet with their advisor prior to applying for graduation. Advisors check that students are admitted to the correct program under the correct catalog year of requirements, that any course substitutions and waivers have been submitted and that students have a course of study for the remainder of their program.

- **Submit a Certificate Graduation Application** – Students should submit a Certificate Graduation Application during the time frame published; as certificates are not automatically awarded by the College. This form may be submitted online through a MyCollege student account (if the student is admitted to the program.)

- **Receive a Certificate Audit Update** – Graduation Analysts review records and email students degree audit updates approximately eight weeks after an application is submitted. These evaluations cannot be completed at the time the application is submitted.

- **Receive your Certificate** – After completion of all requirements, including successful completion of the final courses required for graduation, a notation of the certificate and the date of graduation is entered on the student’s CPCC transcript. One free copy of the certificate is mailed to the student approximately eight weeks after completion. The student’s date of graduation is the term when all
documents needed for graduation certification are complete and on file. Additional copies of certificates may be purchased for a small fee.

**Graduation Process for Adult High School Diplomas**

- **Meet with an Advisor** – Students should meet with their advisor prior to applying for graduation. Advisors review student education plans and determine a term of graduation.

- **Submit a Graduation Application** – Students should submit an application during the time frame published. Applications are available online through MyCollege student accounts or the Graduation Office website, in the Graduation Office (Room 211 of Overcash Building on Central Campus) or in the Adult High School Office.

- **Receive Update from Graduation Office** – Graduation analysts audit student records and notify students of their status by email. These evaluations cannot be completed at the time the application is submitted.

- **Receive your Diploma** – After completion of all requirements, including successful completion of final courses required for graduation, a notation of the Adult High School Diploma and the date of graduation are entered on the student’s CPCC transcript. The student’s date of graduation is the term when all documents needed for graduation certification are complete and on file. If ordered, diplomas are mailed to students approximately eight weeks after graduation. Please note: A minimum of 1 Adult High School credit hour must be earned at Central Piedmont Community College to be awarded the Adult High School Diploma.

**Please note the following**

**Program requirements:** The College reserves the option of changing the requirements for completing a degree, diploma, or certificate program at any time.

**Returning students:**

- When a student is not enrolled in program-related courses for three or more consecutive semesters, requirements for program completion are based on the requirements in effect when the student re-enrolls in the program, not on those in effect when the student originally entered the program.

- An official copy of a student’s high school transcript must be on file in order to be admitted to a degree or diploma program.

- Exceptions to course requirements and catalog year changes (beginning Fall 1997) can be made upon approval of the division director. Sometimes such exceptions must be made because courses in an earlier curriculum program may no longer be offered. Students are not placed in a catalog year prior to the 1997-1998 year.

**GPA:** A student must have a program Grade Point Average (GPA) of 2.0 or better to receive a degree, diploma, or a certificate. Some programs may require a grade of “C” or better.

**Credentials:** An official high school transcript or equivalent must be on file, showing the date of graduation prior to awarding certificates, diplomas, and degrees.

**Graduation Ceremony:** CPCC holds one graduation ceremony in May of each year. Details are sent to eligible graduates in April. The ceremony is held to recognize graduates of the spring term, as well as the previous fall and summer terms. Students who will graduate the following summer may request special permission to participate if they have two or fewer courses totaling seven or less credits that they will complete during the summer term. They should apply for graduation as scheduled and must show proof of registration for their final courses.

**Residence:** A student must meet the Curriculum Program Residency requirements of the College.

**Degrees:** A minimum of 21 program hours must be earned at Central Piedmont Community College.

**College Diplomas:** A minimum of 12 program hours must be earned at Central Piedmont Community College.

**Certificates:** A minimum of thirty percent (30%) of program credits must be earned at Central Piedmont Community College.

For more information on policies governing graduation, please see Policy 5.13 Program Completion Requirements (http://www.cpcc.edu/administration/policies-and-procedures/5-13-program-completion-regulations).

### International Baccalaureate Course Credit Guidelines

<table>
<thead>
<tr>
<th>IB Exam</th>
<th>Score of 4 Cr. Hrs</th>
<th>CPCC Courses</th>
<th>Score of 5 Cr. Hrs</th>
<th>CPCC Courses</th>
<th>Score of 6 or 7 Cr. Hrs</th>
<th>CPCC Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>English HL</td>
<td>No Credit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematical</td>
<td>No Credit</td>
<td>6 ENG 111,</td>
<td>6 ENG 111,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Studies SL</td>
<td></td>
<td>ENG 113</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Studies SL</td>
<td></td>
<td>MAT 165*</td>
<td></td>
<td>3 MAT 165*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematical</td>
<td>No Credit</td>
<td>4 MAT 271</td>
<td></td>
<td>4 MAT 271</td>
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</tr>
<tr>
<td>Studies HL</td>
<td></td>
<td>8 MAT 271,</td>
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<td>8 MAT 271,</td>
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</tr>
<tr>
<td>Biology HL</td>
<td>No Credit</td>
<td>4 BIO 110 or</td>
<td>4 BIO 111,</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>BIO 111</td>
<td>or BIO 120</td>
<td>4 BIO 111,</td>
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<td></td>
<td></td>
<td>or BIO 111</td>
<td></td>
<td>BIO 120</td>
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</tr>
<tr>
<td>Chemistry HL</td>
<td>No Credit</td>
<td>8 CHM 151,</td>
<td>8 CHM 151,</td>
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<tr>
<td>Geography HL</td>
<td>No Credit</td>
<td>3 GEO 111</td>
<td></td>
<td>3 GEO 111</td>
<td></td>
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<tr>
<td>The Americas HL</td>
<td>No Credit</td>
<td>6 HIS 131,</td>
<td></td>
<td>6 HIS 131</td>
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<td></td>
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<td>HIS 132</td>
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<td>HIS 132</td>
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<tr>
<td>Twentieth Century</td>
<td>No Credit</td>
<td>3 HIS 165</td>
<td></td>
<td>3 HIS 165</td>
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<tr>
<td>World</td>
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<tr>
<td>French HL</td>
<td>4 FRE 112,</td>
<td></td>
<td>8 FRE 112,</td>
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<tr>
<td></td>
<td>FRE 182</td>
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<td>FRE 182,</td>
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<td>FRE 211,</td>
<td>12 FRE 112,</td>
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<td>FRE 281</td>
<td>FRE 182,</td>
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<td>FRE 281,</td>
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<td>FRE 281,</td>
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<td></td>
<td></td>
<td>FRE 282</td>
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</tr>
</tbody>
</table>
Students who receive veteran’s benefits should be aware that they will not receive benefits for previously completed courses (as determined by the appropriate division). For all financial aid recipients, repeated courses will be counted toward the 150 percent timeframe. When students repeat courses, the repeated course is included in (a) enrollment status computations (full, 3/4, 1/2, or less than 1/2 time); (b) financial aid awards; (c) 150 percent calculations; and (d) GPA calculations.

## Student Academic Integrity Policy

The purpose of the CPCC Code of Student Academic Integrity (see CPCC Student Handbook) is to support the continued growth and development of a strong academic community based on the principles of academic honesty and integrity.

Although the commitment to maintaining and enforcing high standards of academic honesty and integrity at Central Piedmont Community College rests with all members of the College community, faculty members, in particular, are charged with taking measures to preserve, convey and model those standards by example in their own academic pursuits and in the learning environment which they create for their students. Students, likewise, as members of the College’s academic community, are obligated to take an active role in the preservation of the standards of academic honesty and integrity and encourage others to respect those standards.

It is the expectation of the College that students maintain absolute integrity and high standards of individual honor in their academic work. Conduct that violates the standards of academic honesty and integrity which is subject to disciplinary action, may include, but is not limited to: cheating, fabrication and falsification, plagiarism, abuse of academic materials, installation of a computer virus or complicity in academic dishonesty. Any student who violates the CPCC Code of Student Academic Integrity is subject to academic disciplinary action. Such action may include, but is not limited to, recorded entry of the incident by the Office of Student Conduct and Civility, reduced grades or dismissal from College classes, programs and activities.

## Student Code of Conduct

The College reserves the right to maintain a safe and orderly educational environment for students and staff. Therefore, when in the judgment of College officials, a student’s conduct disrupts or threatens to disrupt the College community, appropriate disciplinary action will be taken to restore and protect the well being of the community.

Students are expected to conduct themselves in accordance with generally accepted standards of scholarship and morality. The purpose of the Student Code of Conduct is not to restrict student rights, but to protect the rights of individuals in their academic pursuits. The complete policy and procedures are given on the College website at: http://www.cpcc.edu/firstyear/success-documents/code-of-conduct

College Security Officers and employees have the authority to take immediate actions and begin disciplinary proceedings in response to violations of the Student Code of Conduct.

Students should note that the possession, consumption, or distribution of alcohol or illegal drugs, or possession of weapons on campuses or any other CPCC instructional site is specifically prohibited and regulated by state statute. Violators will be prosecuted by the authorities. For more information, go to Policy 7.00 Conduct of Students (http://www.cpcc.edu/administration/policies-and-procedures/7.00-conduct-of-students).

| German HL | 4 | GER 112, GER 182 | 8 | GER 112, GER 182, GER 211, GER 281 | 12 | GER 112, GER 182, GER 211, GER 281, GER 212, GER 282 |
| Spanish HL | 4 | SPA 112, SPA 182 | 8 | SPA 112, SPA 182, SPA 211, SPA 281 | 12 | SPA 112, SPA 182, SPA 211, SPA 281, SPA 212, SPA 282 |
| Economics HL | No Credit | 6 | ECO 251, ECO 252 | 6 | ECO 251, ECO 252 |
| Computer Studies | No Credit | 4 | CSC 120 | 4 | CSC 120 |
| Art & Design | No Credit | No Credit | No Credit |
| Psychology | No Credit | 3 | PSY 150 | 3 | PSY 150 |

* MAT165 Finite Math-in Common Course Library, not currently taught at CPCC

## Late Entry

To ensure student success and accuracy of reporting, the College prohibits a registered student from entering (attending for the first time) a curriculum class after the 10 percent date. A program dean may make an exception in the case of a College error.

## Readmission from Suspension

When a student returns after a term of suspension, he or she continues to be advised by the student counselor. If, at the end of the term following suspension, the student’s term Grade Point Average (GPA) meets the Standards of Progress, he or she is returned to good standing by a faculty advisor in the program of study. For more information, go to Policy 5.10 Grading Policy (http://www.cpcc.edu/administration/policies-and-procedures/5-10-grading-policy).

## Repeating Courses

### Curriculum Courses

In an effort to earn a higher grade and/or to enhance mastery of course content, students may repeat any curriculum course. Students may not enroll in the same course more than three times without approval of the appropriate division director, discipline chair, or program chair. If students need additional advisement, the division director will refer them to Counseling and Advisement Services. A withdrawal does not count as a repeat.

When a course has been repeated, the higher grade will be used to recalculate the Grade Point Average (GPA). However, all grades will be recorded on the student’s academic transcript. In addition, students who have received a degree from CPCC should be advised that a final student GPA is computed at the time of graduation and this GPA may not be recalculated as courses are repeated. Furthermore, transfer students should be advised that receiving institutions do not have consistent policies regarding GPA computation.
Student Grievance Procedure

Definition

A grievance is a student allegation that a college decision or action is discriminatory or has a negative effect on the student's status at the college.

Regulation

Any student may request a review of a college decision or action alleged to be discriminatory or to have a negative effect on the student's status at Central Piedmont Community College.

A. If the decision or action is alleged to be discriminatory, the student should refer to 7.13 Discrimination and Harassment Policy (http://www.cpcc.edu/administration/policies-and-procedures/7-13-discrimination-and-harassment).

B. If the decision or action concerns a course grade, the student should follow the steps below in Section V.

C. If the decision or action is about any other matter, the student should follow the steps below in Section III.

Procedure

1. The student is encouraged to first informally discuss the matter in question with the college employee most directly involved or may choose to informally discuss the matter with the employee's immediate supervisor.

2. As part of the grievance process, a student may seek mediation after he/she has discussed the grievance with the college employee most directly involved in the dispute and with that employee's immediate supervisor. (See Policy 7.15 Student Mediation Program (http://www.cpcc.edu/administration/policies-and-procedures/7-15-student-mediation-program))

3. If the student is unable to resolve the matter in question through discussion with the college employee most directly involved or the employee's immediate supervisor, the student may file a grievance with the employee's immediate supervisor. All such written grievances shall be submitted on the Student Grievance Form. This written grievance must be filed within 30 calendar days after the alleged decision or action occurred. The grievance will become the document of record.

4. The immediate supervisor will consider the issue and provide the student with a written decision within 10 working days of receiving the written grievance. If the matter is not resolved at the level of the immediate supervisor, the grievance may be appealed to the second-level supervisor and through the employee’s supervising administrators in succession until a resolution is obtained or until the appeal reaches the administrator who reports to the unit vice president.

5. The administrator who reports to the unit vice president will consider the issue and provide the student with a written decision within 10 working days of receiving the written grievance. This administrator's decision will be final.

6. A student may at any stage of the process consult with the dean of Student Life and Service-Learning to obtain advice regarding the grievance process.

Timeliness

A grievance must be presented within 30 calendar days after the decision or action being questioned. Processing at each step cannot exceed 10 working days; however, the time may be extended by agreement of both parties or by extenuating circumstances as decided by the supervisor or administrator to whom the grievance is presented. If the administrator at each step does not meet processing time limitations, the grievant may then request higher administrative assistance in obtaining requested relief. If the grievant does not meet the stated time limitations, the process will be terminated and the grievance cannot be resubmitted.

Course Grade Appeals Procedure

A faculty responsibility at Central Piedmont Community College is the assignment of student course grades according to professionally acceptable methods which are communicated to everyone in the class and applied to all students equally.

Any student who contests a course grade must attempt first to resolve the matter with the faculty member who assigned the grade. Failing to reach a satisfactory resolution, the student may appeal the course grade in accordance with the procedure outlined below. While a grade is being appealed, a student is obligated to abide by the written division policies concerning continuation in programs or continuation in courses with prerequisites.

1. The student must consult initially with the faculty member who assigned the course grade.

2. If the matter is not resolved through discussion with the faculty member, the student may either request mediation (see 7.15 Student Mediation Program (http://www.cpcc.edu/administration/policies-and-procedures/7-15-student-mediation-program)) or file a course grade appeal.

3. If the conference between the student and the faculty member does not resolve the matter then, the student must complete and submit the Grade Appeal Form to the division director where the contested course grade was awarded. This written appeal must be filed within 30 calendar days after the grade has been posted and cannot be appealed beyond this period. The written appeal will become the document of record. The 30-day period may be extended if mediation is a part of the process.

4. The division director will then confer with the student and the faculty member to seek resolution by mutual agreement within 10 working days. When appropriate, the program chair/coordinator of the course in which the grade was assigned will be involved in this conference.

5. Failing such resolution, the student may contact the appropriate instructional dean for an appointment. The dean will request all documentation, including the Student Grade Appeal Form from the division director prior to meeting with the student. Within 10 working days after receiving the documentation, the dean will confer with the student, faculty member, division director and when appropriate, program chair/coordinator. Based on these discussions, the dean will either render a decision or convene the Grade Appeal Committee.

6. If the dean renders a decision, he/she will communicate that decision in writing to the student, the faculty member, the program chair/coordinator and the division director within five working days. If the grade is to be changed, the dean will change the grade within five working days. The dean's decision will be final.

7. If the dean determines that further evaluation of the student's work is warranted, the dean will convene a Grade Appeal Committee within 10 working days. This committee will consist of the convening dean and
three faculty members: one member appointed by the College Senate, one member selected by the student and one member selected by the instructor who assigned the contested grade. The faculty member who assigned the grade, the student, the division director and, when appropriate, the program chair/coordinator will be present at the meeting. The student may bring one guest. The student and faculty member will be given an opportunity to address the committee and to answer questions. The student’s guest, the division director and the program chair/coordinator may not address the committee. The three faculty members will vote to affirm the grade or to change the grade. The committee’s decision will be final. The dean will communicate the committee’s decision in writing within five working days to the student, the division director, the program chair/coordinator and the faculty member who assigned the grade. If the grade is to be changed, the dean will change the grade within five working days.

8. If the decision is made to change the grade, the college will assist the student in resuming studies at the college. For more information, go to Policy 7.09 Grievance Process for Students (http://www.cpcc.edu/administration/policies-and-procedures/7-09-grievance-process-for-students).

**Student Records (Transcripts)**

The College maintains the position that students’ records are their own property; therefore, this information, with certain exceptions defined below, is released only when a student signs a Student Information Release Authorization Form in the Student Records Office. Students may have copies of their transcripts sent to any institutions or individuals they choose and may also order copies for their own use. A $5 fee is required for each official transcript requested. Transcripts are not released if the student owes money to the College. Transcripts may be ordered online through a student’s MyCollege account, in person in the Student Records Office, or at the Admissions, Registration and Records desk at any campus.

**Policies and Procedures**

The College policy on access to and release of student information is available to students, faculty and staff. It is available in the online Student Handbook and in this catalog. For more information, go to Policy 7.02 Student Records (Transcripts) (http://www.cpcc.edu/administration/policies-and-procedures/7-02-student-records-transcripts).

**Annual Notice to Students of Their Rights Under Family Educational Rights and Privacy Act of 1974**

Central Piedmont Community College, in fulfilling its responsibilities to students, must maintain accurate and confidential student records. The College staff recognizes the rights of students to have access to their academic and personal records in accord with existing College policy and FERPA - Family Educational Rights and Privacy Act of 1974 (Buckley Amendment) (https://epic.org/privacy/student/ferpa/FERPA-20-USC-1232g.pdf).

**Definition of Term “Educational Records”**

Education records, as defined under the provisions of the Family Educational Rights and Privacy Act of 1974 (http://www2.ed.gov/policy/gen/guid/fpco/ferpa), include files, documents and other materials which contain information directly related to students and which are maintained by an educational institution or by an authority on behalf of the institution.

The term "educational record", under the provisions of the law, does not include the following:

1. Records of institutional, supervisory and administrative personnel which are the sole possession of the maker and are not accessible or revealed to any other person except a substitute for the above named personnel
2. Records and documents of Security Officers of the institution which are kept apart from such educational records
3. Records on students which are made or maintained by a physician, psychiatrist, psychologist, counselor, or other recognized professional or paraprofessional acting in their official capacity and which are made, maintained, or used only in connection with a provision for treatment for the student and are not available to anyone other than the persons providing such treatment, except that such records can be personally reviewed by a physician or other appropriate professional of a given student’s choice
4. Financial records of the parents of the students or other information therein contained
5. Confidential recommendations if a given student has signed a waiver of the student’s rights of access, provided such a waiver may not be required of the student
6. Confidential letters or statements of recommendation which were placed in educational records prior to January 1, 1975, if such records or statements are not used for purposes other than those for which they were specifically intended
7. Medical records, physical examination results, reasonable accommodation request forms, or other medical information which are required to be kept apart from general educational records and treated as confidential in accordance with the Rehabilitation Act of 1973 and the Americans with Disabilities Act

**Control Provisions on Student Records and Student Information**

1. Transcripts and other educational records information are released only with written permission of the student. When information other than the transcript is released from the student’s official record (Student Records Office), the student will receive a copy of the release.

2. Students have the right to inspect their own records whether recorded in hard copy form or recorded in the form of magnetic disks and microfilm. Upon inspection, students are entitled to an explanation of any information contained in their records.

3. The official student file will not be sent outside the Counseling Office, Student Records Office, Admissions and Registration Services, Graduation Office, Financial Aid Office, Veteran and Military Affairs Office, or other custodial offices except in circumstances specifically authorized by the Associate Dean of Graduation and Records. The authorization for such special circumstances must be in writing.

4. All medical records, physical examination results, reasonable accommodation request forms, or other medical information must be collected on separate forms, maintained in separate medical files kept apart from a student’s general educational records and treated as confidential. Disclosure of such information may only be made at the express, written consent of the student to the following:

   a. Administrators, Department Heads and others involved in a request for reasonable accommodation or evaluation of qualifications for or performance in a course, program, service or activity
b. Department Heads and instructors for purposes of implementing and enforcing necessary restrictions and accommodations

c. First aid and safety personnel if a known disability may require emergency treatment

Release of Student's Educational Records

1. Requests for protected information shall not be honored without proper written consent by the student via a Student Information Release Authorization Form for the release of such records except under conditions indicated in paragraphs 2 and 5 below.
   a. The written consent must specify the records or the specific data to be released, to whom they are to be released and the reasons for release.
   b. Each request for consent must be specific and each request must be handled separately.

2. Request for confidential information will be honored without prior consent of the student in connection with an emergency, if the knowledge of such information by appropriate persons is necessary (in view of a reasonable College Policies and Procedures person) to protect the health or safety of the student or other persons. However, such a release shall have the approval of a Cabinet Officer unless it can be shown that, under the circumstances, time would not permit or that no Cabinet Officer was available.

3. The following “Directory Information” may be made available to the public by the College unless students notify the Associate Dean of Graduation and Records in writing, by the third week of the semester, that such information concerning themselves is not to be made available:
   a. Student's name and hometown
   b. Major field of study or program
   c. Dates of attendance, degrees, diplomas or awards

4. Information other than “Directory Information”: Any release of student information for public use or use by the media, except that designated above (paragraph 3), must have prior written approval by the students involved.

5. Disclosure to Government Agencies: Properly identified and authorized representatives of, or bona fide written requests from, the Comptroller General of the United States, the Department of Education, the Attorney General of the United States, as well as state and local educational authorities may have access to student or other records in connection with the audit and evaluation of federal or state supported educational programs, in connection with the enforcement of federal or legal requirements related to such programs or for the purpose of military recruiting (Solomon Amendment). Routine requests for student data from such agencies as DEO, OEO, research agencies and state reporting agencies may be honored without prior approval of the student only in formats where students are not identified.

6. Faculty and administrative officers of the College who demonstrate a legitimate educational need will be permitted to view student data for a particular student.

7. Confidential information requested by other than federal or state agencies, as specified in paragraph 5 above, will be released only under the following conditions:
   a. An official order of a court of competent jurisdiction
   b. Subpoena (Students will be notified immediately by registered mail that their records are being subpoenaed.)

Students’ Rights to Question Content of Their Official Student Files

1. Students have the right to review their official records maintained by the College. Furthermore, students may question any inaccurate or misleading information and request correction or deletion of such data from their files.

2. All such requests will be sent to the Associate Dean of Graduation and Records and will become a part of that student’s file.

3. All requests for correction of a student file will be acted upon within 45 work days of receipt of the request. If the custodian can verify that such data are, in fact, in error, appropriate corrections will be made and the student will be notified in writing when the correction has been completed. If an error cannot be readily substantiated, the request will be referred to an Ad Hoc Hearing Committee appointed by the Vice President for Enrollment and Student Services. After a student has had the opportunity to present the case to the hearing committee, the committee will render a decision in writing stating the reasons for its decision. If the decision is in agreement with the student’s request, the student will be permitted to review the file to verify that the change has been made correctly. If the student's request is denied, the student will be permitted to append a statement to the record in question, showing the basis for the disagreement with the denial. Such additions will become a permanent part of the record.

Transcript Evaluation Process

US Institutions

Request previously attended institutions to send official Transcript(s) to CPCC at:

Student Records
CPCC
P.O. Box 35009
Charlotte, NC 28235-5009

After your official college transcript is received in Student Records, it will automatically be evaluated by the Transcript Evaluation Department. You will be notified by email when your evaluation has been completed. Previous courses completed with a "C" or higher grade from regionally accredited institutions that match CPCC courses are transferred for credit.

You may see the courses accepted for transfer by logging into MyCollege and selecting Transcript from the Academic Profile. Make sure to select "CB Combined CU/CE Transcript," then submit.

International Institutions

Students are advised to submit their record of courses to an agency recognized by NACES (National Association of Credential Evaluating Services; www.naces.org (http://www.naces.org)) for an international evaluation. Letter grades ("A," "B" or "C") and earned credit hours must be provided for each course. Course equivalencies based on "Pass" or "Satisfactory" completion are not accepted.

You may request your CPCC evaluation after your official international evaluation report has been received by:

Student Records
CPCC
P.O. Box 35009
Charlotte, NC 28235-5009
After your official international college transcript evaluation is received in Student Records, it will automatically be evaluated by the Transcript Evaluation Department. You will be notified by email when your evaluation has been completed. Previous courses completed with a “C” or higher grade from regionally accredited institutions that match CPCC courses are transferable. You may see the courses accepted for transfer by logging into MyCollege and selecting "Transcript" from the Academic Profile menu. Make sure to select “CB Combined CU/CE Transcript,” and then submit.

**Note:** In most cases, students are not required to wait until their evaluation is completed in order to register for classes. When completion of prerequisite courses is necessary to register for courses, student counselors, academic advisors, faculty advisors and division directors can review students’ transcripts to verify successful completion of the required prerequisite course(s) and grant course permission. This is not a substitution for an official evaluation. Students should submit their written requests for evaluation as soon as their transcripts are received by Student Records at CPCC.
Enrollment
Enrollment

- Career and College Promise (High School Enrichment) (p. 61)
- College and Career Readiness Programs (p. 61)
- College-Level Curriculum Students (p. 62)
- Financial Assistance (p. 63)
- First Year Experience / Orientation (p. 62)
- High School Completion (p. 61)
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College Admission

Central Piedmont Community College follows an “open door” policy that welcomes all students without regard to color, creed, disability, race, national origin, or gender. However, admission to the College, itself does not mean that students are admitted immediately into a program with specified admissions requirements. All degree and diploma programs require high school graduation or its equivalent. The high school graduation requirement is considered to have been met by:

- Graduation from a high school recognized by the United States Department of Education (USDE)
- Graduation from a high school accredited by an accrediting organization recognized by the Council for Higher Education (CHEA)
- Graduation from a certified home school
- Possession of a High School Equivalency Diploma
- Possession of an Adult High School Diploma

Steps for admission vary, depending on the learning goals of each student at CPCC. Students are encouraged to contact the College early in order to complete enrollment steps before the class registration period begins.

Quick Reference: An admissions office is available on every CPCC campus. On Central Campus, it is in the second floor (ground floor) lobby of the Central High Building and can be reached by phone at: 704.330.6006. Students may enroll throughout the year, but the College has Admissions Priority Deadlines. Use the deadlines to allow time to register for classes in the next upcoming term. Find updated deadlines and detailed information about admission processes at: www.cpcc.edu/admissions.

Career and College Promise (high school enrichment programs)

Students currently enrolled in North Carolina high schools who want to take courses at CPCC may call 704.330.6637 or visit this website: www.cpcc.edu/hsprograms.

High School Completion

For students who plan to complete high school (grades 9-12), CPCC offers the Adult High School (HSD), and the High School Equivalency Test Preparation programs.

- The Adult High School Diploma (HSD) Program leads to a high school diploma granted by the Charlotte-Mecklenburg Board of Education. The number of credits required for graduation is set in conjunction with Charlotte-Mecklenburg Schools. For more information, call 704.330.6129.
- The High School Equivalency Test offers another opportunity for students who have not completed high school. A High School Equivalency Diploma is awarded by the North Carolina Community College System after a student passes individual tests that reflect the equivalent knowledge and skills of graduating high school seniors. For more information, call 704.330.6129.

Quick Reference: Adult High School or High School Equivalency Programs are available for students who need a high school credential. For information or assistance, call 704.330.6129 or visit the CPCC Education Center located on the Central Campus.

College and Career Readiness Programs

- Adult ESL-English as a Second Language
  Adult English as a Second Language non-credit courses focus on helping students obtain a level of English language proficiency that will allow them to meet personal and professional goals. Instruction is provided by professionals trained to teach students from diverse cultural, geographical and linguistic backgrounds. Coursework is tailored to reflect the goals of the students and helps prepare students for further academic study, employment and/or citizenship. Higher level students will begin to develop the cognitive academic language proficiencies needed to make these transitions. Courses are free of charge to students. For more information, call 704.330.6172.
  
  Quick Reference: Non-native speakers interested in attending free, non-credit, English as a Second Language classes may call 704.330.6172 or visit the Adult ESL office in Room 200 of the Kratt Building on Central Campus.

- Foundational Skills Programs
  The Foundational Skills program offers students an opportunity to learn basic language arts (reading and writing) and math skills. After completing all four Foundational Skills levels, students will be prepared for entry into high school equivalency programs, Adult High School, and/or short-term training programs. The College also provides services to help people with disabilities learn the life skills they need to enjoy independent living and successful employment in the real world. There is no charge for these classes. For more information, call 704.330.6129.

  Quick Reference: Students who want to read, write or compute at an adult level may call the Education Center at 704.330.6129. Students who followed the OSC track in High School or had an IEP and can provide appropriate documentation from Disability Services may call 704.330.6219 or in Room 200 of the Kratt Building on Central Campus.

- Human Resources Development
  The Human Resources Development Program offers job-seeking support through skills assessment, training and career development courses. Assistance is available in the HRD office in Room 337 of the Central High Building on Central Campus or by calling 704.330.6794.

- Pathways to Careers
  This program is designed to provide training and academic support for entry-level employment in high demand careers. Pathways offers a comprehensive program by providing contextualized academic skill development, career advising, work readiness and occupational training. Students are given the opportunity to earn a high school credential while earning an occupational certificate in one of several
areas such as developmental disabilities, welding, or medical reimbursement.

**First Year Experience (FYE)**
The First Year Experience Program provides enrollment support for students attending college for the first time taking classes for college-level credit. New college applicants can find the enrollment steps at www.cpcc.edu/getstarted. These steps include orientation, advising, and course registration. A short demonstration video accompanies each step.

**First Year Advising**
All new students who plan to take college-credit courses should make First Year Advising their first step. Find First Year Experience online at www.cpcc.edu/firstyear or contact the FYE program:

- By email at: fye@cpcc.edu
- By phone at: 704.330.6100
- At campus offices:
  - On Central Campus in Charlotte in Room 110 of the Central High Building
  - On Levine Campus in Matthews in Room 2225 of the Levine 2 Building.

**First Year Financial Aid**
Personal assistance and information about the financial aid process is available through the First Year Experience Program in Room 112 of the Central High Building in Charlotte.

**College-Level Curriculum Students**

**Non-Degree Students**
Students who want to take college-level courses but do not plan to pursue a degree, diploma, or certificate should follow the enrollment steps for Non-Degree Seeking Students at www.cpcc.edu/getstarted.

**Degree-Seeking Students**
All new students who plan to enter a degree, diploma, or certificate program for college-level credit need to follow the enrollment steps listed for College Credit at: www.cpcc.edu/getstarted. Help in completing the enrollment steps is available through First Year Experience at 704.330.6100 or by emailing fye@cpcc.edu. Contact the FYE Program:

- By email at: fye@cpcc.edu
- By phone at: 704.330.6100
- At campus offices:
  - On Central Campus in Charlotte in Room 110 of the Central High Building
  - On Levine Campus in Matthews in Room 2225 of the Levine 2 Building.

Find First Year Experience online at www.cpcc.edu/firstyear.

**Program Changes**

- **Students who want to change their program of study** must meet with the academic department offering the new desired program or with the Counseling and Advisement Office before registration begins. Veterans Affairs students must contact the Veterans Educational Benefits Office (VEBO) at CPCC in Terrell Building on Central Campus before making any program changes.
- **Students receiving Financial Aid** should consult the Financial Aid office prior to making a program change to determine if the program change will affect their eligibility for financial aid.

**International Student Admissions**
Applications for international student enrollment at CPCC are available in the Office of International Programs and Services located in the Central High Building, Room 101, by phone at 704.330.6838, or online at: www.cpcc.edu/international_services.

**F-1 Visa students**
F-1 Visa students should follow the enrollment steps for **F-1 Visa International Students** at www.cpcc.edu/getstarted.

1. **Evidence of English competency**: A TOEFL score is not required to apply to CPCC. However, in order to enter a college-level program, F-1 Visa students must meet the TOEFL, IELTS requirement, or complete the Academic English as a Second Language Program (EFL).

2. **Internet-based Test of English as a Foreign Language (IBT TOEFL)** – Test scores: Reading 17; Listening 17; Speaking 16; and Writing 16.

3. **Academic International English Language Testing System (Academic IELTS)** – Test scores: Reading 6.5; Listening 6.5; Speaking 6.5 and Writing 6.5. If any single score on either test falls below the minimum, the student is required to take, and complete, the Academic English as a Second Language (ESL) Program. CPCC no longer accepts paper-based TOEFL (pBT) or Computer-based cBT TOEFL.

4. **Processing Fee**: A $40 processing fee is required and must be submitted with the completed international student application.

5. **Medical Insurance**: Any international student (non-immigrant) who is admitted to CPCC under an F-1 student visa must purchase medical insurance prior to registration each semester.

**Permanent Resident Aliens or Other Visa Holders**
Alien registration card holders and others holding certain valid work visas are admitted to the College in the same manner as native citizens of the United States. (Restrictions may apply to some visa types regarding residence classification for tuition purposes.)

**Undocumented Immigrants**
The North Carolina Community College System advised in Memorandum CC10-026 (effective June 10, 2010) that community colleges should admit or enroll undocumented or illegal immigrants only as follows:

- **Enrollment in Non-College Level Courses**: Undocumented immigrants may enroll in non-college level courses or programs including high school equivalency preparation courses, Foundational Skills, Adult High School, English as a Second Language and other continuing education courses less than college level.

- **Enrollment in College-Level Courses**: Undocumented immigrants who are high school students may enroll in college-level courses consistent with the Career and College Promise policy. Participation in this program is not based on legal residence, but on attendance in a North Carolina high school. These courses are open to all high school students attending high school (public, private, or home school) located in the state who meet the eligibility criteria.
Undocumented immigrants must have attended and graduated from a United States public high school, private high school, or home school that operates in compliance with state and local law. Undocumented immigrants with a High School Equivalency diploma are not considered to be “graduated from a United States public high school, private high school, or home school” and therefore are not eligible to be admitted.

Undocumented or battered illegal immigrants who have been determined to meet one of the qualifying conditions in Federal Law, 8 USC Section 1641 are eligible for college-level courses. It is the applicant’s responsibility to produce sufficient written documentation to satisfy the College that the applicant is eligible for post-secondary education benefits.

- **Out-of-State Tuition Required**: Undocumented immigrants who are registered into a class are required to pay the out-of-state tuition rate. The College shall not enroll undocumented students into a class or program of study for which there are waiting lists, nor register undocumented students for classes until the conclusion of the last published (i.e. late) registration period.

**Quick Reference**: Contact information for assistance with the following international issues:

- **F-1 Visa Admissions**: 704.330.6838; International Programs & Services, Room 101, Central High Bldg.
- **Other Visas**: 704.330.6006; Admissions, Room 227, Central High Building, Central Campus
- **Permanent Resident**: 704.330.6006; Admissions, Room 227, Central High Building, Central Campus
- **Limited English Proficiency/Adult ESL Testing**: 704.330.6172; Adult ESL, Room 200, Kratt Hall, Central Campus
- **Academic ESL Testing**: 704.330.6914; Testing Center, Room 248, Central High Bldg., Central Campus
- **Academic ESL Program**: 704.330.6914; Foreign Languages & Academic ESL Division, Room 123, Sloan-Morgan Building, Central Campus; www.cpcc.edu/international_services/academic-esl

**Financial Assistance**

**Financial Aid**
Financial Aid supports students in obtaining their educational goals. For more information, call 704.330.6942 or visit a Financial Aid office on any of the CPCC campuses.

**Sponsored Student Programs/Cashiering Business Office**
Students receiving financial support from outside the College or who have other financial questions or concerns should contact the Cashiering Business Office at 704.330.4262 or go to the Cashiering Business Office in Room 2131 in the Levine 1 Building of Levine Campus in Matthews.

**TRIO Student Support Services** empower eligible students to persist and graduate from college. A variety of services are offered to support students’ academic, personal and social needs. The TRIO office is located in Room 117 of the Central High Building on Central Campus and can be reached at 704.330.6394.

**Disability Services**
Central Piedmont Community College (CPCC) does not discriminate against students with disabilities in the recruitment and admissions process. CPCC acts in accordance with the Americans with Disabilities Act of 1990 as amended in 2008 (ADAAA) and Section 504 of the Rehabilitation Act of 1973 which states: “No otherwise qualified individual with a disability...shall, solely by reason of his or her disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

Students who require accommodations should contact Disability Services
- by phone at 704.330.6621; Voice/TTY – 704.330.6421,
- at the department office in Room 219 of the Terrell Building on Central Campus,
- online at: www.cpcc.edu/disabilities.

To request accommodations, students with disabilities must first self-identify, provide adequate documentation, and follow the procedures/ steps outlined on the Disability Services website. If determined to be reasonable, appropriate adjustments and/or auxiliary aids will be provided to enable participation and equal opportunity to benefit from all educational programs and activities at CPCC. For further information, contact CPCC Disability Services by email at disability.counselingservices@cpcc.edu.

**Transfer Resource Center**
Students seeking advising services and programs to assist in transferring to four-year colleges or universities may call 704.330.6433 or visit the center at Student Success Services in room 365 of the Central High Building on Central Campus.

**Veterans Services**

**Center for Military Families and Veterans**
The Center for Military Families and Veterans provides resources and support which address the many aspects of transition from military to civilian life. Students may call the CMFV at 704.330.6126 or visit offices in

- Room 233 of the Terrell Building on Central Campus,
- Room 3115 of the Levine I Building on Levine Campus

**Veterans Educational Benefits Office**
The educational experience of veterans and eligible family members is supported by the Veterans Educational Benefits Office (VEBO). Students may visit the VERO in Room 233 of the Terrell Building on Central Campus, call the office at 704.330.6267, or send an email to VeteransAffairs@cpcc.edu.

**Campus Tours**
The College encourages individuals and groups to contact Enrollment Services to schedule a guided tour. Visitors gain unique program insights based on specific interests.

To schedule an appointment for a tour of the Central Campus, call 704.330.6040.

Tours of area campuses are coordinated by Enrollment and Student Services Directors for each campus and are given with advance notice. Contact information for all ESS Directors is found on the left menu.

**Enrollment and Student Services Directors**
Enrollment and Student Services Directors (ESS Directors) provide campus leadership to ensure efficient operation of Enrollment and Student Services functions on each campus. ESS Directors coordinate student
First Year Experience

First Year Experience (FYE)
The First Year Experience Program provides enrollment support for new and returning students. Students can find the enrollment steps at cpcc.edu/getstarted. These steps include orientation, advising, and course registration. A short demonstration video accompanies each step.

First Year Advising
All new students who plan to take college-credit courses should make First Year Advising their first step. Find First Year Experience online at www.cpcc.edu/firstyear or contact the FYE program:

- By email at: fye@cpcc.edu
- By phone at: 704.330.6100
- At campus offices:
  - On Central Campus in Charlotte in Room 110 of the Central High Building
  - On Levine Campus in Matthews in Room 2225 of the Levine 2 Building.

First Year Financial Aid
Personal assistance and information about the financial aid process is available through the First Year Experience Program in Room 112 of the Central High Building on Central Campus in Charlotte.

Testing and Assessment

Testing and Assessment Centers
Testing and Assessment Centers on four CPCC campuses support the learning process by serving students, faculty and community testing needs. The centers administer a wide variety of diagnostic tests for instructional placement, certification, licensure and other specialized purposes. The physically attractive atmospheres and a low-key method of operation are designed to help reduce test anxiety. The Testing & Assessment website, www.cpcc.edu/testing_assessment, continually updates hours of operation on campuses, schedules placement tests online, provides test-taking strategies, practice placement tests, placement test review videos and additional information.

Fees may apply for certain testing services. A photo ID is needed for all testing services. As a courtesy to others and for security purposes, students are required to turn off and put away all electronic equipment such as tablets and cell phones before entering testing areas. The Testing Centers cannot accommodate children. The Central Campus Testing Center is open Monday through Thursday from 8 a.m. until 6 p.m. The last course test is given at 5:30 p.m. On Friday, the Center is open from 8 a.m. until 4:30 p.m. and the last course test is given at 3:30 p.m. Hours are subject to change.

To see hours at other campus locations or to schedule a placement test, contact the Testing Center

- online at http://www.cpcc.edu/testing_assessment,
- by email at testingcenter@cpcc.edu, or
- by phone at 704.330.6886.

Tuition and Fees

Tuition (p. 64)
Fees (p. 65)
Refund Policy (p. 66)
Sponsored Programs (p. 66)
Student Insurance (p. 66)

Tuition and fees are subject to change without notice.

NOTE: Registration automatically is canceled if payment is not made by the published due dates for the following:

- tuition
- required fees (student publications/activity fees, technology fees, lab fees and CAPS fees)
- optional student accident and student professional liability insurance fees
- GED Testing fees

Cash, check, or credit cards (MasterCard, American Express, Visa, or Discover Card) are accepted.
Tuition

Tuition Rates for In-State students

Curriculum Courses
Fewer than 16 semester hours: $72 per credit hour.
16 semester hours or more: $1,152 per semester.

High School Diploma or High School Equivalency Courses
No tuition or fee.

Tuition Rates for Out-of-State students

Curriculum courses
Fewer than 16 semester hours: $264 per credit hour.
16 semester hours or more: $4,224 per semester.

High School Diploma or High School Equivalency Courses
No tuition or fee.

North Carolina Residence Status

For students enrolling in college curriculum classes, an initial residence classification is made upon application to the College. It is the student’s responsibility to supply documenting evidence of residence status if requested. No one item or combination of items can be considered the determining factor(s) in residence classification. The decision is based on the preponderance of the evidence presented.

A legal resident of North Carolina is one who has domicile (as opposed to temporary abode) in the State; however, the definition of residence status, for tuition purposes, includes other elements such as duration of residence. To be considered eligible for in-state status, one first must be eligible to establish legal residence and have maintained such residence for at least 12 consecutive months immediately prior to the start of the term for which the in-state benefit is sought.

One or more of the following may be applicable:

- Legal residence of minors (under 18 years of age) is that of the parents, surviving parent or legal guardian.
- Residence status of foreign nationals is reviewed first in light of immigration documentation. Some visas do not confer eligibility to establish legal residence.
- Documenting evidence that legal residence has been established and maintained for 12 months prior to the start of the term is required as well.
- Persons holding Alien Registration Receipt Cards (Form I-551) and others holding certain work visas may be eligible to apply for in-state status.

Ownership of property in or payment of taxes to the State of North Carolina will not, in itself, qualify a person for in-state tuition status. It is the responsibility of the student to inform the College if North Carolina residence is lost or abandoned while enrolled.

NOTE: The out-of-state tuition rate is charged automatically to students for whom North Carolina residence has not been established.

Students who think that they have been classified incorrectly or those initially classified as out-of-state who think they now meet the requirements for in-state status should contact Registration Services at any Central Piedmont Community College campus to initiate a review of status.

Information provided here is not intended to be comprehensive; however, the State Policy Manual is available for review at all CPCC Campus Registration Centers. Residence policy is based on North Carolina General Statute 116-143.1.

Fees

Applied Music Study Fee
A fee of $200 is charged for music classes.

Campus Access Parking and Security (CAPS) Fee
The Campus Access, Parking and Security Fee (CAPS Fee) is charged to curriculum and Corporate and Continuing Education students who attend classes at any College campus. Revenues collected from this fee are used to pay costs of campus security and parking lot rental and maintenance at all CPCC campuses and centers.

The CAPS fee is
- $73 per semester for curriculum students enrolled in eight semester hours or less
- $97 per semester for curriculum students enrolled in nine semester hours or more
- $12 per class for Corporate and Continuing Education students.

For details about the CAPS fee, visit the website at www.cpcc.edu/caps_fee.

Corporate and Continuing Education Fees are published per class.

Forensics Fee
A fee of $50 per class is charged only for forensics classes.

GED and High School Equivalency Tests
The GED (General Educational Development) Test consists of four sub-tests for $80 or $20 per sub-test.

The HiSET (High School Equivalency Test) contains five sub-tests for $50 or $15 per sub-test.

Lab Fees
Curriculum Lab Fees: $21 per lab hour with $168 maximum. (subject to change)

Occupational Extension Lab Fees: $21 per lab with $168 maximum.

Student Publications/Activity Fee
$26 per semester for 1 to 8 credit hours.
$35 per semester for 9 or more credit hours.
Maximum fee is $35 per semester.

The Student Publications/Activity Fee is used to support the Student Life Center and many co-curricular and extra-curricular programs. Among these are student government, student publications, clubs and
organizations, intramural sports, educational activities, speakers and entertainers of various kinds.

**Technology Fees**

A technology fee of $48 is charged per term for Curriculum classes, and a technology fee of $5 is charged for Occupational Extension classes.

**Returned Check Policy**

All returned checks are subject to a processing fee of $25. This fee also applies to credit card payments not accepted and returned by a financial institution. This fee, along with the original amount of the check or credit card, is due within five (5) business days after official notification from the College. These amounts are payable only by cash or money order at the Cashiering/Business Office on any campus. A hold is placed on all student records until acceptable payment is received.

**Refund Policy**

The North Carolina Community College System establishes the refund policy which is subject to change.

**Curriculum Classes**

All curriculum student refunds are issued to students’ Higher One debit cards or to the credit card used for the tuition payment.

- All tuition is automatically refunded for any class cancelled by the College.
- A 100 percent refund of tuition is paid by the College to students who officially withdraw from class prior to the first day of the academic semester.
- A 75 percent refund of tuition is paid by the College to students who officially withdraw from class on or after the first day of the academic semester through the 10 percent point of the semester.

PLEASE NOTE: Dropping or withdrawing from classes and adding replacement classes after the first day of the semester may result in additional tuition owed as a result of the 75 percent refund policy. Students always should check their account balances.

**Corporate and Continuing Education and Occupational Extension Classes**

- All tuition is automatically refunded by the College for any class cancelled by the College.
- A 100 percent refund of tuition is paid by the College to students who officially withdraw from class prior to the first day of the class.
- A 75 percent refund of tuition is paid by the College to students who officially withdraw from class on or after the first day of the class through the 10 percent point of the class.

**Self-Supporting Course Refunds / Cancellations / No Shows**

The College reserves the right to cancel classes at any time without prior notice. Tuition is refunded 100 percent for any class canceled by the College.

Students who cancel registration at least seven (7) business days prior to the start date of the class are eligible for a full refund. After that, cancellations are subject to the entire class fee. NOTE: Students who do not cancel and do not attend are still responsible for payment.

**Sponsored Programs**

Sponsored students must submit a letter of authorization to bill along with their registration information to the Sponsored Programs office or to any Cashiering/Business Office on a CPCC campus before they register, but no later than the same day they register for classes. For further information, visit the website at www.cpcc.edu/sponsored-programs or call the Sponsored Programs office at 704.330.4262.

**Student Insurance**

Insurance coverage is available to students through CPCC at http://www.cpcc.edu/enterprise-risk-management/student-insurance-1

**Student Accident Insurance Plan**

Student Accident Insurance is required for specific classes and is paid for at the time of registration. The CPCC Soccer Club is considered a specific-covered class. The plan insures students against loss resulting from accidental bodily injury sustained while participating in or attending specific classes. For detailed, current coverage information, visit the website above. For more information contact the office of Enterprise Risk Management at 704.330.4472.

**Medical Hospitalization Group Plan**

The plan is available to students enrolled for six or more credit hours. The group plan offers several benefit options, depending on the needs of the student. Premiums vary per term or year, depending on the selected coverage and payment schedule. Spouses and unmarried children may be covered for an additional fee. Plans are a direct relationship between the student and the insurance provider. Qualified students may contact the insurance provider directly through the website above.
Student Services

CPCC provides a comprehensive assortment of services and resources to help students reach their full potential. Select any of the menu options on the left side of this page under Student Services to see complete details about each of them.

Administrative Support

CPCC administration provides effective leadership by setting the tone and direction for the College and by granting employees the authority and resources to carry out their duties. The College efficiently and effectively expends its resources and is committed to maintaining a leadership role in its utilization of personnel and facilities. These effective administrative processes allow the College to focus on its primary mission of providing the highest quality educational programs and services.

Community Service

Service to the Charlotte-Mecklenburg community has long been one of the core values of CPCC. The College offers a wide range of high-quality speakers and cultural and artistic events presented in state-of-the-art performance venues.

Additionally, the College has a Service-Learning Center whose mission is to promote civic engagement and develop a culture of service among students, faculty and staff. This program supports the efforts of hundreds of local agencies and assists our students in becoming more engaged citizens and learners.

Enrollment and Student Services

Enrollment and Student Services (ESS) is committed to providing quality educational support to facilitate student success for a diverse student population. Services provided include first year experience support, recruitment, enrollment, financial aid, graduation, academic advising and tutoring, career and personal counseling, disability services, international services, testing, veterans’ services, and student activities. ESS collaborates with Learning units to support the mission of the College through comprehensive student-centered initiatives.

International Programs and Services

International Programs and Services is committed to supporting the academic and personal growth of foreign students at CPCC. Students from around the world can attend CPCC to study intensive English or a degree, certificate or diploma program. With more than 400 students studying at CPCC on a student visa, CPCC continues to recognize the importance of preparing students to be globally competent with the international knowledge necessary to build and maintain a strong, globally competitive economy in the Charlotte region.

Counseling and Advisement

iCAN - Integrated Counseling and Advising Network (http://www.cpcc.edu/ican)

Counseling and advising at CPCC are integral to the College’s mission, which includes educating students for life. Therefore, the College is committed to a process that is effective, caring, supportive and accessible to all students. To foster total student development, CPCC operates a comprehensive counseling and advisement system that brings together the expertise of counselors, academic advisors, faculty and other staff. Assistance in the following areas is provided:

• academic, personal and career counseling
• academic assessment and advisement, and
• guidance in the transition from high school to college.

By helping students maximize resources, services and other means of support, the iCAN system creates opportunities for improved self-understanding and facilitates achievement of career and life goals. The iCAN promotes student success by helping students help themselves.

To schedule an appointment for any of these services, check hours of operation, or for more information, call 704.330.6433 or visit online at www.cpcc.edu/ican.

Academic Advisors provide professional guidance for students as they begin their journey at the College. By talking with an advisor, students receive:

• recommendations about appropriate course placement and selection,
• explanations of institutional policies and procedures,
• assistance identifying strategies for success, and
• assistance in developing individualized educational plans.

Advisors work with students during periods of transition, providing help when students re-enter college after time away or when they want to change their program of study.

Counselors serve as an integral part of the teaching and learning process. In addition to providing academic advisement, counselors assist students in exploring alternatives, developing goals, learning new strategies and designing a specialized academic success plan for goal achievement. The Counseling staff also helps students deal with issues that adversely affect their persistence through the Personal Counseling Assistance Program (PCAP). Counselors offer free, confidential and professional counseling to students facing personal concerns that may hinder their progress. Medical or agency referrals are provided when appropriate. Students are encouraged to schedule appointments, but walk-in times are available.

In their role as Faculty Advisors, instructors contribute to student success by assisting with program planning, course selection, scheduling and academic guidance. Faculty advisors also help students connect with a variety of College and community resources.

Transfer Resource Center Advisors are dedicated to assisting students who wish to transfer to four-year colleges or universities, are also available. They help students in reviewing college options, setting goals and other activities to facilitate the transfer process.

The Virtual Office of Counseling and Advisement Services provides online assistance. On the iCAN website, students can discuss specific advising issues with an advisor or counselor by logging into the iCAN Chat - Live Help (http://www.cpcc.edu/ican/contact-us/chat-live-help) at: http://www.cpcc.edu/ican/contact-us/chat-live-help.

Disability Services

The Disability Services office at CPCC provides academic accommodations and auxiliary aids or assistive technology to students with documented disabilities as specified under the American with Disabilities Act of 1990 (and Amendments Act of 2008) and Section 504...
of the Rehabilitation Act of 1973. It is the mission of Disability Services to ensure that CPC students with disabilities have equal access to learning. Believing that individuals are better able to advocate for their needs with greater success, we strive to empower students with self-advocacy skills at every step. To request services, students with disabilities must self-identify at Disability Services and provide appropriate documentation. Visit www.cpcc.edu/disabilities or call 704.330.6621/ TTY 704.330.6230 to learn more.

Disability Documentation

Students requesting accommodations are asked to submit appropriate documentation to Disability Services. The primary elements of documentation are diagnosis of a disabling condition and the nature, severity and functional limitations of the disability. The type of documentation requested varies according to the disability. Examples include, but are not limited to: comprehensive psychological evaluations, vocational rehabilitation evaluations, recent high school IEPs/504 Plans, or medical documents from a physician. There are times when documentation submitted does not provide adequate information for the primary elements mentioned above. In such cases, Disability Services may request additional documentation.

Procedures for Services and Academic Accommodations

When Disability Services has received and reviewed a student’s documentation, the office contacts the student through his/her CPCC email account to set up an intake meeting with a Disability Services counselor. At this meeting, the counselor explains Disability Services procedures and guidelines, discusses accommodations and completes any forms that might be necessary.

In order to guarantee timely accommodations, students must meet with an assigned Disability Services counselor prior to the start of the semester. The counselor completes an Accommodations Form for each class based on approved accommodations. New Accommodations Forms must be completed each semester the student is enrolled. Approved classroom/testing accommodations are not effective until Accommodation Forms are signed by the counselor and student, and are taken by the student to his/her instructor(s).

Interpreting Services

For students who are deaf/hard of hearing, interpreting services can be one of the most critical components in educational programming. The success of a student's educational experience is dependent on the quality and availability of interpreting services. The College employs qualified, certified, and licensed interpreters, skilled in using American Sign Language, who function as a communication channel among the student, instructor and classmates. Students are referred for interpreting services by a Disability Services counselor. At times, an adjustment to class scheduling is necessary in order to coordinate interpreting services. Deaf/hard of hearing students may request interpreting services for any College-sponsored program or activity.

Counseling Services

In conjunction with other CPCC counselors, Disability Services counselors can provide individual, vocational and academic counseling and other referrals to qualified students with disabilities. Disability Services counselors also facilitate for faculty and staff appropriate provisions for accommodations to students with disabilities.

Tutorial Services

Tutoring is not an accommodation in post-secondary institutions. However, CPC offers tutoring services to all students as a tool for enhancing success. Disability Services counselors may refer students to the Academic Learning Center and/or the office of Student Support Services (TRIO), but it is ultimately the student's responsibility to pursue tutoring services.

Confidentiality

In accordance with requirements of the Federal Family Education Rights and Privacy Act (FERPA), Disability Services protects students' right to privacy by limiting access to disability records. Unless a student signs and dates the Consent to Release Information form, Disability Services will not disclose any information to a student's parents/guardian/family members. Information concerning a student’s disability is treated confidentially and is only be shared with College staff and faculty who have a legitimate educational interest. It is primarily the student’s responsibility to share this information when necessary and/or advisable.

Complaints

To appeal the denial of a requested accommodation, students should first contact the Disability Services Director. To schedule an appointment, call 704.330.6621 or email Disability.CounselingServices@cpcc.edu. If still unsatisfied, students should then call to make an appointment with the Associate Vice President of Student Success Services at 704.330.6108. If necessary, the next step would be to follow the Student Grievance Procedure (College Policy 7.09 [http://www.cpcc.edu/administration/policies-and-procedures/7-09-grievance-process-for-students]).

Financial Aid

Federal Programs

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Regulations

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Federal Programs

Federal Pell Grants

The Federal Pell Grant, which does not have to be repaid, is a federal program designed to provide financial assistance to undergraduate students who demonstrate a financial need to attend college. The U.S. Department of Education uses a standard formula, established by Congress, to evaluate the information reported on the Free Application for Federal Student Aid (FAFSA). The formula produces an Expected Family Contribution (EFC) number. The Student Aid Report contains the EFC number which determines eligibility. The Federal Pell Grant award amount depends on the student’s EFC, the student’s cost of attendance, whether the student is full-time or part-time and whether the student attends school for a full academic year or less. Students need to be enrolled in an eligible curriculum program consisting of at least 16 credit hours in length. Students with bachelor’s degrees are not eligible.

Federal Supplemental Educational Opportunity Grant

A Federal Supplemental Educational Opportunity Grant (FSEOG), which does not have to be repaid, is for undergraduates with exceptional financial need – that is, students with the lowest Expected Family Contributions (EFC’s) – and gives priority to students who receive Federal Pell Grants.

The Federal Supplemental Educational Opportunity Grant program is a campus-based program administered directly by the Financial Aid Office. The amount of aid awarded depends on the student’s financial need, on the amount of other aid the student receives and on the availability of funds. Students with bachelor’s degrees are not eligible.

Federal Work-Study

The Federal Work-Study (FWS) program utilizes federal funds to provide part-time employment for undergraduate and graduate students with financial need to help meet their educational expenses. Students with bachelor’s degrees are eligible. Students who are enrolled at least half-time may work an average of 15 to 20 hours per week. FWS employment is determined by the student’s total financial need, the student’s class schedule, the student’s credit hours of enrollment and the student’s academic progress per term.

Awarded FWS funds are limited to availability of positions, funds and completion of the entrance/interview process. There are no term limitations on earnings, provided annual limits on the student’s award letter are not exceeded.

All available FWS positions are advertised on the CPCC Human Resources website at www.cpcc.edu/humanresources/employment.

Students are paid each month and the amount paid is according to the position and the number of hours worked.

Complementing Academic Experience

Employment complements a student’s academic experience by providing skill development and networking opportunities relevant to the student’s major and/or career field of interest. It is the policy of the College to employ students part-time, and not interfere with students’ academic pursuits or displace full-time employment opportunities.

Meeting Professional Standards

The College’s student employment programs are subject to and will be administered in accordance with applicable Federal and State laws and statutes governing employment practices and strive to follow the professional standards of the National Student Employment Association.

America Reads/America Counts/Community Service

America Reads, America Counts, and Community Service are Federal Work-Study programs offered in the fall and spring semesters. These programs allow CPCC students to partner with local elementary schools and nonprofit agencies in an effort to increase children’s literacy and outreach to the community. Students gain valuable work experience by being involved in service activities that support literacy and community outreach.

America Reads, a national campaign that was initiated in 1997, challenges every American to help our children learn to read well and independently by the end of elementary school. Nationwide, there are approximately 1,200 colleges and universities participating in the America Reads Challenge.

Building on the success of the America Reads Challenge, America Counts was initiated in July 1999 as an effort to improve student achievement in mathematics and assist students in mastering challenging mathematics, including the foundations of algebra and geometry, by the end of the 9th grade.

The Federal Work Study Community Service Program is an opportunity for students to work in a not-for-profit organization while earning their Federal Work Study money. Community service jobs are in fields such as health care, child care, literacy training, education (including tutorial services), welfare, social services, transportation, housing and neighborhood improvement, public safety, crime prevention and control, recreation, rural development and community improvement, support services to students with disabilities and activities in which students serve as mentors for such purposes as tutoring, supporting educational and recreational activities, and counseling, including career counseling. The benefits of taking a community service position are:

- Helping improve the quality of life for community members
- Earning Federal Work Study funds
- Gaining solid work experience in areas such as public service, psychology, education, administration, etc.
- Acquiring professional contacts in one’s community and school, as well as networking opportunities
- Making a difference

The America Reads Challenge (and the Community Service) Federal Work Study program is a strong example of how students both give to and
receive from the community. The program promotes access to college by helping students enhance postsecondary education costs while offering these students the opportunity to pursue a community service. – Richard W. Riley

For more information about these programs please contact Service-Learning at 704.330.6445 or service.learning@cpcc.edu.

Scholarships

Scholarships are provided through Central Piedmont Community College’s Foundation and the generosity of industries, businesses, professional organizations, civic clubs and individuals. A scholarship review committee determines the recipient for those scholarships awarded by the College.

Applications for scholarship consideration are submitted online through the Academic Works portal (https://cpcc.academicworks.com/users/sign_in). Academic Works is a comprehensive scholarship database designed to provide applicants with a simplified application process in searching for multiple CPCC Institutional scholarship offerings. Scholarship applications submitted are accepted until all funds are awarded. Students are encouraged to apply early for scholarship consideration. Contact the Financial Aid Office or visit the College’s Financial Aid website at www.cpcc.edu/financial_aid/assistance/scholarships for scholarship deadline dates and a detailed listing of scholarships.

Donors of scholarships should direct contributions to the CPCC Foundation, Incorporated, which supports and supplements educational establishment of scholarships and requests for other scholarship donor-related information should be directed to the CPCC Foundation at 704.330.6869. The CPCC Foundation is a 501(c)(3) organization eligible to receive tax-deductible contributions.

Scholarships also are awarded on a competitive basis applying the following criteria: academic excellence, achievement, leadership qualities, need or other criteria as stipulated by the donor.

Awards are usually restricted to tuition assistance and require the recipient to maintain a minimum grade point average to continue the scholarship. Each scholarship is awarded for one academic year beginning with the fall semester. Students should reapply each year by completing the Financial Aid Office and the College awards for Federal Student Aid (FAFSA). Annually, new scholarship opportunities are announced in the Financial Aid Office and the College Foundation of North Carolina, Inc. is the place to start: www.cfnc.org (http://www.cfnc.org).

North Carolina Community College Grant

The North Carolina Community College Grant is a need-based grant established by the North Carolina Legislature. The North Carolina State Education Assistance Authority, through College Foundation, Inc., makes award determinations.

The North Carolina Community College Grant provides funds to help meet the educational costs of North Carolina residents attending community colleges.

To be eligible, a student must:

- be admitted to a curriculum program and be enrolled for at least six credit hours per semester,
- be a North Carolina resident,
- have completed and submitted the Free Application for Federal Student Aid (FAFSA),
- qualify for the grants based upon a valid Expected Family Contribution (EFC) calculation under Federal Methodology and the program’s recognized “required educational expenses” for attending a North Carolina community college,
- meet the satisfactory requirements of CPCC’s Financial Aid Office and the College, and
- meet all other eligibility requirements for Federal Student Aid.

North Carolina Education Lottery Scholarship

The North Carolina Education Lottery Scholarship (NCELS) was created by the 2005 General Assembly to provide financial assistance to students in need attending eligible colleges and universities located within the state of North Carolina.

Applicants must:

- be admitted to a curriculum program and be enrolled for at least six credit hours per semester,
- be a North Carolina resident,
- have completed and submitted the Free Application for Federal Student Aid (FAFSA),
- qualify for the grants based upon a valid Expected Family Contribution (EFC) calculation under Federal Methodology and the program’s recognized “required educational expenses” for attending a North Carolina community college,
- meet the Satisfactory Academic Progress requirements of CPCC’s Financial Aid Office and the College,
- meet all other eligibility requirements for Federal Student Aid.

Applicants must complete the Free Application for Federal Student Aid (FAFSA) which also is used to qualify for federal student aid and institutional scholarships.

North Carolina Reach Scholarship

The Child Welfare Postsecondary Support Program, also known as NC Reach, was established by the 2007 North Carolina General Assembly to provide funding for college students who have either aged out of North Carolina public foster care or whose adoption from North Carolina public

State Programs

College Foundation of North Carolina, Inc.

For general information on college costs and requirements, or specific information on scholarships, or a tax-advantaged savings program,
foster care was finalized on or after their twelfth birthday. Applicants need to meet the following eligibility requirements:

- Either, have aged out of North Carolina public foster care between the ages of 18 – 25, or have finalized adoption from North Carolina public foster care on or after their twelfth birthday
- Be enrolled at either a North Carolina Community College or one of the 16 constituent institutions of the University of North Carolina System on at least a half-time basis pursuing an undergraduate degree, diploma or certificate
- Have satisfactory progress toward the completion of undergraduate study
- Comply with registration requirements for military service, unless they are exempt from registration
- Not be in default or owe a refund under any federal or state loan or grant program

Award amounts vary. Benefits are determined based on federal and state grants and scholarships, including the Pell Grant, the Education Training Voucher and state scholarships, such as the North Carolina Education Lottery Scholarship, which are applied first to the predetermined attendance costs at the qualifying school. The NC Reach Scholarship pays the balance of the predetermined costs of attendance. Legitimate student loans incurred after July 31, 2007 for attendance costs for qualifying students also are eligible for repayment through this program.

To apply for this program, please visit www.ncreach.org/APPLY-FOR-FUNDING.51.0.html (http://www.ncreach.org/apply). Additional information may be obtained by calling the NC Reach team at 800.585.6112 or by clicking the “Contact Us” link on the NC Reach homepage (www.ncreach.org (http://www.ncreach.org)).

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Awards

Students should complete their financial aid package before course registration or be prepared to meet their expenses and pay tuition/fees within the designated due dates. If tuition/fees are paid within designated due dates, registration is canceled automatically.

The Financial Aid Office reserves the right to adjust a financial aid package when an over-award is made. Students are required to notify the Financial Aid Office if any additional gift/aid assistance is received for educational expenses. Furthermore, the Financial Aid Office voids any award if it is determined that the student provided incorrect or false information on the financial aid application. All financial aid awards are subject to change if information on which they were based changes, if federal regulations require a change, or an over-award occurs.

Central Piedmont Community College’s Financial Aid Office adjusts student awards throughout the drop/add period. After the drop/add period, no awards are adjusted unless a “never attended” or a “complete withdrawal” is received from the instructor. The award letter is based on full-time enrollment for an entire year. Any changes in enrollment status must be reported to the Financial Aid Office.

- Full-time status (100%) means enrollment for a minimum of 12 credit hours.
- Three-quarter time status (75%) means enrollment for 9 to 11 credit hours.
- Half-time status (50%) means enrollment for 6 to 8 credit hours.
- Less than half-time status consists of enrollment in 1 to 5 credit hours.

Clock Hour/Credit Hour Conversions

The determination of enrollment status (full, 3/4, 1/2, or less) is, by Federal regulations, different for the following four programs of study:

- Collision Repair & Refinishing Technology - D60130 (http://www.cpcc.edu/financial_aid/fyi/collision-conv-stud)
- Computer-Integrated Machining Technology - D50210 (http://www.cpcc.edu/financial_aid/fyi/computer-covn-stud)
- Dental Assisting - D45240 (http://www.cpcc.edu/financial_aid/fyi/dental-conv-stud)

This determination of enrollment status is different because the programs have one or more courses that cannot be used toward a two-year degree program. Enrollment status determination for the above programs is determined by totaling the clock/contact hours a student takes each semester for each course. Total hours are then divided by 37.5 to obtain the converted credits. Converted credits are then used to determine the enrollment status. For a list of converted courses, check with the Financial Aid Office.

Less than Half-time Attendance

Federal regulations require a less than half-time budget calculation restricted to tuition, books and transportation for students who are enrolled less than half-time. If a less-than half-time enrollment status is the result of dropped or never attended classes, Federal Pell is reduced and an over-award could occur. It is the responsibility of the student to satisfy any balance before receiving additional federal aid.

Financial Aid awards cannot be automatically transferred from one college to another. Students need to have results of the FAFSA released to the new college. All documents in a student’s financial aid file are the property of Central Piedmont Community College and cannot be released. Financial aid also cannot be received simultaneously at two or more colleges.

If any financial aid funds remains after charges are paid, remaining funds are transferred to the student’s Higher One Debit Card (usually within the first four weeks of class). If requested, a check can be mailed to the student’s current address. It is important to keep student addresses, telephone numbers and email addresses updated. Changes in personal information can be made at http://mycollege.cpcc.edu or in person at Records and Registration in the Central High Building on Central Campus.

Any unclaimed refunds are voided after 90 days. Funds can be reissued only BEFORE August 1 for the prior fiscal year award (July 1 to June 30).

Why Part of a Grant May Need to Be Repaid

Unlike loans, grants usually do not have to be repaid. However, there are two reasons why part of a Federal grant may have to be repaid:

1. The amount given was more than the student was eligible to receive. This is called an over-award and can happen if the school makes an error when calculating eligibility for financial aid, or if an audit of financial records reveals that some of the information provided was incorrect (for example, actual income was higher than what was reported on the financial aid application).
2. A student withdrew early from the program for which the grant was given.

Eligibility for Title IV Federal financial aid may be restored by entering into an acceptable repayment plan with the Department. As long as payments
are made as agreed, the grant-originated debt does not affect eligibility for further aid. However, if students fail to make the agreed-upon payments, their eligibility is permanently lost until the debt is paid in full.

Grant overpayment debts are not eligible for either consolidation or rehabilitation.

Student Eligibility for Financial Aid
To be eligible for financial aid, students need to meet the following minimum guidelines:

Qualitative Standards

- Students must maintain a cumulative grade point average of at least 2.0 each semester as computed by the Financial Aid Office, which may be different than the transcript GPA.

Quantitative Standards

- Students must complete a minimum of 67 percent of the cumulative credit hours attempted each semester (e.g. if the student has attempted 50 credit hours, the student must earn credit for at least 33 hours)

  Number of hours attempted = the total cumulative number of credit hours for which the student is enrolled at the 10 percent point of each term

  Number of credit hours earned = the total cumulative number of credit hours from each term at CPCC in which the student received a passing grade, as noted on the student's academic transcript

Maximum Time Frame

Students should complete a program of study in a time frame not to exceed 150 percent of the published length of the program for full-time students. This is measured in credit hours (e.g. if the academic program length requires 60 credit hours, maximum time frame cannot exceed 90 hours attempted). Transfer credit hours accepted from other institutions and evaluated in the student's current program of study are included in the calculation of maximum time frame.

Programs/Courses Ineligible for Financial Aid

Diploma or certificate programs containing less than sixteen (16) semester hours are not eligible for Federal student aid. Although the Financial Aid Office makes every effort to monitor these programs, it is the responsibility of the student to ensure acceptance into a program of at least sixteen (16) semester hours in order to be eligible for federal aid. In addition, Career Development, Continuing Education, courses for which credit by examination has been received and/or courses being audited by the student are ineligible for financial aid. For a list of ineligible programs, student may contact their academic counselor or the Financial Aid Office.

Policy on the Return of Title IV Funds

For Financial Aid Recipients

Federal regulations require a recalculation of federal financial aid eligibility for students who withdraw, drop out, or are dismissed prior to completing 60 percent of an academic term. (An example of the Return to Title IV Fund calculation is available in the Financial Aid/Veterans Affairs Office.)

Recalculation for percent of aid earned is based on the following formula:

Percent earned = Number of Days Completed Prior to Withdrawal Date - Divided By - Total Days In a Semester/Term. If the calculation results in an overpayment, the student owes the balance to the College. In that case, the student should make payment arrangements on the balance with the Financial Aid/Veterans Affairs Office. If the student fails to pay the debt to the College within 45 days of notification, the debt is reported to the U.S. Department of Education as an overpayment. Federal eligibility is lost until the debt is paid or satisfactory arrangements are made with the U.S. Department of Education.

Financial aid students should notify the Financial Aid Office before withdrawing. According to federal regulations, the Return to Title IV recalculation is computed using the 50 percent point of the semester for students who stop attending classes within a given term without formally withdrawing.

Financial Aid Satisfactory Academic Progress (SAP)

Financial Aid Satisfactory Academic Progress (SAP) is a set of standards for financial aid progress. Pursuant to Federal regulations, all financial aid recipients are required to meet satisfactory academic guidelines established by Central Piedmont Community College and financial aid standards of progress. The intent of this policy is to ensure that students who receive federal and state financial aid make measurable progress toward completion of a degree, certificate, or diploma program in a reasonable period of time and a reasonable number of credit hours is attempted in their program of study. The policy looks at all credit hours attempted, not only those taken while receiving financial aid. All classes count.

This policy applies to students applying for or receiving federal and state funds. To reasonably measure a student's satisfactory academic progress toward completion of his or her degree, certificate, or diploma, the student's total academic record is evaluated, regardless of whether or not they received financial aid in the past.

Federal regulations require institutions of higher education to establish minimum standards of satisfactory progress for students receiving financial aid. Students are expected to achieve certain minimum levels of progress toward the successful academic completion of course requirements for a degree, certificate, or diploma. Progress is measured both qualitatively and quantitatively. To ensure a student is making sufficient progress throughout their course of study, a maximum time frame is divided into increments. At the end of each increment (each semester), the institution determines whether the student has successfully completed a minimum percentage of work toward his or her degree, diploma or certificate for all increments completed.

As a recipient of federal or state financial aid, students have certain rights and responsibilities. Failure to fulfill any part of the agreement, as described, may result in the cancellation of a student's award and the student may be responsible for repaying any received funds.

Monitoring SAP

The Financial Aid office monitors satisfactory academic progress for all students receiving or applying for federal or state aid to ensure that they
make progress toward program completion. All programs are reviewed for satisfactory academic progress at the end of each semester.

In order to measure a student's satisfactory progress toward a degree, diploma, or certificate requirements, the student's total academic record at Central Piedmont Community College is evaluated, whether or not the student received financial aid for the entire time of enrollment.

**Evaluation Period:** Student compliance with the Financial Academic Satisfactory Academic Progress policy requirements are monitored at the end of each semester.

**Cumulative Credit Hours Attempted** - Cumulative credit hours attempted are defined as all credit hours attempted at CPCC plus all credit hours transferred from other institutions. Attempted credits include courses with grades of "A" through "F," "W," "I/A," "I/B," "I/C," "I/D," "P" or "I."

**Cumulative Credit Hours Completed** - Credit hours successfully completed are defined as grades “A“ through “D,” “I/A,” “I/B,” “I/C” “I/D or “P.” Credit hours not successfully completed are defined as “F” or “W.”

**Audited Courses**
Credit hours taken for a grade of “audit” do not apply toward an associate degree, diploma, or certificate program. Therefore, credit hours with this designation are not included in determining enrollment status for financial aid or satisfactory academic progress. Students with changes in grade type of an “Audit” (AU) after the disbursement of financial aid are reviewed for an enrollment status change. This change may result in a reduction of financial aid eligibility and a balance owed to the College.

**Incomplete Grades**
Courses with grades of “I” (Incomplete) are considered as credit hours attempted and not completed. Students who make arrangements with the instructor to complete required course work are not required to re-register for the same class during a subsequent semester to complete the work. Any course carried forward to the next semester for completion is counted as part of the new semester enrollment status. If the “incomplete” grade resulted in placing a student on financial aid probation or suspension, the student may appeal for an Incomplete Grade, once the course is completed. A student may appeal for a re-evaluation of Satisfactory Academic Progress by submitting or faxing the Satisfactory Academic Progress appeal form to the Financial Aid office at the Central Campus. If the grade becomes final before the review, the actual grade, credits attempted and credits earned are used to determine whether the student is making satisfactory progress.

**Pass/Fail Grades**
A grade of “P” (Pass) is used for successful completion of Developmental Math (DMA) or Developmental Reading (DRE) courses. A grade of “P” is included in a student’s SAP calculation as attempted and completed credit hours with an assigned Grade Point Average (GPA) of 4.0.

A grade of “R” (Fail) is used for unsuccessful completion of DMA or DRE courses. A grade of “R” is included in a student’s SAP calculation as attempted and not completed credit hours with an assigned GPA of 0.0.

**Withdrawn Never Attended**
A grade of “WN” is an assigned grade given when a student registers for a class and never attends the course prior to the class census date. “WN” grades are not included in the SAP calculation as attempted credit hours nor assigned any type of grade points.

**Dropping Classes**
The final eligibility for aid is based on the number of hours for which a student is enrolled at the 10% point of the semester. For students who register and then drop classes prior to that date, eligibility for aid is RECALCULATED on their remaining hours as of the 10% point of the semester. Students who receive a financial aid payment based on more hours than those remaining as of the 10% point of the semester may be responsible for repaying a portion of any financial aid received. Dropped classes are not included in the SAP calculation as attempted credit hours or assigned any type of grade points.

**Cumulative Grade Point Average**
A student's cumulative grade point average should meet the minimum standards of the institution according to their degree intentions. The minimum cumulative grade point average for graduation at CPCC is 2.0.

**Course Withdrawals**
Students who withdraw from classes officially or unofficially should understand how withdrawals affect their eligibility for financial aid as determined by the Satisfactory Academic Progress procedure. A “Withdrawal” counts as an attempted, not completed class and does not count in the Academic GPA calculation; however, it does count in the Financial Aid GPA calculation with an assigned grade point of 0.0. Students who receive federal or state aid should be aware that repeated courses and grades of “W” are included in measuring progress towards completion. Financial Aid recipients should discuss their possibility of withdrawing with a Financial Aid Officer before doing so.

**Return of Title IV Funds for Course Withdrawals or All “F” Grades**
Federal law states that if a student receives federal financial aid and withdraws, stops attending or drops out of all of their classes before completing at least 60 percent of the semester, the student must return a portion of the federal aid that was received. A Withdrawal (W Grade) from a class (es) is a non-punitive grade for cumulative and major grade point averages. Withdrawal grades are counted as an attempt for financial aid. Withdrawal grades are calculated in the financial aid GPA as a zero grade. Students are billed for the amount to be repaid according to this policy. Students are reported to the Department of Education for repayment. Until the balance is paid, students’ records are placed on hold, prohibiting them from receiving any further financial aid funds. If students have tuition, fees or other outstanding institutional charges, registration, grades and transcripts are placed on hold at CPCC until debts are satisfied.

**Reducing enrollment during any semester can create serious consequences for financial aid recipients.**
- Satisfactory Academic Progress may be affected;
- In cases of complete withdrawals, students may be required to repay a percentage of financial aid received for that semester. (See Return of Title IV Funds).
- If a student purchases books using federal or state funds and never attends classes or earns a SAP status of “Unsatisfactory,” the student is responsible for all charges.

**Developmental Studies Standards of Progress**
Financial aid recipients may take a maximum of 30 credit hours in developmental coursework. Developmental courses (designated by course numbers below 100, e.g. DMA 010, DRE 096) are included in...
the calculation of satisfactory academic progress. Students enrolled in developmental courses must receive grades of “A,” “B,” or “C” to remain in good standing. All credit hours attempted or completed are counted towards the 30 hours of developmental course work. Developmental hours in exceeding 30 semester credit hours cannot be counted towards enrollment status for federal and state grants or for the cost of attendance for any campus-based programs or loan programs.

Repeated Courses
Students may receive aid when repeating a course that was previously failed (received a 0.0 or No pass), regardless of the number of times the course was attempted and failed. However, according to the college’s policy on Excessive I’s, F’s, and/or W’s, students are not allowed to register for courses in which they received three I’s, F’s, and/or W’s without permission from the division that offers the course. Student may receive aid to repeat a previously passed course only one additional time. Students who complete any course twice with a passing grade are no longer eligible to receive aid for that course. If a student retakes a course that is not aid eligible, a recalculation of aid is computed to exclude credits for the repeated course. This rule applies whether or not the student received aid for enrollments in the course.

English as a Foreign Language (EFL)
Students may receive Federal Student Aid program funds for an EFL course. These courses are not considered developmental. EFL credit hours are included in all Satisfactory Academic Progress calculations and also are counted toward Pell Lifetime Eligibility Used (LEU).

Transfer Students
Satisfactory progress for transfer students is based on the number of credit hours accepted toward their current program of study. Transfer credits used toward program requirements count when calculating completion rate. The transfer credits are included as attempted and completed hours.

Change of Majors
Students who change their major are still responsible for maintaining satisfactory academic progress in accordance with outlined procedures. A review of satisfactory academic progress is based on the student’s current program of study. A student changing from an associate program to a diploma or certificate program may lose federal and state eligibility immediately upon making the change.

Summer Session
Credit hours attempted and earned during the summer session are included in the calculation of Satisfactory Academic Progress. Full-time status is the same for summer session as for fall and spring semesters (at least 12 credit hours).

Warning, Suspension, Probation on an Appeal
Warning
Following the first term of failure to maintain cumulative satisfactory academic progress, students are granted one term to regain satisfactory academic progress. This term is known as the “Warning” term. Financial aid may be received during this Warning term.

- WG – Warning due to grade point average
- WP – Warning due to pass rate
- WB – Warning due to grade point average and pass rate.

Suspension
If a student is able to regain satisfactory academic progress with courses completed successfully during the “Warning” term, the probation is lifted. Students who do not regain satisfactory academic progress are placed on “SUSPENSION” and are no longer eligible for financial aid at CPCC until their cumulative progress is again satisfactory.

After Suspension
Other than when an appeal is granted for unusual or mitigating circumstances, students can reestablish eligibility only by taking action that brings them in compliance with the qualitative and quantitative components of the Financial Aid Satisfactory Academic Progress Standards, including the maximum timeframe.

It is the student’s responsibility to be aware of his or her Satisfactory Academic Progress for financial aid eligibility.

Students are notified, via their CPCC email accounts when placed on warning or suspension. Students may view their satisfactory academic progress on their MyCollege accounts. Federal Pell Grant and other types of financial assistance (depending on availability of funds) are reinstated at the beginning of the next term of attendance, if students are otherwise eligible and take necessary actions to bring them in compliance with the qualitative and quantitative components of the Financial Aid Satisfactory Academic Progress Standards. Whether approved by the Financial Aid Appeals Committee or approved after one or more semesters of satisfactory progress, the student’s status upon reinstatement is probationary.

Probation on an Appeal
When students are reinstated by the Financial Aid Appeals Committee due to an approved appeal they are placed on probation.

Termination
Students are required to adhere to the Academic Plan given when their appeals were approved. If they do not, they are placed on Financial Aid Termination. They lose financial aid eligibility and no other appeal can be accepted until minimum SAP requirements are met.

Appeals
Students may appeal the termination of financial aid by obtaining an appeal form online at http://www.cpcc.edu/financial_aid/fyi/Forms %202013-2014 and indicating in writing:

a) reasons why they did not achieve minimum standards,
b) reasons why their eligibility should not be terminated, but reinstated.

To initiate a financial aid appeal, students should complete a Financial Aid Appeals Form, print their transcript evaluation and submit it along with required supporting documentation. In addition, the appeal needs to explain and document that the situation has been resolved. Appeals are considered for circumstances that were out of the ordinary or out of a student's control. These may include:

1. Extended student/family illness or injury
2. Death of a relative  
3. Change of degree program

Once appeals are reviewed, the approval or denial notice is sent to the student’s CPCC email address. If the appeal is approved, the student is placed on an academic plan. To maintain eligibility, the students must meet all criteria of their academic plans.

NOTE: Students participating in the Federal Work Study program who are suspended from financial aid cannot continue working until satisfactory academic progress is re-established.

Reviewing Appeals

An Appeal Committee reviews student appeals and documentation to determine if financial aid eligibility should be reinstated. Once a decision is made, the Financial Aid Office notifies students of the decision through their CPCC email accounts. Students may review their satisfactory academic status in their MyCollege account.

Deadline

Appeals are reviewed only for the current semester up to 30 calendar days into the semester starting from the first day of the semester. Appeals submitted after that time are reviewed for the following semester.

International Programs and Services

The International Programs and Services Office is committed to supporting the academic and personal growth of CPCC’s international students who are on an F-1, student visa. Whether students need assistance with admissions, immigration-related issues, resources at the College or want to learn more about the Charlotte community, International Programs and Services is here to help.

For more information, call 704.330.6838, or visit the International Services website (http://www.cpcc.edu/international_services). (http://www.cpcc.edu/international_services)

Lost and Found

Lost and Found is managed by College Security/Police Services. Found items can be turned in by calling the Security Dispatch Center at 704.330.6632. College Security/Police will send an officer to pick up the item, or found items also may be returned to Security/Police on each campus. Lost items are stored by CPCC Security/Police for 30 days. Unclaimed items beyond that time frame are disposed of according to North Carolina Law.

Inquiries about lost items should be directed first to the College Security/Police Services Office at the campus where the item was lost. To determine if someone has turned in a lost item to Security/Police, call 704.330.6632 to describe the item. Found items are electronically recorded by description in a database for all dispatchers and security officers to access. If Security/Police have an item similar to an item described, directions are given as to how and where the lost item may be identified and claimed.

Transfer Resource Center

The Transfer Resource Center offers advising and support services to CPCC students who plan to transfer to a four-year college or university. Transfer advisors assist students in selecting courses at CPCC which align with their intended major at their intended four-year institution and facilitate a smooth transition into their program. To assist transfer students with gathering information about senior (four-year) institutions, the office maintains a comprehensive website of resources and brings admissions representatives from four-year institutions to CPCC to talk with prospective transfer students through a program called Transfer Tuesdays. In addition to individual college visits, the office hosts a college transfer fair each semester, bringing colleges and universities from across North Carolina and the southeast to CPCC. The Transfer Resource Center office maintains a close relationship with UNC Charlotte and a UNC Charlotte admissions representative visits the Central and Levine Campuses each month to meet with students individually.

The Transfer Resource Center is located on the third floor of the Central High Building on Central Campus and appointments can be made by calling 704.330.6433. Transfer advisors also are available at the Levine Campus by appointment which can be made by calling 704.330.4267. For more information, transferring students should visit the Transfer Resource Center website (http://www.cpcc.edu/ican/trc).

TRIO Student Support Services

TRIO - Student Support Services is funded by the U.S. Department of Education to provide academic support for first generation, low-income and/or students with disabilities enrolled at Central Piedmont Community College.

TRIO Student Support Services empowers eligible students to persist and graduate from college. The program helps students reach their personal academic goals by guiding them toward their educational and career objectives and assisting them with their graduation plans. A variety of services, as well as personal support, is offered to support eligible students’ academic, personal and social needs to attend, persist in and graduate from CPCC and/or transfer to a university. Services include:

- tutoring,
- academic coaching,
- academic portfolio development,
- scholarship information and financial aid application assistance,
- financial literacy instruction,
- personal coaching,
- social support,
- TRIO Student Association, and much more.

For more information about the CPCC TRIO - Student Support Services program, visit the program office in Room 117 of Central High Building on Central Campus, call 704.330.6394 or 6532, or visit www.cpcc.edu/triosss.

Veterans Resources

- Bank of America Center for Military Families and Veterans (p. 77)
- Financial Aid and Scholarships (p. 77)
- Servicemembers Opportunity Colleges (SOC) (p. 77)
- Student Veterans Association (p. 77)
- Tuition Assistance (p. 77)
Bank of America Center for Military Families and Veterans

The Bank of America Center for Military Families and Veterans (formerly known as the Veterans Resource Center) is a place where armed forces members (including National Guards/Reservists), veterans and their immediate family members engage in services promoting their personal and professional development. The center provides resources that address many aspects of education, military and civilian life. Services provided by the center include:

- academic advising
- assistance filing a VA claim
- career coaching
- computer lab with study space
- goal-setting
- personal counseling
- Student Veterans of America Association
- welcoming reception area and social lounge
- workshops on well-being

For more information, visit the Center for Military Families and Veterans in Room 233 of Terrell Building on Central Campus. Office hours are Monday through Friday, 8 a.m. through 5 p.m. The center also may be reached by phone at 704.330.6126 or online at www.cpcc.edu/military.

Financial Aid and Scholarships

Veterans Affairs students are encouraged to apply for financial aid and scholarships. Scholarships are provided through CPCC’s Foundation and the generosity of industries, businesses, professional organizations, civic clubs and individuals. Visit the following websites for information on financial aid:

- www.cpcc.edu/financial_aid
- www.cpcc.edu/financial_aid/assistance/scholarships

Tuition Assistance

Tuition Assistance is processed through the Sponsored Programs Office at CPCC - 704.330.4262 or sponsoredprograms@cpcc.edu.

The Department of Defense does not authorize tuition assistance for classes for which a member also is receiving education benefits under

- the Montgomery GI Bill - Selected Reserve program (chapter 1606 of title 10, United States Code),
- the Reserve Educational Assistance Program (chapter 1607 of title 10, United States Code),
- or any GI Bill programs other than either the Montgomery GI Bill - Active Duty program (chapter 30 of title 38, United States Code) or the Post-9/11 GI Bill Program (chapter 33 of title 38, United States Code).

Servicemembers Opportunity Colleges (SOC)

Central Piedmont Community College has been designated as an institutional member of Servicemembers Opportunity Colleges (SOC), a group of more than 1,900 institutions pledged to be reasonable in working with servicemembers and veterans trying to earn degrees even while pursuing demanding, transient careers. As a SOC member, CPCC is committed to easing the transfer of relevant course credits and crediting education from appropriate military training. SOC has been developed jointly by educational representatives of each of the armed services, the Office of the Secretary of Defense and a consortium of 13 leading national higher education associations. It is sponsored by the American Association of State Colleges and Universities and the American Association of Community Colleges.

Student Veterans Association

The Student Veterans Association (SVA) is a service and advocacy group at Central Piedmont Community College. The Association’s mission is to serve all generations of military branches, their dependents and all veteran supporters educationally, personally, and professionally while enhancing the value of their military experiences as they transition to the next phase of their life.

The SVA brings past and current members of the Armed Forces together to promote, unify, and advocate for the veteran voice on- and off-campus. The SVA aims to educate the community about how the military has affected the lives of service members and to support those returning home from duty through the process of re-integration. The SVA stands ready to help student veterans achieve their education goals.

For more information email cpcc.sva@gmail.com.

Veterans Affairs Educational Benefits (p. 78)

Click above link for all details about VA education benefits:

- Eligibility, Enrollment Certification Process
- Verification of Enrollment
- Notification from the Department of Veteran Affairs
- SAP - Satisfactory Academic Progress
- Graduation
- Changes to: Contact Information, Enrollment Status, Program of Study

Veterans Education Benefits Regulations (p. 80)

Click above link to see all regulations about VA education benefits:

- Chapter 30: Montgomery GI Bill, Active Duty
- Chapter 31: Training and Rehabilitation for Veterans with Service-Connected Disabilities
- Chapter 33: Fry Scholarship
- Chapter 33: Post-9/11 GI Bill
- Chapter 33: Transfer of Post-9/11 GI-Bill Benefits to Dependents (TEB/TOE)
- Chapter 35: Dependents and Survivors Educational Assistance
- Chapter 1607 REAP: Education benefit for Activated Reservists
- Chapter 1606: Educational Assistance for Members of the Selected Reserve
- Veterans Access, Choice, and Accountability Act of 2014
Veterans Affairs Education Benefits

Note: All policies are subject to change based on institutional and federal guidelines.

- Eligibility, Enrollment Certification Process (22-1999) (p. 78)
- Verification of Enrollment (Chapters 30, 1606 and 1607) (p. 79)
- Notification from the Department of Veterans Affairs (p. 79)
- Satisfactory Academic Progress (SAP) (p. 79)
- Changes to: Address/Phone Information, Enrollment Status, Program of Study (p. 80)
- Websites for Further Information (p. 80)

Central Piedmont Community College is extremely proud of its long-standing relationship with the men and women in uniform that bravely serve this country, those who have served and their families. The mission of the CPCC Veterans Affairs Education Benefits Office is to enhance the educational experience of veterans and eligible family members by providing access to education benefits within a supportive environment. CPCC is dedicated to providing the highest quality and comprehensive support to student veterans in an atmosphere that provides commitment, respect and academic excellence.

Central Piedmont Community College is approved by the North Carolina State Approving Agency for the enrollment of persons eligible for education assistance benefits from the U.S. Department of Veteran Affairs. The College provides training opportunities for veterans, eligible National Guard/Reservists, and eligible dependents (spouse and/or children) of 100 percent service-connected disabled or deceased veterans.

For additional information regarding these benefits, which are administered by the United States Department of Veterans Affairs, contact one of the following offices:

- Department of Veterans Affairs - 1-888-442-4551 or http://www.benefits.va.gov/gibill/
- Mecklenburg County Veterans Service Office - 704.336.2102
- District Office of the North Carolina Division of Veterans Affairs - 704.563.2037
- Central Piedmont Community College's Veterans Affairs Education Benefits Office - 704.330.6552
- Central Piedmont Community College Center for Military Families and Veterans - 704.330.6126

Inquiries may be made at 1-888-442-4551 or by email to http://www.benefits.va.gov/gibill/ – Ask A Question.

Eligibility, Enrollment Certification Process (22-1999)

Veterans Affairs students are in the unique position of having to meet requirements as specified by both the Department of Veterans Affairs and the North Carolina State Approving Agency (NCSAA). Although CPCC Veterans Affairs Office does not work for the Department of Veterans Affairs, it works closely with them to ensure students’ needs are met. The College strives to meet the DVA goal of “Putting Veterans First.”

To receive VA education benefits, students must complete the following 6 steps:

1. Apply for VA education benefits.
2. Complete all CPCC admission steps. All admission steps are given on the Get Started website: http://www.cpcc.edu/getstarted/veterans
3. Submit official transcripts to CPCC Records for evaluation. Request official copies of high school, military and all prior college Transcripts to be sent to Student Records in the Central High Building along with the Member 4 copy of the DD214.
4. Meet with an Academic Counselor to be admitted into a VA Approved Program of Study.

Dual Degrees

Central Piedmont Community College is approved for VA students to pursue dual degrees simultaneously. Diplomas and Certificates do not qualify for the Dual Degree Program. Students need to meet certain criteria to be certified for Veterans Affairs benefits while seeking two degrees. Students desiring a second degree should contact the Veterans Affairs Education Benefits Office for more information.

Note: Financial Aid award amounts are calculated only for the primary active program.

Selection of Degree Program

In order to receive veterans affairs education benefits, VA regulations require that students have a “predetermined and identified educational, professional or vocational objective.” Benefits cannot be authorized for courses which do not lead to the completion of this objective. Courses which do not apply to the selected program are considered unrelated courses and are not eligible for benefits. Therefore, any such courses will not be certified. Students need to access their MyCollege account with their student ID and password to run a Program Evaluation and confirm all courses are required for their Program of Study before they register for classes, as only required courses can be certified.

Developmental Courses

Per Federal guidelines, all Developmental courses and labs need to be taken in seated classroom settings for VA certification. Developmental courses offered online as Internet and/or /Tele-course/ Blended seated classes with an online lab component are not eligible for certification for Veterans Affairs education benefits. Developmental

All Veterans, National Guard/Selected Reserve and Survivors and Dependents of Disabled Veterans can apply online for benefits. Applications are available at http://www.benefits.va.gov/gibill/. From there, applicants are directed to the VONAPP website, the official Department of Veterans Affairs, for the online application. Print an extra copy of the completed VONAPP, with confirmation numbers, to keep for personal records. A Certificate of Eligibility from the Department of Veteran Affairs is sent after the application is processed.
5. Submit forms for education benefits.  
Students need to access their MyCollege account with their student ID and password to complete and submit forms listed under their approved chapter for education benefits. Each time veteran students register for classes, they must complete the Veterans Affairs Education Benefits Office Certification Request form. The form can be completed and submitted online from their MyCollege student account. It is found under VA Forms. The CPCC VA file must be complete in order for a veteran student to be certified for VA Education Benefits. Once the file is complete and the student has registered and paid for classes (if required), veteran students must attend the VA Annual Certification Workshop, as well as each academic year. Workshop dates and times can be accessed by going to http://www.cpcc.edu/veterans/ every year.

6. Attend a mandatory annual VA Certification workshop to be eligible for certification.  
The CPCC VA file must be complete in order for a veteran student to be certified for VA Education Benefits. Once the file is complete and the student has registered and paid for classes (if required), veteran students must attend the VA Annual Certification Workshop, as well as each academic year. Workshop dates and times can be accessed by going to http://www.cpcc.edu/veterans/ every year.

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Verification of Enrollment (Chapters 30, 1606 and 1607)  
After the Veterans Affairs Education Benefits Office has certified semester hours to the VA Regional Processing Office, VA students need to verify their hours have not changed. They may do this the last calendar day of each month by calling 877.823.2378 (if there are no changes) or by using WAVE (Web Automated Verification of Enrollment) through www.benefits.va.gov/gibill (http://www.benefits.va.gov/gibill). Students are responsible for notifying the Veterans Affairs Education Benefits Office immediately when changes are made to their enrollment and complete a VA Schedule Adjustment Form. The Veterans Affairs Education Benefits Office is responsible for transmitting all Changes of Enrollments immediately to the VA Regional Processing Office to prevent student debt.

Notification from the Department of Veterans Affairs  
All VA Certifying Officials use a program called VAOnce to transmit Enrollment Certifications, reductions/increases or terminations to the VA Regional Processing Office. The Department of VA will transmit an electronic message directly to your CPCC email account when any type of activity is transmitted by a VA Certifying Official to the VA Regional Processing Office. It is important to always notify the Department of Veterans Affairs, CPCC’s Veterans Affairs Education Benefits Office and the Student Records Department of changes in your address, phone number or email address to prevent delays in communication.

Satisfactory Academic Progress (SAP)  
VA education benefits are discontinued when a student ceases to make satisfactory progress toward completion of his/her training. Veterans and eligible dependents/ spouses are required to seek academic assistance by contacting their instructor, counselor, advisor, or the Bank of America Center for Military Families and Veterans before academic difficulties place them on “Probation” or “Suspension.”

Unsatisfactory Attendance: Unsatisfactory attendance in courses may result in administrative withdrawal. An administrative withdrawal is reported to the VA Regional Office and education benefits are discontinued at that time.

Satisfactory Progress: Students receiving VA education benefits need to maintain a minimum grade point average (GPA) of 2.000 to be considered making satisfactory progress.

Pass - A grade of “P” (Pass) is used for successful completion of DMA or DRE courses. A grade of “P” is included in a student’s SAP calculation as attempted and completed credit hours.

Fail - A grade of “R” (Fail) is used for unsuccessful completion of DMA or DRE courses. A grade of “R” is included in a student’s SAP calculation as attempted and not completed credit hours with a GPA of 0.0.

If a Veteran Affairs student requesting benefits is currently on “Probation” or “Suspension”, a notification is sent to the student’s CPCC email. If the student is on Suspension, eligibility is terminated until the student meets the Standards of Academic Progress required to regain eligibility for VA education benefits.

Unsatisfactory Progress, Suspension: If a student on VA probation fails to achieve a semester GPA of 2.0 at the end of the first probationary semester, the student is reported to the Veterans Affairs Regional Office as terminated due to unsatisfactory progress. The student is no longer eligible for certification until the cumulative GPA is brought up to a 2.000. Education benefits are discontinued by the Department of Veterans Affairs for any student reported to the VA Regional Office for unsatisfactory progress. These standards are in accordance with the Department of Veterans Affairs Code of Federal Regulations, Title 38, Part 21, Sub-part D, Section 21.4277.

Probation: Students who fail to achieve a cumulative GPA of 2.000 are placed on academic probation for the next semester. Students on probation are required to attend an “On Track” meeting with their assigned VA Certifying Official during the probationary term before they can be certified.

Failing Grades: Veteran affairs students who complete a course but earn a grade of “F”, may still receive VA benefits. Any student who does not complete the final exam and does not attend class through the last scheduled day receives an unearned grade of “F”. The VA Regional Office is notified of any student who fails to attend class and fails to take the final exam and such students are classified as having received an overpayment of funds. Any overpayments are the student’s responsibility. VA students may receive benefits to retake a required course if they previously received a failing grade.

Note: Courses completed with a grade of “D” cannot be recertified if the College accepts the grade toward graduation.

Graduation: Students applying for Graduation must inform the CPCC VA Education Benefits Office once they have verified they are in their last semester at the College. If students need additional hour for full-time status, they can be certified for all credit hours they are taking during their last semester, if they are taking all courses needed to satisfy graduation requirements. This benefit may be used only once at CPCC. Previously passed courses or courses transferred in from other colleges cannot be certified.
Changes to: Address/Phone Information, Enrollment Status, Program of Study

Address/Phone Number Changes
To report a change of address/phone number, Veterans Affairs students should update their address/phone number through the Student Records Department or at http://mycollege.cpcc.edu, email the Veterans Affairs Education Benefits Office at veteransaffairs@cpcc.edu and contact the VA Regional Office at 1.888.442.4551.

Veterans Affairs students are responsible to notify CPCC’s Veterans Affairs Education Benefits Office immediately of any withdrawals, attendance issues, change of address, phone number or email address, pending or approved program changes, course substitutions and/or waivers and graduation. Veterans Affairs students are responsible to the US Department of Veterans Affairs for repaying overpayments.

Change of Enrollment Status

• Withdrawn, Non-Attendance: It is the student’s responsibility to report all withdrawals or attendance issues to the CPCC Veterans Affairs Education Benefits Office immediately to prevent overpayments. Students are required to complete a VA Schedule Adjustment form and submit mitigating circumstances in writing for evaluation and approval within five business days of the change in enrollment. The last date of attendance must be verified by the instructor for all withdrawals. VA students are allowed a one-time penalty exclusion by the VA Regional Processing Office for withdrawing up to six credit hours. Students can be paid up to the last instructor-confirmed date of attendance for those six hours. This exclusion must be approved and processed by the Department of Veterans Affairs. After that time, students must provide the VA Education Benefits Office with mitigating circumstances or repay any benefits received. If the student attends classes throughout the semester and receives a “W” (non-punitive) grade, this must be reported to the VA Regional Office and is not part of the six-hour, one-time exclusion - even if a student can document attendance through the last day of class. Students are responsible for overpayments resulting from non-punitive grades. Failure to notify the CPCC VA Education Benefits Office of withdrawals and continued acceptance of educational funds may be considered fraud. Students are encouraged to register only for those classes they know they can complete.

• Withdrawn, Never Attended - A grade of “WN” is assigned when a student registers for a class and never attends the class prior to the census date. “WN” grades are not included in the SAP calculation as attempted credit hours or assigned any GPA rating. The Department of VA does not pay education benefits for any courses assigned a “WN” grade.

Change of Program
Changes in Program of Study must be submitted to the VA Regional Office by the Veterans Affairs Certifying Official. This is necessary because re-evaluation of all prior credits earned must be completed to ensure their full utilization. VA students can be certified only for courses fully accepted for their Program of Study as reflected in the College Catalog. VA students desiring a program change should contact a VA Certifying Official, first. However, all program changes are initiated through Academic Counseling Services and the required form must be completed:

• Application for Change of Program, VA Form 22-5495 (Dependent/Spouse).

This form is accepted only after the Program Code has been officially updated by an Academic Counselor.

VA forms now available at http://www.benefits.va.gov/gibill/ are:
1. VA Form 22-0296 - Direct Deposit Enrollment
2. VA Form 22-1995 - Application for Change of Program or Place of Training – Veterans, National Guard/Reservists
3. VA Form 22-5495 - Application for Change of Program or Place of training for Survivors’ and dependents’ Educational Assistance

Websites for Further Information

American Legion: www legion.org/ (http://www legion.org)
DD 214 online request: www.vetrecs.archives.gov/ (http://www.vetrecs.archives.gov)
Department of Veterans Affairs: www.va.gov/ (http://www.va.gov)
Disabled American Veterans: www.dav.org/ (http://www.dav.org)
Education Benefits online application: www.vabenefits.vba.va.gov/vonapp (http://www.vabenefits.vba.va.gov/vonapp)
GI Bill Programs, Pay Rates, Applications, Forms: http://www.benefits.va.gov/gibill/
Returning service members: www.oefoif.va.gov/ (http://www.oefoif.va.gov)
VA Vocational Rehabilitation: www.vetsuccess.gov/ (http://www.vetsuccess.gov)
Veterans’ Benefits Administration: www.vba.va.gov/ (http://www.vba.va.gov)

Veterans Education Benefits Regulations

• Chapter 30: Montgomery GI Bill, Active Duty (p. 80)
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• Department of Defense Change to Tuition Assistance Program (p. )
• Veterans Access, Choice, and Accountability Act of 2014 (p. 82)

Chapter 30: Montgomery GI Bill, Active Duty

Persons who first entered active duty after June 30, 1985, are generally eligible. Some Vietnam Era veterans and certain veterans separated under special programs are also eligible. The veteran needs to have received an honorable discharge and continuously served for three years, or two years, if first enlisted for that, or two years of an obligation to serve
four years in the Selected Reserve and must have entered the Selected Reserve within a year of leaving active duty. The MGIB program provides up to 36 months of education benefits. Generally, benefits are payable for 10 years following release from active duty.

Chapter 31: Training and Rehabilitation for Veterans with Service-Connected Disabilities

Veterans Affairs Vocational Rehabilitation is a program whose primary function is to help veterans with service connected disabilities become suitably employed, maintain employment and achieve independence in daily living.

The program offers a number of services to help each eligible disabled veteran reach his or her rehabilitation goal. These services include vocation and personal counseling, education and training, financial aid, job assistance, and if needed, medical and dental treatment. Services generally last up to 48 months and can be extended in certain instances.

To be eligible, the veteran should first be awarded a monthly VA disability compensation payment (in most cases) and must have received or will receive a discharge that is other than dishonorable. Eligibility is also based on meeting the following conditions:

- Have received an honorable or other than dishonorable discharge
- Have a VA service-connected disability rating of 10 percent or more
- Veteran needs Vocational Rehabilitation to overcome an employment handicap
- It has been less than 12 years since VA notified the veteran of the qualified SCD

Detailed information and the online application can be found at www.vetsuccess.gov or contact the VA Vocational Rehabilitation Office, 251 North Main Street, Winston-Salem, NC 27155. Telephone: 336.714.0817.

Chapter 33: Fry Scholarship

The Marine Gunnery Sergeant John David Fry Scholarship (Fry Scholarship) currently pays a benefit equal to the Post-9/11 GI Bill for children and spouses of soldiers who have died in the line of duty since September 10, 2001. Beneficiaries attending school may receive up to their full tuition and fees for a public school, plus a monthly living stipend and book allowance under this program with 36 months of entitlement.

- A surviving Spouse can receive benefits for terms beginning on or after January 1, 2015. A surviving spouse's eligibility generally ends 15 years after the Servicemember's death. A spouse will lose eligibility for this benefit upon remarriage if this occurs during the 15 year period.
- Children are eligible for this benefit from age 18 – 33. A child's marital status has no effect on eligibility.

Chapter 33: Post-9/11 GI Bill

The Post-9/11 GI Bill is an education benefit program for individuals who served at least 90 days of aggregate service after September 10, 2001. To be eligible for 100 percent of the benefit an individual should have served an aggregate of 36 months of active duty service or have been discharged for a service-connected disability after 30 days of continuous service. Post-9/11 GI Bill benefits are payable for training pursued on or after August 1, 2009. No payments can be made under this program for training pursued before that date. Once individuals elect to receive benefits under the Post-9/11 GI Bill, they are no longer eligible to receive benefits under the program from which they elected the Post-9/11 GI Bill. Individuals should carefully consider their educational goals before applying and electing benefits under the Post-9/11 GI Bill. Benefits are payable for 15 years following release of active duty.

Important Note - The $600 Buy Up is not payable under the Post-9/11 GI Bill.

Chapter 33: Transfer of Post-9/11 GI-Bill Benefits to Dependents (TEB/TOE)

For the first time in history, service members enrolled in the Post-9/11 GI Bill Program are able to transfer unused education benefits to their spouses or children starting August 1, 2009. Department of Defense guidance, issued June 23, 2009, establishes the criteria for eligibility and transfer of those education benefits.

For details regarding eligibility for this transfer, go to www.gibill.va.gov. All applications will be submitted through the Transferability of Educational Benefits (TEB) website located at www.dmdc.osd.mil/TEB/. An individual approved to transfer an entitlement to educational assistance under this section may transfer the individual’s entitlement to:

- The individual's spouse
- One or more of the individual's children
- Any combination of spouse and child
- An eligible service member may transfer up to the total months of unused Post-9/11 GI Bill benefits, or the entire 36 months if the member hasn’t used any months. A family member should be enrolled in the Defense Eligibility Enrollment Reporting Systems (DEERS) and be eligible for benefits, at the time of transfer to receive transferred educational benefits.

Chapter 35: Dependents and Survivors Educational Assistance

The Dependents Educational Assistance Program is an education benefit for eligible spouses and children of certain veterans. To be eligible, the student should be the spouse or child of a member of the Armed Forces who has died while on active duty or as the result of a disability that VA has determined is service-connected, or is 100 percent permanently and totally disabled for a service-related reason.

- Dependents receive up to 45 months of full-time benefits and are generally eligible for the benefits between ages 18 and 26.
- For a spouse, benefits end 10 years from the date that the DVA declares eligibility or 20 years from the date of death of the veteran.

Chapter 1606: Educational Assistance for Members of the Selected Reserve

Chapter 1606 is for individuals in the Selected Reserve or National Guard. Members should have a six-year obligation to serve in the Selected Reserve signed after June 30, 1985. An officer will need to have agreed to serve six years in addition to original obligation. Eligible members need to complete initial active duty for training (IADT), obtain a high school diploma or equivalency before applying for benefits and remain in good standing while serving in an active Selected Reserve unit. The Department of Defense (DOD) is responsible for determining eligibility and issuing DD Form 2384-1 Notice of Basic Eligibility (NOBE). Tuition Assistance, awarded by the respective branch of service, may be available to members of the National Guard or Active Duty Personnel. Eligibility requirements are available at the member's unit command.
Chapter 1607 REAP: Education benefit for Activated Reservists

Chapter 1607 is an education benefit that provides up to 36 months of education benefits to members of the Selected Reserves, Individual Ready Reserve and National Guard, who are called or ordered to active service in response to a war or national emergency, as declared by the President or Congress. Eligibility will be determined by the Department of Defense or Department of Homeland Security as appropriate. Generally, a member of a Reserve component who serves on active duty on or after September 11, 2001, under title 10, U.S. Code, for at least 90 consecutive days under a contingency operation, is eligible for REAP. National Guard members are eligible if their active service extends for 90 consecutive days or more and their service is authorized under section 502(f), title 32 U.S. Code, authorized by the President or Secretary of Defense for a national emergency and supported by federal funds.

DOD Change to Tuition Assistance Program

The Department of Defense (DOD) no longer authorizes tuition assistance for classes for which a member also is receiving education benefits under

- the Montgomery GI Bill - Selected Reserve program (chapter 1606 of title 10, United States Code),
- the Reserve Educational Assistance Program (chapter 1607 of title 10, United States Code), or
- any GI Bill programs other than either the Montgomery GI Bill - Active Duty program (chapter 30 of title 38, United States Code) or the Post-9/11 GI Bill program (chapter 33 of title 38, United States Code).

Veterans Access, Choice, and Accountability Act of 2014

“Choice Act” as it pertains to the in-state tuition provision – Section 702.

To remain approved for VA’s GI Bill programs, NC schools must charge in-state tuition and fee amounts to “covered individuals,” as described, to include same-sex spouses and children (biological, adopted, pre-adoptive and stepchildren of same-sex spouses) for terms that start after 7/1/15.

A “covered individual” is defined in the Choice Act as:

- A Veteran using Montgomery GI Bill-AD (CH30) or Post 9/11 GI Bill (CH33) who lives in NC (regardless of legal state of residence) and enrolls in the school within three years of discharge from a qualifying period of active duty service of 90 days or more.
- Anyone using transferred CH33 Post-9/11 GI Bill benefits (TOE) who lives in NC (regardless of legal state of residence) and enrolls in the school within three years of discharge from a qualifying period of active duty service of 90 days or more.
- A spouse or child using benefits under the CH33 Marine Gunnery Sergeant John David Fry Scholarship (FRY) who lives in NC (regardless of legal state of residence) and enrolls in the school within three years of the Service member’s death in the line of duty after a period of active duty service of 90 days or more.

IMPORTANT: Individuals who initially meet the above requirements maintain “covered status” even if they are outside the three-year window or change programs as long as they continue to use Post-9/11 GI Bill (CH33) or Montgomery GI Bill-Active Duty (MGIB-AD CH30) benefits and remain continuously enrolled at the same institution of higher learning. Continuity of enrollment is not broken by regularly scheduled breaks between courses, semesters, or terms. VA students do not need to enroll in summer sessions to maintain continuous enrollment.

Situations not covered by the Choice Act:

- Once a student changes schools they are no longer covered under Section 702.
- Neither active duty individuals, nor their dependents using TOE, are covered under Section 702 while the VA transfer student is on active duty.

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Programs of Study

To carry out the mission of the College, CPCC offers the following educational programs:

Degree Programs, Diplomas and Certificates

The cornerstone of the North Carolina Community College System is the preparation of students for entry into the workforce, for job changes and for career advancement to meet individual goals and regional needs. In addition, community colleges provide students opportunities to transfer to four-year colleges and universities. The College offers career programs in a broad range of occupational areas.

Associate in Applied Science (A.A.S.)

The College offers two-year Associate in Applied Science (A.A.S.) degrees and shorter-term diploma and certificate programs. Graduates of these programs develop marketable employment and college-level academic skills. In some cases, courses within the programs are transferable to colleges and universities. Students may reach other career goals such as updating job skills, career advancement and re-entry into the workforce. In support of these programs, the College continues to form partnerships with business and industry.

Transfer Programs

The College provides the first two years of study in the arts and sciences and pre-professional fields for students who wish to transfer to four-year colleges and universities in the Associate in Arts (A.A.), Associate in Science (A.S.), and Associate in Fine Arts (A.F.A.) degrees. Students are able to transfer a diploma or an associate degree to four-year colleges prepared with the background and skills necessary to succeed in further studies. Graduates have college-level academic skills and have successfully completed the general education core curriculum.

Comprehensive Articulation Agreement

The Comprehensive Articulation Agreement (http://www.nccommunitycolleges.edu/academic-programs/college-transferarticulation-agreements/comprehensive-articulation-agreement-caa) (C.A.A.) is a statewide contract between the North Carolina Community College System and the North Carolina State University System. This agreement enables students to complete lower division general education requirements at the community college and meet respective four-year college or university equivalents by doing so.

College and Career Readiness

A basic premise of the community college movement is the expansion of educational opportunities for all adults, including those facing academic barriers to success. The College and Career Readiness department offers pre-college courses to help students improve their skills before enrolling in college or seeking employment.

A variety of pre-college courses are offered in language arts, math, High School Equivalency preparation, Adult High School, English as a Second Language, and specialized programs that integrate occupational training with academic and job readiness. Programs also are offered at libraries, public schools, and community sites to target select populations, including newly arrived refugees, parents and the homeless.

Corporate and Continuing Education

Corporate and Continuing Education is offered across College disciplines in relevant and popular topic areas through non-credit programming, events and services for individuals and employers. With flexibility in design, content and delivery, Corporate and Continuing Education plays a significant role in meeting the training needs of business and industry. Strong partnerships with governmental and community organizations allow the College to leverage multiple funding sources and to provide targeted and often hands-on skill training and knowledge to ensure a ready and reliable workforce.

For individuals, Corporate and Continuing Education offers year-round programming and services to help adults meet their professional and personal goals, including starting or growing a small business or preparing for retirement. Such a comprehensive selection allows individuals to earn certifications and courses for professional licensure, as well as to pursue recreational and leisure programs.

Career and College Promise (CCP)

Career and College Promise was formerly three programs known as Cooperative High School, The College Experience Program, and Concurrent Enrollment.

Success in today’s global economy may require a two- or four-year degree, a certificate or diploma. Through Career and College Promise (CCP), qualified students of high school age in North Carolina have the opportunity to pursue these options, tuition free, while they are in high school, allowing them to get a jump-start on their workplace and college preparation.

To be eligible, a high school student must meet with their career development coordinator or guidance counselor to determine if they are college-ready.

Career and College Promise provides the following options for students while they are still in high school:

College Transfer – College Transfer pathways provide tuition-free courses that transfer seamlessly to any public or participating private college or university, saving successful students time and money in pursuing four-year degrees.

Career Technical – Career Technical pathways lead to a certificate or diploma aligned with a high school career cluster. Students must complete a college application to be admitted into a CCP pathway and must meet all prerequisites for the courses they choose.

Cooperative Innovative High School Programs are located on college campuses or approved locations in Charlotte-Mecklenburg Schools. They enroll 100 or fewer students per grade level and provide opportunities for students to complete an associate degree program or earn up to two years of college credit within five years. Eligibility requirements for Cooperative Innovative High School Programs are established by the local board of education and local boards of trustees.

For specific criteria and eligibility requirements, please refer to the following document on Career and College Promise Operating Procedures from the State Office at http://www.nccommunitycolleges.edu/sites/default/files/basic-pages/academic-programs/attachments/section14_18july2014_ccpvs2.pdf
For more information visit the CPCC website at https://www.cpcc.edu/hsequivalency/tel:704.330.6129.

College and Career Readiness Programs

The College and Career Readiness (CCR) department aims to equip students with academic skills and college-going knowledge so they have the confidence to decide on a career and to complete the program of study associated with that career. CCR staff members take a student-focused approach to helping students develop vital knowledge and skills required to successfully enter college or employment. Students are supported in developing an individual career path that will help them track their progress during their educational and career journey.

To ensure a smooth transition into a post-secondary education institution or the workforce, the department’s team guides students through an assortment of College and Career Readiness courses, such as

- Foundational Skills courses in language arts and math,
- pre-college courses that include High School Equivalency Test preparation, Adult High School and English as a Second Language, or
- Pathways to Careers, which combines occupational training with academic and work readiness.

Career awareness and work-related skills are integrated into all instruction to help students see the relevancy and application of what they are learning.

Adult English as a Second Language (Adult ESL)

Adult English as a Second Language non-credit courses focus on helping students obtain a level of English language proficiency that will allow them to meet personal and professional goals. Instruction is provided by professionals trained to teach students from diverse cultural, geographical and linguistic backgrounds. Coursework is tailored to reflect the goals of the students and helps prepare students for further academic study, employment and/or citizenship. Higher level students will begin to develop the cognitive academic language proficiencies needed to make these transitions. Courses are free of charge to students. For more information, call 704.330.6172 (http://catalog.cpcc.edu/programssofstudy/collegeandcareerreadiness/adultesltel:704.330.6864).

No degrees offered.

An Adult High School Diploma is awarded through Charlotte-Mecklenburg Schools (CMS). The number of credits needed to earn the diploma is based on an agreement with CMS and is subject to change.

No certificates offered.

Foundational Skills

The Foundational Skills program offers students an opportunity to learn basic language arts (reading and writing) and math skills. After completing all four Foundational Skills levels, students are prepared for entry into high school equivalency programs, Adult High School, and/or short-term training programs.

The College also provides services to help people with disabilities learn the life skills they need to enjoy independent living and successful employment. More information about these offerings is available under Special Learning Needs.

No degrees offered.

No diplomas offered.

No certificates offered.

High School Equivalency

The High School Equivalency Preparation program offers students an opportunity to gain the knowledge and skills needed to successfully pass a national high school equivalency test and earn a high school equivalency diploma. The test, based on the rigorous Common Core State Standards, measures knowledge in science, math, social studies and language arts.

There is no charge for preparation classes; however, there is a fee for final testing. For more information, call 704.330.6129 (http://catalog.cpcc.edu/programssofstudy/collegeandcareerreadiness/hsequivalency/tel:704.330.6129).

No degrees offered.

A High School Equivalency Diploma is issued by the North Carolina Community College System following successful passage of one of three state-approved high school equivalency tests, including the GED, TASC, and HISET.

No certificates offered.

Human Resource Development (HRD)

The mission of the HRD program is to educate and train individuals for success in the workplace. This program is a statewide initiative sponsored by the NC Community College System. The HRD role is to serve unemployed and underemployed individuals across Mecklenburg County who are struggling to deal with the stark transitions taking place as a result of the economy. The HRD program at CPCC provides skills assessment services, employability skills training and career advising to individuals in transition and in the emerging workforce. The courses
taught in this program address assessment of an individual’s assets and limitations’ development of positive self concept, employability, communication and problem solving skills and awareness of the impact of information technology in the workplace.

**Eligibility**
The classes are offered at **no cost** for individuals who meet one of the following conditions:
- They are unemployed
- They received notice of a pending layoff
- They are working and are eligible for Federal Earned Income Tax Credit
- They are working and earning at or below 200 percent of Federal Poverty Guidelines

For more information on the HRD program, call 704.330.6794 or visit online at [www.cpcc.edu/ccr/hrd](http://www.cpcc.edu/ccr/hrd).

**Pathways to Careers**

Pathways to Careers, formerly known as Pathways to Employment, is a program to transition into college. It combines the teaching of basic reading, writing and math skills with technical skills. Pathways to Careers offers an intensive, structured program that provides courses for academic support or to prepare for High School Equivalency while also earning an occupational credit-bearing certificate. To ensure student success, the program provides a variety of student support services, academic advising and training to help students become more eligible for employment or to help them transition to higher level certificates and degree programs or employment. Scholarships are available for eligible applicants. This program provides extra support for second language learners.

**Core Components**

**Bridge to Careers**

This is an intensive eight-week program focused on improving basic math, reading, writing and communication skills needed to transition to Pathways to Careers and to improve skills needed to earn a high school equivalency diploma. It combines online and classroom instruction and provides individual tutoring to improve academic advising. Students who successfully complete this program may transition to the Pathways to Careers certificate program.

**Go Pathways**

Go Pathways is a series of short-term courses and workshops that provide:
- academic assessment and career exploration,
- computer literacy and
- academic study skills.

No degrees offered.
No diplomas offered.

Pathways to Careers support several CPCC certificates in various high-demand career industries. *

**Certificates**
- Human Services Technology with a Specialization in Developmental Disabilities (C4538A-C1);
- Air Conditioning, Heating and Refrigeration Technology with a Specialization in Heating Service (C35100-C1)
- Air Conditioning, Heating and Refrigeration Technology with a Specialization in Air Conditioning Service (C35100-C2)
- Office Administration Specialist Certificate (C25370-C5)
- Welding Technology Certificate with a Specialization in Entry-Level Welding (C50420-C2)
- Computer Integrated Machining Technology certificate with a Specialization in Basic Machining Skills (C50210-C3)

**Credentials**
- NC State Early Childhood Credential Career Readiness Certificate
- Workforce Readiness Certificate
- PC PRO/COMPTIA A+ CERTIFICATION preparation

*Certificates supported by Pathways to Careers may change.

**Special Learning Needs**

The Special Learning Needs Program helps people with intellectual disabilities learn the life skills they need for independent living and successful employment in the real world. The program is part of the CPCC College and Career Readiness Foundational Skills area.

The program’s classes are free of charge, with all course materials provided by CPCC. Classes take place on Central Campus, as well as several community sites. The program gives students the opportunity to learn socialization skills and gain invaluable knowledge that may allow them to one day become more independent in areas such as employment, transportation, and daily living.

Program participants learn from instructors who understand their learning needs and design classes focused on the following areas:
- Functional Academics
- Community Living
- Health and Safety
- Leisure and Humanities

Participants who successfully complete the Special Learning Needs Program may continue in a transitions program to further their education, if they so desire.

**College-Level Curriculum Programs**

CPCC has developed a variety of affordable, two-year degree and distance learning programs that respond to the immediate needs of the local workforce, including the areas of science, technology, engineering, math and many others.
It is this commitment to affordability that gives CPCC students the opportunity to earn a quality education at a fraction of the cost of other local higher education institutions.

Types of College-Level Programs

CPCC offers a variety of learning programs to accommodate students’ lifestyles, while achieving their educational goals. These include:

- **College Transfer Programs** for students who are interested in completing their general education requirements prior to transferring to a four-year institution. Students who intend to transfer to a four-year college or university should seek the Associate in Arts (A.A.), Associate in Science (A.S.), Associate in Engineering (A.E.) *(pending state approval)*, or Associate in Fine Arts (A.F.A.) degrees.

- **Associate in Applied Science degrees, diplomas and certificates** for students who are interested in completing a career-oriented program.

CPCC General Education Goals

Through its general education program, Central Piedmont Community College seeks to provide a high quality education to its students and ensure that graduates have the necessary knowledge, skills and abilities to function effectively in their personal and professional lives.

Central Piedmont Community College defines general education as acquiring and integrating the general knowledge, intellectual skills and experiences needed by an individual to achieve a level of competency appropriate for a two-year college graduate, preparing for advanced work and life-long learning and functioning more fully as a person and as a member of society.

The following goals identify the essence of a general education. Although some competencies may be achieved primarily through successful completion of particular courses, students should have the opportunity to develop and use many of these skills throughout their programs.

1. **Written Communication**
   Definition: The ability to identify, analyze, question and evaluate content as a guide to understanding and action.

2. **Oral Communication**
   Definition: The ability to develop and clearly express in oral form ideas that are appropriate to audience and purpose.

3. **Critical Thinking**
   Definition: The ability to develop and clearly express in oral form ideas that are appropriate to audience and purpose.

Associate in Applied Science, Degrees, Diplomas, Certificates

**Introduction**

The programs in the following section are primarily designed for students who intend to enter the workforce upon graduation. Certain programs are available at all campuses. Others are available only at certain campuses. However, many general education requirements are offered at all CPCC campuses.

Some two-year degree programs also have one-year diplomas, as well as certificates that require less than one year of full-time study.

**Requirements**

These degrees are awarded after completion of a minimum of 64 semester credit hours, or the number of credit hours specified by each area of study, including the required general education courses for that area.

A minimum of 21 credit hours must be earned at CPCC. Official copies of high school and all other college/university transcripts must be on file in the Student Records office.

**Associate in Applied Science Degrees are awarded in the following areas:**

- Accounting *(p. 89)*
- Advertising and Graphic Design *(p. 91)*
- Air Conditioning, Heating and Refrigeration Technology *(p. 92)*
- Architectural Technology *(p. 96)*
- Associate Degree Nursing *(p. 205)*
- Automotive Systems Technology *(p. 98)*
- Baking and Pastry Arts *(p. 101)*
- Biomedical Equipment Technology *(p. 105)* *(pending SACSCOC approval)*
- Broadcasting and Production Technology *(p. 106)* *(pending SACSCOC approval)*
- Business Administration *(p. 107)*
- Cardiovascular Technology *(p. 111)*
- Civil Engineering Technology *(p. 113)*
- Collision Repair & Refinishing Technology *(p. 115)*
- Computer Engineering Technology *(p. 118)*
- Computer-Integrated Machining Technology *(p. 126)*
- Computer Technology Integration *(p. 120)*
- Construction Management Technology *(p. 130)*
- Cosmetology *(p. 133)*
- Criminal Justice Technology *(p. 134)*
- Culinary Arts *(p. 137)*
- Dental Hygiene *(p. 140)*
- Diesel and Heavy Equipment Technology *(p. 142)*
- Early Childhood Education *(p. 145)*
- Electrical Engineering Technology *(p. 147)*
- Electrical Systems Technology *(p. 149)*
- Electronics Engineering Technology *(p. 154)*
- Emergency Medical Science *(p. 156)*
- Fire Protection Technology *(p. 157)*
- Geomatics Technology *(p. 159)*
- Geospatial Technology *(p. 162)*
- Global Logistics & Distribution Management Technology *(p. 167)* *(pending SACSCOC approval)*
- Graphic Arts and Imaging Technology *(p. 168)*
   - Flexography Concentration *(p. 168)*
- Health Information Technology *(p. 171)*
- Horticulture Technology *(p. 174)*
- Hospitality Management *(p. 177)*
- Human Services Technology *(p. 181)*
   - Developmental Disabilities Concentration *(p. 181)*
   - Substance Abuse Concentration *(p. 181)*
• Interior Design (p. 187)
• Interpreter Education (p. 189)
• Mechanical Engineering Technology (p. 191)
• Mechatronics Engineering Technology (p. 193)
• Medical Assisting (p. 195)
• Medical Laboratory Technology (p. 198)
• Medical Office Administration (p. 199)
• Nondestructive Examination Technology (p. 201)
• Nursing, Associate Degree (p. 205)
• Occupational Therapy Assistant (p. 206)
• Office Administration (p. 207)
  • Legal Concentration (p. 207)
• Paralegal Technology (p. 214)
• Pharmacy Technology (p. 216)
• Physical Therapist Assistant (p. 218)
• Respiratory Therapy (p. 219)
• Simulation and Game Development (p. 221)
• Surgical Technology (p. 225)
• Sustainability Technologies (p. 226)
• Turfgrass Management Technology (p. 229)
• Welding Technology (p. 230)

Diplomas
Diplomas are awarded after completion of a minimum of 36 semester credit hours, or the number of credit hours specified by the specific program of study. For program completion, a minimum of 12 credit hours must be earned at CPCC. Official copies of high school and all other college/university transcripts must be on file in the Student Records Office.

Diplomas are awarded in the following areas:
• Accounting (p. 89)
• Air Conditioning, Heating and Refrigeration Technology (p. 92)
• Architectural Technology/Building Information Modeling (BIM) (p. 96)
• Automotive Systems Technology (p. 98)
• Basics of Manufacturing (p. 191)
• Collision Repair and Refinishing Technology (p. 115)
• Computer-Integrated Machining Technology (p. 126)
• Computer Technology Integration/Cloud & Virtualization Technology (p. 120)
• Computer Technology Integration/Database Analysis & Programming (p. 120)
• Computer Technology Integration/Information Assurance & Digital Forensics (p. 120)
• Computer Technology Integration/IT Business Analysis (p. 120)
• Computer Technology Integration/Mobile Apps Development (p. 120)
• Computer Technology Integration/Networking Technology (p. 120)
• Computer Technology Integration/Software Development (p. 120)
• Computer Technology Integration/Web Technologies (p. 120)
• Concepts of Manufacturing Support Technology (p. 191)
• Concepts of Mechanical Design Technology (p. 191)
• Dental Assisting (p. 139)
• Diesel and Heavy Equipment Technology Diploma (p. 142)
• Electrical Systems Technology (p. 149)
• Geospatial Technology – Geographic Information Science (p. 162)
• Geospatial Technology – Geography (p. 162)
• Geospatial Technology – Geomatics (p. 162)
• Horticulture Technology (p. 174)
• Hotel Management (p. 177)
• Medical Assisting (p. 195)
• Nuclear Plant Inspection (p. 201)
• Office Systems Technology/General Clerical Skills (p. 207)
• Office Systems Technology/Word Processing Operator (p. 207)
• Ophthalmic Medical Assistant (p. 213)
• Paralegal Technology (p. 214)
• Pre-Architecture (p. 96)
• Residential Interior Decoration (p. 187)
• Residential Interior Decoration & Home Staging (p. 187)
• Restaurant Management (p. 177)
• Simulation & Game Development/Game Design (p. 221)
• Simulation & Game Design/Game Programming (p. 221)
• Simulation & Game Design/3D Modeling (p. 221)
• Simulation & Game Design/Animation (p. 221)
• Turfgrass Management Technology (p. 229)
• Welding Technology (p. 230)

Certificates
Certificates are awarded in the following areas:
• Basic Law Enforcement Training (p. 104)
• Cosmetology Instructor (p. 133)
• Cytotechnology (p. 138)
• Infant/Toddler Care (p. 145)
• Lateral Entry Teacher (p. 191)
• Nurse Aide (p. 205)
• School-Age Care (p. 145)

Specialized Certificates
Special short-term certificates are offered in a number of programs. Courses in certificate programs are taken from diploma and degree programs and may be completed within 12 to 18 semester credit hours. A student may earn certificates that build to earning a diploma or degree. A student may earn a certificate(s) in the same semester that he or she earns a degree or diploma. To earn a certificate the following conditions must have been fulfilled:

1. Official copies of all high school and college transcripts are in the student’s folder at CPCC (when this is a certification requirement).
2. Completion of required courses in the student’s program of study.
3. The final thirty percent (30%) of credits earned must be from CPCC.
4. A Grade Point Average (GPA) of 2.0 or higher within the certificate program.
Accounting

The Accounting curriculum is designed to provide students with the knowledge and skills necessary for employment and growth in the accounting profession. Using the “language of business” and technology resources, accountants assemble, analyze, process and communicate information about financial operations.

In addition to course work in accounting principles, theories and practice, students study business law, finance and economics. Related skills are developed through the study of communications, computer applications, financial analysis, critical thinking skills and ethics.

Graduates should qualify for entry-level accounting positions in many types of organizations including accounting firms, small businesses, manufacturing firms, banks, hospitals, school systems and governmental agencies. With work experience and additional education, an individual may advance in the accounting profession.

Visit Career Coach for career information.

Accounting (A25100)

Degree Awarded

The Associate in Applied Science Degree – Accounting is awarded by the College upon completion of this program.

A Diploma in accounting is available upon the completion of 46 credit hours of specified, required courses.

Certificates in Accounting and Tax are available upon completion of 15 credit hours of specified, required courses.

Admissions

- Complete required CPCC application.
- A high school diploma or equivalent is required.
- Submit high school transcripts and any college transcripts to the Admissions/Record Center.
- Request college transcripts to be evaluated for transfer credit.
- Accounting, business and economic college level courses taken more than 10 years ago will not be accepted.
- CPCC placement tests are required in reading comprehension and algebra. Developmental courses in English and mathematics are available for students to build basic skills and knowledge. All needed developmental courses must be completed prior to beginning ACC, BUS, ECM, INT, LOG and MKT prefix courses.
- A counseling/orientation appointment follows placement testing.
- See Program Chair for advising of course sequence and registration advisement. Call 704.330.6595 for an appointment.
- Many courses have prerequisites or co-requisites. Check the Courses section for details.

Transferring to Senior Institution

To transfer courses more effectively, students intending to transfer to a senior institution should check with that college for its general education, program and GPA requirements.

Students enrolled in the Accounting program who think that they may decide to transfer to a senior institution should take MAT 143 or higher.

Contact Information

The Accounting program is in the Business and Accounting Division. For more information, call 704.330.6595.

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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</tr>
<tr>
<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
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<tr>
<td>Select one of the following:</td>
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</tr>
<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
<td></td>
</tr>
<tr>
<td>COM 231</td>
<td>Public Speaking</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
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<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
<td></td>
</tr>
<tr>
<td>ENG 113</td>
<td>Literature-Based Research</td>
<td></td>
</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
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<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
<td></td>
</tr>
<tr>
<td>MAT 152</td>
<td>Statistical Methods I</td>
<td></td>
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<td>Select one of the following:</td>
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<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
<td></td>
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<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
<td></td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
</tr>
<tr>
<td>ART 116</td>
<td>Survey of American Art</td>
<td></td>
</tr>
<tr>
<td>ART 117</td>
<td>Non-Western Art History</td>
<td></td>
</tr>
<tr>
<td>DAN 110</td>
<td>Dance Appreciation</td>
<td></td>
</tr>
<tr>
<td>DAN 211</td>
<td>Dance History I</td>
<td></td>
</tr>
<tr>
<td>DAN 212</td>
<td>Dance History II</td>
<td></td>
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<tr>
<td>DRA 111</td>
<td>Theatre Appreciation</td>
<td></td>
</tr>
<tr>
<td>DRA 112</td>
<td>Literature of the Theatre</td>
<td></td>
</tr>
<tr>
<td>DRA 122</td>
<td>Oral Interpretation</td>
<td></td>
</tr>
<tr>
<td>ENG 231</td>
<td>American Literature I</td>
<td></td>
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<tr>
<td>ENG 232</td>
<td>American Literature II</td>
<td></td>
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<tr>
<td>ENG 241</td>
<td>British Literature I</td>
<td></td>
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<tr>
<td>ENG 242</td>
<td>British Literature II</td>
<td></td>
</tr>
<tr>
<td>ENG 251</td>
<td>Western World Literature I</td>
<td></td>
</tr>
<tr>
<td>ENG 252</td>
<td>Western World Literature II</td>
<td></td>
</tr>
<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</td>
<td></td>
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<tr>
<td>HUM 160</td>
<td>Introduction to Film</td>
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<tr>
<td>HUM 211</td>
<td>Humanities I</td>
<td></td>
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<tr>
<td>HUM 212</td>
<td>Humanities II</td>
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<td>MUS 110</td>
<td>Music Appreciation</td>
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<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
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<tr>
<td>MUS 210</td>
<td>History of Rock Music</td>
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<tr>
<td>MUS 213</td>
<td>Opera and Musical Theatre</td>
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<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
<td></td>
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<tr>
<td>PHI 220</td>
<td>Western Philosophy I</td>
<td></td>
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<tr>
<td>PHI 221</td>
<td>Western Philosophy II</td>
<td></td>
</tr>
<tr>
<td>PHI 230</td>
<td>Introduction to Logic</td>
<td></td>
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<tr>
<td>REL 110</td>
<td>World Religions</td>
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<tr>
<td>REL 111</td>
<td>Eastern Religions</td>
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<tr>
<td>REL 112</td>
<td>Western Religions</td>
<td></td>
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<tr>
<td>REL 211</td>
<td>Introduction to Old Testament</td>
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<td>Major Requirements</td>
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<tr>
<td>ACC 120 Principles of Financial Accounting</td>
<td>4.0</td>
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<tr>
<td>ACC 121 Principles of Managerial Accounting</td>
<td>4.0</td>
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<tr>
<td>ACC 220 Intermediate Accounting I</td>
<td>4.0</td>
<td></td>
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<tr>
<td>BUS 115 Business Law I</td>
<td>3.0</td>
<td></td>
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<tr>
<td>CIS 110 Introduction to Computers</td>
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<tr>
<td>ECO 251 Principles of Microeconomics</td>
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<td>ACC 129 Individual Income Taxes</td>
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<tr>
<td>ACC 150 Accounting Software Applications</td>
<td>2.0</td>
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<tr>
<td>ACC 149 Intro to Acc Spreadsheets</td>
<td>2.0</td>
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<tr>
<td>ACC 225 Cost Accounting</td>
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<tr>
<td>ACC 130 Business Income Taxes</td>
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<td></td>
</tr>
<tr>
<td>ACC 221 Intermediate Accounting II</td>
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<tr>
<td>ACC 269 Auditing &amp; Assurance Services</td>
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<tr>
<td><strong>Take one of the following courses:</strong></td>
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<tr>
<td>ACC 240 Gov &amp; Not-For-Profit Acct</td>
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<tr>
<td>ACC 250 Advanced Accounting</td>
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<td><strong>Technical Electives</strong></td>
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<td>ACC 140 Payroll Accounting</td>
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<td>BUS 125 Personal Finance</td>
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<td>WBL 112 Work-Based Learning I</td>
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<tr>
<td>BUS 139 Entrepreneurship I</td>
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<tr>
<td>BUS 121 Business Math</td>
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<tr>
<td>BUS 110 Introduction to Business</td>
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<tr>
<td>BUS 112 SIFE Business Development</td>
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<tr>
<td>BUS 152 Human Relations</td>
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<tr>
<td>INT 115 Global Communication</td>
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<td>INT 110 International Business</td>
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<tr>
<td>BUS 240 Business Ethics</td>
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<tr>
<td>BUS 225 Business Finance</td>
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<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td>67</td>
</tr>
</tbody>
</table>

**Accounting Diploma (D25100-D1)**

The Accounting Diploma is designed to provide the student with a concentrated course of study in the field of accounting. Upon completion of the 15 courses, a diploma will be awarded by the college. The courses for the Accounting Diploma may be applied toward the Associate in Applied Science Degree – Accounting.

<table>
<thead>
<tr>
<th>General Education Requirements</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111 Writing and Inquiry</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>COM 110 Introduction to Communication</td>
<td>3.0</td>
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<tr>
<td>or COM 231 Public Speaking</td>
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<tr>
<td><strong>Select 3 credits from the following:</strong></td>
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<tr>
<td>MAT 140</td>
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<tr>
<td>MAT 155</td>
<td></td>
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<tr>
<td>MAT 161</td>
<td></td>
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<tr>
<td>MAT 171 Precalculus Algebra</td>
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<tr>
<td>MAT 175</td>
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<tr>
<td>MAT 263 Brief Calculus</td>
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<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td>67</td>
</tr>
</tbody>
</table>

**Accounting Certificates (C25100)**

**Accounting Certificate with a Specialization in Accounting (C25100-C1)**

The certificate is designed to provide the student with a concentrated course of study in the field of accounting. Upon completion of the five courses, a certificate will be awarded by the College. The courses for the certificate may be applied toward the Associate in Applied Science Degree – Accounting.

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 120 Principles of Financial Accounting</td>
<td>4.0</td>
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<tr>
<td>ACC 121 Principles of Managerial Accounting</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>BUS 115 Business Law I</td>
<td>3.0</td>
<td></td>
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<tr>
<td>ACC 129 Individual Income Taxes</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>ACC 220 Intermediate Accounting I</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>CIS 110 Introduction to Computers</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>ACC 130 Business Income Taxes</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>ACC 149 Intro to Acc Spreadsheets</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>ACC 225 Cost Accounting</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td>15</td>
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</tbody>
</table>

**Accounting Certificate with a Specialization in Tax (C25100-C2)**

The certificate is designed to provide the student with a concentrated course of study in the field of taxation. Upon completion of the five courses, a certificate will be awarded by the College. The courses for the certificate may be applied toward the Associate in Applied Science Degree – Accounting.

For more information, call 704.330.6595/6646.

Visit Career Coach for career information.

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 120 Principles of Financial Accounting</td>
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<tr>
<td>ACC 121 Principles of Managerial Accounting</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>CIS 110 Introduction to Computers</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>ACC 149 Intro to Acc Spreadsheets</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>ACC 150 Accounting Software Applications</td>
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<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>
Advertising + Graphic Design

The future belongs to those who are able to solve problems with courageous creativity. The Advertising + Graphic Design curriculum is designed to provide students with the knowledge and skills to be the next creative leaders in our community. Graduates of the program are prepared for employment within the creative industries sector, including graphic design firms, advertising agencies, marketing communications and in-house creative groups.

Students have the opportunity to learn the development of concepts and design for visual communication materials such as ads, corporate and brand identity programs, print and interactive media.

Visit Career Coach for career information.

Advertising + Graphic Design (A30100)

Degree Awarded

The Associate in Applied Science Advertising + Graphic Design Degree is awarded by the College upon completion of this program.

Admissions

• High school diploma or equivalent is required.
• Placement tests determine enrollment in English (ENG) and mathematics (MAT) courses.
• Many courses have prerequisites or co-requisites; check the Courses section for details.

Contact Information

The Advertising + Graphic Design program is in the Applied Technologies Division at the Harper Campus. For more information contact Kenn Compton at kenn.compton@cpcc.edu or call 704.330.4481.; or Ellen Ward at ellen.ward@cpcc.edu (courtney.kimball@cpcc.edu), or call 704.330.4485.

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
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<tr>
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<tr>
<td>ENG 113</td>
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<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MAT 110</td>
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<td>MAT 143</td>
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<tr>
<td>MAT 152</td>
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<tr>
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<td>MAT 271</td>
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<td>MAT 272</td>
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<td>MAT 273</td>
<td>Calculus III</td>
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<tbody>
<tr>
<td>ANT 210</td>
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<td>ANT 220</td>
<td>Cultural Anthropology</td>
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<tr>
<td>ECO 151</td>
<td>Survey of Economics</td>
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<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</td>
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<tr>
<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
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<tr>
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<td>World Regional Geography</td>
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<tr>
<td>HIS 111</td>
<td>World Civilizations I</td>
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<tr>
<td>HIS 112</td>
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<tr>
<td>HIS 132</td>
<td>American History II</td>
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<td>POL 110</td>
<td>Introduction to Political Science</td>
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<td>POL 220</td>
<td>International Relations</td>
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<td>PSY 150</td>
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<td>SOC 210</td>
<td>Introduction to Sociology</td>
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<td>SOC 213</td>
<td>Sociology of the Family</td>
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<td>Social Diversity</td>
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<tr>
<td>PSY 237</td>
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<td>SOC 220</td>
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Major Requirements

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<th>Credits</th>
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<tr>
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<td>GRD 241</td>
<td>Graphic Design III</td>
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<td>GRD 152</td>
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<td>Typography II</td>
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<td>GRD 113</td>
<td>History of Graphic Design</td>
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<td>Interactive Design</td>
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Electives

Select 6 credits of the following:

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<td>ART 117</td>
<td>Non-Western Art History</td>
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<tr>
<td>ART 131</td>
<td>Drawing I</td>
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<td>ART 132</td>
<td>Drawing II</td>
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<td>GRD 263</td>
<td>Illustrative Imaging</td>
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Total Credits  72

No diplomas offered.
No certificates offered.

Air Conditioning, Heating and Refrigeration Technology

The Air Conditioning, Heating and Refrigeration Technology curriculum, provides the basic knowledge to develop skills necessary to work with residential and light commercial systems.

Topics include mechanical refrigeration, heating and cooling theory, electricity, controls and safety. The program covers air conditioning, furnaces, heat pumps, tools and instruments, residential building codes, residential system sizing and advanced comfort systems.

Graduates should be able to assist in the start-up, preventive maintenance, service, repair and/or installation of residential and light commercial systems and demonstrate an understanding of advanced systems and of system selection and balance.

Visit Career Coach for career information.

Air Conditioning, Heating and Refrigeration Technology (A35100)

Degree Awarded

An A.A.S. Degree in Air Conditioning, Heating and Refrigeration Technology is awarded by the College upon completion of this program.

Admissions

- Completion of a high school diploma is required for entering A.A.S. program.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Contact Information

For more information, call 704.330.4446 or 704.330.4408.

Visit Career Coach for career information.

General Education Requirements

ENG 111  Writing and Inquiry  3.0
Take 3 credits from the following:  3.0

ENG 112  Writing and Research in the Disciplines
ENG 113  Literature-Based Research
ENG 114  Professional Research & Reporting

Take 1 course from the following:  3.0

MAT 110  Mathematical Measurement and Literacy
<table>
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<tr>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
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Take 1 course from the following: **3.0**

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<tr>
<td>COM 110</td>
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<tr>
<td>ANT 210</td>
<td>General Anthropology</td>
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<td>ANT 220</td>
<td>Cultural Anthropology</td>
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<td>World Civilizations I</td>
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<td>HIS 112</td>
<td>World Civilizations II</td>
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<td>HIS 131</td>
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<td>HIS 132</td>
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<td>Comparative Government</td>
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<td>International Relations</td>
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<td>PSY 150</td>
<td>General Psychology</td>
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<td>PSY 237</td>
<td>Social Psychology</td>
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<td>PSY 241</td>
<td>Developmental Psychology</td>
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<td>Social Diversity</td>
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<tbody>
<tr>
<td>ART 111</td>
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<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
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<td>ART 115</td>
<td>Art History Survey II</td>
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<tr>
<td>ART 116</td>
<td>Survey of American Art</td>
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<td>Non-Western Art History</td>
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<td>DAN 110</td>
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<td>DAN 211</td>
<td>Dance History I</td>
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<td>DRA 111</td>
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<td>DRA 112</td>
<td>Literature of the Theatre</td>
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<td>DRA 122</td>
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<td>ENG 231</td>
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<td>ENG 232</td>
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<td>British Literature I</td>
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<td>ENG 242</td>
<td>British Literature II</td>
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<tr>
<td>ENG 251</td>
<td>Western World Literature I</td>
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<td>ENG 252</td>
<td>Western World Literature II</td>
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<td>Myth in Human Culture</td>
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<td>HUM 160</td>
<td>Introduction to Film</td>
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<td>HUM 211</td>
<td>Humanities I</td>
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<td>HUM 212</td>
<td>Humanities II</td>
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<td>Introduction to Jazz</td>
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<td>MUS 210</td>
<td>History of Rock Music</td>
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<td>Opera and Musical Theatre</td>
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<td>Western Philosophy I</td>
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<td>PHI 221</td>
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<td>REL 211</td>
<td>Introduction to Old Testament</td>
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<td>REL 212</td>
<td>Introduction to New Testament</td>
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**Major Requirements**

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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>5.0</td>
</tr>
<tr>
<td>AHR 112</td>
<td>Heating Technology</td>
<td>4.0</td>
</tr>
<tr>
<td>AHR 113</td>
<td>Comfort Cooling</td>
<td>4.0</td>
</tr>
<tr>
<td>AHR 114</td>
<td>Heat Pump Technology</td>
<td>4.0</td>
</tr>
<tr>
<td>ELC 111</td>
<td>Introduction to Electricity</td>
<td>3.0</td>
</tr>
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<td>AHR 130</td>
<td>HVAC Controls</td>
<td>3.0</td>
</tr>
<tr>
<td>AHR 211</td>
<td>Residential System Design</td>
<td>3.0</td>
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<td>AHR 212</td>
<td>Advanced Comfort Systems</td>
<td>4.0</td>
</tr>
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<td>AHR 213</td>
<td>HVACR Building Code</td>
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<td>AHR 240</td>
<td>Hydronic Heating</td>
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<td>AHR 225</td>
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<td>Commercial HVAC Controls</td>
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**Technical Electives**

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<tr>
<td>BUS 230</td>
<td>Small Business Management</td>
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<td>WBL 111</td>
<td>Work-Based Learning I</td>
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<td>BUS 139</td>
<td>Entrepreneurship I</td>
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<td>ELC 220</td>
<td>Photovoltaic System Technology</td>
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<td>ELC 221</td>
<td>Advanced Photovoltaic System Designs</td>
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<td>AHR 235</td>
<td>Refrigeration Design</td>
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<tr>
<td>ELC 125</td>
<td>Diagrams and Schematics</td>
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<tr>
<td>ELC 128</td>
<td>Introduction to Programmable Logic Controller</td>
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<td>WLD 112</td>
<td>Basic Welding Processes</td>
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<td>ELC 115</td>
<td>Industrial Wiring</td>
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<td>Motors and Controls</td>
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<td>EUS 110</td>
<td>Introduction to Electric Utility Industry</td>
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<td>AHR 245</td>
<td>Chiller Systems</td>
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<td>AHR 293</td>
<td>Selected Topics in HVACR</td>
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<td>Work-Based Learning I</td>
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<td>WOL 110</td>
<td>Basic Construction Skills</td>
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**Total Credits** **67**
Air Conditioning, Heating and Refrigeration Technology Diploma (D35100)

The Air Conditioning, Heating and Refrigeration Technology curriculum, provides the basic knowledge to develop skills necessary to work with residential and light commercial systems.

Topics include mechanical refrigeration, heating and cooling theory, electricity, controls and safety. The diploma program covers air conditioning, furnaces, heat pumps, tools and instruments. In addition, the A.A.S. degree covers residential building codes, residential system sizing and advanced comfort systems.

Diploma graduates should be able to assist in the start-up, preventive maintenance, service, repair and/or installation of residential and light commercial systems. A.A.S. degree graduates should be able to demonstrate an understanding of system selection and balance and advanced systems.

Diploma Awarded

A Diploma in Air Conditioning, Heating and Refrigeration Technology is awarded by the college upon completion of this program.

Graduates may apply for advanced standing in the Air Conditioning, Heating and Refrigeration Technology Degree Program.

Note: Basic tools are required for some courses. A list may be obtained from the instructor.

Admissions

- Completion of a high school diploma or equivalent is required as the foundation of a career in this area.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Contact Information

For more information, call 704.330.4446 or 704.330.4408.

Notes: Any student who has completed a diploma level general education course must take the appropriate associate degree general education course if he or she chooses to pursue the higher credential.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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<td>MAT 115</td>
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Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
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<td>AHR 110</td>
<td>Introduction to Refrigeration</td>
<td>5.0</td>
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<tr>
<td>ELC 111</td>
<td>Introduction to Electricity</td>
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<td>AHR 211</td>
<td>Residential System Design</td>
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BPR 130    Print Reading-Construction   3.0
CIS 111    Basic PC Literacy           2.0

Total Credits: 44

- Air Conditioning, Heating and Refrigeration Technology with a Specialization in Heating Service (C35100-C1) (p. 94)
- Air Conditioning, Heating and Refrigeration Technology with a Specialization in Air Conditioning Service (C35100-C2) (p. 95)
- Air Conditioning, Heating and Refrigeration Technology with a Specialization in All Weather Systems Service (C35100-C3) (p. 95)
- Air Conditioning, Heating and Refrigeration Technology with a Specialization in HVAC Controls (C35100-C4) (p. 95)
- Air Conditioning, Heating and Refrigeration Technology with a Specialization in Refrigeration Service (C35100-C5) (p. 95)
- Air Conditioning, Heating and Refrigeration Technology with a Specialization in HVAC Contracting (C35100-C6) (p. 95)
- Air Conditioning, Heating and Refrigeration Technology with a Specialization in AHR Controls (C35100-C7) (p. 95)
- Air Conditioning, Heating and Refrigeration Technology with a Specialization in Introduction to Energy (C35100-C8) (p. 95)
- Air Conditioning, Heating and Refrigeration Technology with a Specialization in Apartment/Rental Maintenance (C35100-C9) (p. 95)

Air Conditioning, Heating and Refrigeration Technology Certificates (C35100)

Specialization Certificates

The certificates listed below can be earned in the Air Conditioning, Heating and Refrigeration (A35100) program.

Admissions

- Completion of a high school diploma or equivalent is encouraged as the foundation of a career in this area.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Contact Information

For more information, call 704.330.4446 or 704.330.4408.

Air Conditioning, Heating and Refrigeration Technology with a Specialization in Heating Service (C35100-C1)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHR 110</td>
<td>Introduction to Refrigeration</td>
<td>5.0</td>
</tr>
<tr>
<td>ELC 111</td>
<td>Introduction to Electricity</td>
<td>3.0</td>
</tr>
<tr>
<td>AHR 112</td>
<td>Heating Technology</td>
<td>4.0</td>
</tr>
<tr>
<td>AHR 140</td>
<td>All-Weather Systems</td>
<td>2.0</td>
</tr>
<tr>
<td>AHR 180</td>
<td>HVACR Customer Relations</td>
<td>1.0</td>
</tr>
<tr>
<td>AHR 211</td>
<td>Residential System Design</td>
<td>3.0</td>
</tr>
<tr>
<td>AHR 115</td>
<td>Refrigeration Systems</td>
<td>2.0</td>
</tr>
<tr>
<td>AHR 130</td>
<td>HVAC Controls</td>
<td>3.0</td>
</tr>
<tr>
<td>AHR 180</td>
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Air Conditioning, Heating and Refrigeration Technology with a Specialization in Air Conditioning Service (C35100-C2)

Major Requirements

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<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AHR 110</td>
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<td>ELC 111</td>
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<td>AHR 113</td>
<td>Comfort Cooling</td>
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<tr>
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<td>HVAC Controls</td>
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<td>AHR 180</td>
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Total Credits: 16

Air Conditioning, Heating and Refrigeration Technology with a Specialization in All Weather Systems Service (C35100-C3)

Note: Requires a prerequisite of C35100-C2

Major Requirements

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<td>Introduction to Refrigeration</td>
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<td>AHR 112</td>
<td>Heating Technology</td>
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<td>AHR 114</td>
<td>Heat Pump Technology</td>
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<td>AHR 213</td>
<td>HVACR Building Code</td>
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<tr>
<td>AHR 140</td>
<td>All-Weather Systems</td>
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Total Credits: 17

Air Conditioning, Heating and Refrigeration Technology with a Specialization in Commercial System Design and Maintenance (C35100-C4)

Major Requirements

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<td>Introduction to Refrigeration</td>
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</tr>
<tr>
<td>AHR 213</td>
<td>HVACR Building Code</td>
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<td>AHR 140</td>
<td>All-Weather Systems</td>
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<td>AHR 180</td>
<td>HVACR Customer Relations</td>
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<tr>
<td>AHR 215</td>
<td>Commercial HVAC Controls</td>
<td>2.0</td>
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<tr>
<td>AHR 225</td>
<td>Commercial System Design</td>
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<tr>
<td>AHR 240</td>
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Total Credits: 17

Air Conditioning, Heating and Refrigeration Technology with a Specialization in Refrigeration Service (C35100-C5)

Major Requirements

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<td>ELC 111</td>
<td>Introduction to Electricity</td>
<td>3.0</td>
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<td>AHR 130</td>
<td>HVAC Controls</td>
<td>3.0</td>
</tr>
<tr>
<td>AHR 115</td>
<td>Refrigeration Systems</td>
<td>2.0</td>
</tr>
<tr>
<td>AHR 180</td>
<td>HVACR Customer Relations</td>
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<tr>
<td>AHR 235</td>
<td>Refrigeration Design</td>
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Total Credits: 17

Air Conditioning, Heating and Refrigeration Technology with a Specialization in HVAC Contracting (C35100-C6)

Major Requirements

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<tbody>
<tr>
<td>AHR 211</td>
<td>Residential System Design</td>
<td>3.0</td>
</tr>
<tr>
<td>AHR 213</td>
<td>HVACR Building Code</td>
<td>2.0</td>
</tr>
<tr>
<td>AHR 225</td>
<td>Commercial System Design</td>
<td>3.0</td>
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<tr>
<td>BPR 130</td>
<td>Print Reading-Construction</td>
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<tr>
<td>BUS 230</td>
<td>Small Business Management</td>
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<tr>
<td>or BUS 139</td>
<td>Entrepreneurship I</td>
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Total Credits: 14

Air Conditioning, Heating and Refrigeration Technology with a Specialization in AHR Controls (C35100-C7)

Major Requirements

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<tr>
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<td>Introduction to Electricity</td>
<td>3.0</td>
</tr>
<tr>
<td>AHR 130</td>
<td>HVAC Controls</td>
<td>3.0</td>
</tr>
<tr>
<td>AHR 212</td>
<td>Advanced Comfort Systems</td>
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</tr>
<tr>
<td>ELC 125</td>
<td>Diagrams and Schematics</td>
<td>2.0</td>
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<tr>
<td>ELC 128</td>
<td>Introduction to PLC</td>
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<tr>
<td>AHR 215</td>
<td>Commercial HVAC Controls</td>
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Total Credits: 17

Air Conditioning, Heating and Refrigeration Technology with a Specialization in Introduction to Energy (C35100-C8)

Major Requirements

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<th>Title</th>
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<td>Introduction to Refrigeration</td>
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<tr>
<td>AHR 112</td>
<td>Heating Technology</td>
<td>4.0</td>
</tr>
<tr>
<td>ELC 111</td>
<td>Introduction to Electricity</td>
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</tr>
<tr>
<td>EUS 110</td>
<td>Introduction to Electric Utility Industry</td>
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</table>

Total Credits: 16

Air Conditioning, Heating and Refrigeration Technology Certificate with a Specialization in Apartment/Rental Maintenance (C35100-C9)

Major Requirements
Architectural Technology

The Architectural Technology curriculum prepares individuals with knowledge and skills that can lead to employment in the field of architecture or one of the associated professions.

Students receive instruction in construction document preparation, materials and methods, environmental and structural systems, building codes and specifications and computer applications as well as complete a design project. Optional courses may be provided to suit specific career needs.

Upon completion, graduates have career opportunities within the architectural, engineering and construction professions as well as positions in industry and government.

Visit Career Coach for career information.

Architectural Technology (A40100)

Degree Awarded

The Associate of Applied Science Degree - Architectural Technology is awarded by the College upon completion of this program.

Admissions

- A high school diploma or equivalent is required.
- CPCC Placement tests are required in English and mathematics.
- Developmental Studies for math and English classes are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- Students should see a faculty advisor before registration.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Note: The curriculum at Central Piedmont Community College includes emphasis on computer-aided drafting (CAD) and related computer courses to prepare graduates for employment in the expanding CAD area within the field of Architectural Technology.

Contact Information

For more information, call 704.330.6548 or visit www.cpcc.edu/arc_id/home.htm

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
</tr>
<tr>
<td>Take 3 credits of the following:</td>
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</tr>
<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
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</tr>
<tr>
<td>ENG 113</td>
<td>Literature-Based Research</td>
<td></td>
</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select 3 credits of the following:</td>
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<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
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</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
<td></td>
</tr>
<tr>
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</tr>
<tr>
<td>ANT 210</td>
<td>General Anthropology</td>
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<tr>
<td>ANT 220</td>
<td>Cultural Anthropology</td>
<td></td>
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<tr>
<td>ANT 221</td>
<td>Comparative Cultures</td>
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</tr>
<tr>
<td>ECO 151</td>
<td>Survey of Economics</td>
<td></td>
</tr>
<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</td>
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<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
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<td>GEO 111</td>
<td>World Regional Geography</td>
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<td>HIS 111</td>
<td>World Civilizations I</td>
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<td>HIS 112</td>
<td>World Civilizations II</td>
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<tr>
<td>HIS 131</td>
<td>American History I</td>
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<tr>
<td>HIS 132</td>
<td>American History II</td>
<td></td>
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<td>POL 120</td>
<td>American Government</td>
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<tr>
<td>POL 210</td>
<td>Comparative Government</td>
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<td>POL 220</td>
<td>International Relations</td>
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<tr>
<td>PSY 150</td>
<td>General Psychology</td>
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<tr>
<td>PSY 237</td>
<td>Social Psychology</td>
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<td>PSY 241</td>
<td>Developmental Psychology</td>
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<td>PSY 281</td>
<td>Abnormal Psychology</td>
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<td>SOC 210</td>
<td>Introduction to Sociology</td>
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<tr>
<td>SOC 213</td>
<td>Sociology of the Family</td>
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</tr>
<tr>
<td>SOC 225</td>
<td>Social Diversity</td>
<td></td>
</tr>
<tr>
<td>POL 110</td>
<td>Introduction to Political Science</td>
<td></td>
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<tr>
<td>PSY 237</td>
<td>Social Psychology</td>
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<tr>
<td>SOC 220</td>
<td>Social Problems</td>
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Major Requirements

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<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ARC 111</td>
<td>Introduction to Architectural Technology</td>
<td>3.0</td>
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<td>ARC 112</td>
<td>Construction Materials &amp; Methods</td>
<td>4.0</td>
</tr>
<tr>
<td>ARC 114</td>
<td>Architectural CAD</td>
<td>2.0</td>
</tr>
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<td>ARC 213</td>
<td>Design Project</td>
<td>4.0</td>
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<td>ARC 230</td>
<td>Environmental Systems</td>
<td>4.0</td>
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<td>ARC 113</td>
<td>Residential Architectural Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 131</td>
<td>Building Codes</td>
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<td>SST 140</td>
<td>Green Building and Design Concepts</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 132</td>
<td>Specifications &amp; Contracts</td>
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<tr>
<td>ARC 250</td>
<td>Survey of Architecture</td>
<td>3.0</td>
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<tr>
<td>ARC 133</td>
<td>Construction Document Analysis</td>
<td>2.0</td>
</tr>
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<td>ARC 225</td>
<td>Architectural Building Information Modeling I</td>
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<td>ARC 141</td>
<td>Elementary Structures for Architecture</td>
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Technical Electives

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<td>COM 120</td>
<td>Intro to Interpersonal Communication</td>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
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<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
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</tbody>
</table>
### Pre-Architecture Diploma (D40100-D1)

The Pre-Architecture Diploma is a one year program designed to prepare prospective students for an accredited, professional architecture education. The diploma will also equip the student with basic skills that can lead to employment in the field of architecture or one of the associated professions.

Completion of this diploma will fulfill approximately 24 transferable credit hours of general education requirements. This will allow the student a high degree of focus on the major program area during the first two years of professional study in architecture. Additionally, the required Architectural Technology coursework will both aid the student in developing efficient work/study habits and serve as an introduction to the architecture profession.

While not ensuring acceptance into any Bachelor of Architecture program, the Pre-Architecture Diploma will provide a vehicle for talented students to display ability and excellence in college level work. It will also provide an opportunity to build an artistic portfolio which is required for acceptance to most accredited professional architecture programs.

Prior to beginning work on this diploma, students are strongly urged to consult with an advisor or faculty member at both CPCC and the university to which he/she plans to apply in the future concerning transfer courses and requirements.

#### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
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<td>Art Appreciation</td>
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<td>MAT 171</td>
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<td>or MAT 172</td>
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<tr>
<td>ANT 210</td>
<td>General Anthropology</td>
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<td>ANT 220</td>
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<td>Principles of Microeconomics</td>
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<td>GEO 111</td>
<td>World Regional Geography</td>
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#### Major Requirements

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<td>ARC 112</td>
<td>Construction Materials &amp; Methods</td>
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<tr>
<td>ARC 114</td>
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**Total Credits:** 67

### Building Information Modeling (BIM) Diploma (D40100-D2)

The diploma in BIM provides specialized, hands-on training for technicians, drafters, architects, engineers, BIM project managers, and other design/construction professionals seeking to create and work on intelligent building models in an integrated construction documentation environment.

#### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>Writing and Inquiry</td>
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<td>Algebra/Trigonometry I</td>
<td>3.0</td>
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<tr>
<td>or MAT 171</td>
<td>Precalculus Algebra</td>
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#### Major Requirements

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<tr>
<td>ARC 112</td>
<td>Construction Materials &amp; Methods</td>
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<td>ARC 114</td>
<td>Architectural CAD</td>
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<tr>
<td>ARC 230</td>
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<td>3.0</td>
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<tr>
<td>ARC 131</td>
<td>Building Codes</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 133</td>
<td>Construction Document Analysis</td>
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<td>ARC 141</td>
<td>Elementary Structures for Architecture</td>
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### Technical Elective

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**Total Credits:** 40
Select 2 credits of the following:  
ARC 132 Specifications & Contracts  
ARC 210 Intro to Sustain Design  
ARC 231 Architectural Presentations  
ARC 235 Architectural Portfolio  
PHY 131 Physics-Mechanics

Total Credits: 44

Suggested Course Sequence

First Year

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<th>Fall</th>
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Second Year

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Total Credits: 45

* In order for the diploma to be completed in three semesters, ARC 114 & ARC 221 must be taken as sequential short session courses and completed during the same semester as indicated.

Architectural Technology Certificates (C40100)

Architectural Technology Certificate with a Specialization in Computer Aided Design/Drafting (C40100-C1)

This certificate prepares individuals for CAD drafting positions within the field of architecture. Course work includes work in basic architectural drafting techniques, reading construction documents, 2D and 3D CAD drawing, rendering, modeling, animation and video of building interiors and exteriors.

Major Requirements

<table>
<thead>
<tr>
<th>Major Requirement</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ARC 111</td>
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<td>ARC 225</td>
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Electives

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<td>ARC 192</td>
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Total Credits: 13

Architectural Technology Certificate with a Specialization in Residential Architectural Technology (C40100-C2)

Graduates from this certificate should be able to provide support to the residential architectural design industry. This certificate is also available to students enrolled in Career & College Promise.

Major Requirements

<table>
<thead>
<tr>
<th>Major Requirement</th>
<th>Credits</th>
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Total Credits: 17

Automotive Systems Technology

The Automotive Systems Technology curriculum prepares individuals for employment as Automotive Service Technicians. It provides an introduction to automotive careers and increases student awareness of the challenges associated with this fast and ever-changing field.

Classroom and lab experiences integrate technical and academic course work. Emphasis is placed on theory, servicing and operation of brakes, electrical/electronic systems, engine performance, steering/suspension, automatic transmission/transaxles, engine repair, climate control and manual drive trains.

Upon completion of this curriculum, students should be prepared to take the ASE exam and be ready for full-time employment in dealerships and repair shops in the automotive service industry.

Visit Career Coach for career information.

Automotive Systems Technology (A60160)

Degree Awarded

The Associate in Applied Science Degree - Automotive Systems Technology is awarded by the College upon completion of this program.

Admissions

- A high school diploma or equivalent is required.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Program Accreditation

The BMW-ADP and GM-ASEP programs are Master Certified by the National Automotive Technician Foundation (NATEF) Automotive Service Excellence (A.S.E.).

Program Manufacturer Partners

General Motors’ Automotive Service Excellence Program (ASEP), and BMW (ADP) are options for this associate degree program. In addition,
CPCC currently offers a Honda Professional Automotive Career Training (PACT) program certificate as an Express Service Technician. Call the Transport Systems Division Cooperative Education Coordinator at 704.330.4157 or division office 704.330.4121 for manufacturer program information.

Note: Students must furnish required hand tools and protective clothing, as well as textbooks. A list of these items can be obtained from an instructor or program chair by calling 704.330.4183.

**Contact Information**

The Automotive Systems Technology program is in the Transport Systems Technologies Division. For more information, 704.330.4183 or 704.330.4121.

Visit Career Coach for career information.

**General Education Requirements**

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<td>ENG 112</td>
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<td>ENG 113</td>
<td>Literature-Based Research</td>
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<tr>
<td>or ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
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<td>or COM 231</td>
<td>Public Speaking</td>
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<td>MAT 110</td>
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<td>MAT 143</td>
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<td>MAT 152</td>
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<td>Art History Survey II</td>
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<td>ART 116</td>
<td>Survey of American Art</td>
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<td>ART 117</td>
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<td>REL 111</td>
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<td>ECO 251</td>
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<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
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<td>POL 220</td>
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<td>AUT 151</td>
<td>Brake Systems</td>
<td>3.0</td>
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<tr>
<td>AUT 181</td>
<td>Engine Performance 1</td>
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<td>AUT 183</td>
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<td>TRN 170</td>
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<td>AUT 116</td>
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<td>AUT 221</td>
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<td>AUT 231</td>
<td>Manual Transmissions/Transaxles/Drive Trains</td>
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Technical Electives
Select 9 credits of the following: 9.0
TRN 120A Basic Transportation Electrical Lab
AUT 113 Automotive Servicing I
AUT 114 Safety and Emissions
AUT 114A Safety and Emissions Lab
AUT 116A Engine Repair Lab
AUT 141A Suspension & Steering Lab
AUT 213 Automotive Servicing 2
AUT 221A Automatic Transmissions/Transaxles Lab
AUT 231A Manual Transmissions/Transaxles/Drive Trains Lab
RCT 110 Introduction to Racing
RCT 121 Race Car Metal Inert Gas Welding
RCT 254 Racing Chassis Fabrication
RCT 255 Racing Sheet Metal Fabrication
WBL 111 Work-Based Learning I
WBL 112 Work-Based Learning I
WBL 122 Work-Based Learning II
WBL 132 Work-Based Learning III
AUT 212 Auto Shop Management

Total Credits 69

Automotive Systems Technology Diploma (D60160)
The Automotive Systems Technology curriculum prepares individuals for employment as Automotive Service Technicians. It provides an introduction to automotive careers and increases student awareness of the challenges associated with this fast and ever-changing field.

Classroom and lab experiences integrate technical and academic course work. Emphasis is placed on theory, servicing and operation of brakes, electrical/electronic systems, engine performance, steering/suspension, automatic transmission/ transaxles, engine repair, climate control and manual drive trains.

Upon completion of this curriculum, students should be prepared to take the ASE exam and be ready for full-time employment in dealerships and repair shops in the automotive service industry.

This diploma is also available for students enrolled in Career & College Promise.

Diploma Awarded
A diploma in Automotive Systems Technology is awarded by the College upon completion of this program.

Admissions
- Completion of a high school diploma or equivalent is required as the foundation of a career in this area.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Program Accreditation
This program is Master Certified by the National Automotive Technician Foundation (NATEF) Automotive Service Excellence (A.S.E.).

Note: Students must furnish required hand tools and protective clothing, as well as textbooks. A list of these items can be obtained from an instructor or program chair by calling 704.330.4183.

Contact Information
The Automotive Systems Technology program is in the Transport Systems Technologies Division. For more information, call 704.330.4183 or 704.330.4121.

Choose 42 hours from Major and Related Course Requirements listed below:

General Education Requirements
ENG 111 Writing and Inquiry 3.0
MAT 115 3.0

Major Requirements
TRN 110 Introduction to Transport Technology 2.0
TRN 120 Basic Transportation Electricity 5.0
TRN 140 Transportation Climate Control 2.0
AUT 141 Suspension & Steering Systems 3.0
AUT 151 Brake Systems 3.0
AUT 181 Engine Performance 1 3.0
TRN 140A Transportation Climate Control Lab 2.0
TRN 170 Pc Skills for Transportation 2.0
AUT 116 Engine Repair 3.0
AUT 116A Engine Repair Lab 1.0
AUT 151A Brakes Systems Lab 1.0
AUT 183 Engine Performance 2 4.0
AUT 221 Automatic Transmissions/Transaxles 3.0
AUT 231 Manual Transmissions/Transaxles/Drive Trains 3.0

Technical Electives
Select 1 credit of the following: 1.0
AUT 113 Automotive Servicing I
WBL 112 Work-Based Learning I
WBL 122 Work-Based Learning II
AUT 213 Automotive Servicing 2
AUT 141A Suspension & Steering Lab
TRN 120A Basic Transportation Electrical Lab

Total Credits 44

- Automotive Systems Technology Certificate Specialization in Vehicle Maintenance (C60160-C6) (p. )
- Automotive Systems Technology Certificate Specialization in Basic Engine and Electrical (C60160-C7) (p. 101)
- Automotive Systems Technology Certificate Specialization in Advanced Engine Performance Including Chassie Electronics (C60160-C9) (p. 101)
- Automotive Systems Technology Certificate Specialization in Brake and Alignment (C60160-11) (p. 101)
Automotive Systems Technology
Certificate Specialization in Vehicle Maintenance (C60160-C6)

Major Requirements

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<td>AUT 141</td>
<td>Suspension &amp; Steering Systems</td>
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<td>AUT 151</td>
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<td>AUT 116</td>
<td>Engine Repair</td>
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<td>AUT 114</td>
<td>Safety and Emissions</td>
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Total Credits: 16

Automotive Systems Technology
Certificate Specialization in Basic Engine and Electrical (C60160-C7)

Major Requirements

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<td>TRN 120</td>
<td>Basic Transportation Electricity</td>
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<td>TRN 140</td>
<td>Transportation Climate Control</td>
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<td>TRN 170</td>
<td>Pc Skills for Transportation</td>
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<td>AUT 116</td>
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<td>TRN 120A</td>
<td>Basic Transportation Electrical Lab</td>
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<td>Engine Repair Lab</td>
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Total Credits: 18

Automotive Systems Technology
Certificate Specialization in Advanced Duel and Electronic Systems (C60160-C8)

Major Requirements

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<td>Basic Transportation Electricity</td>
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<tr>
<td>AUT 163</td>
<td>Advanced Automotive Electricity</td>
<td>3.0</td>
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<tr>
<td>TRN 120A</td>
<td>Basic Transportation Electrical Lab</td>
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Total Credits: 14

Automotive Systems Technology
Certificate Specialization in Vehicle Line Dry Systems (C60160-10)

Major Requirements

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<th>Course</th>
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<td>AUT 183</td>
<td>Engine Performance 2</td>
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<td>AUT 163</td>
<td>Advanced Automotive Electricity</td>
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Total Credits: 15

Automotive Systems Technology
Certificate Specialization in Brake and Alignment (C60160-11)

Major Requirements

<table>
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<th>Course</th>
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<tr>
<td>TRN 110</td>
<td>Introduction to Transport Technology</td>
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<tr>
<td>TRN 120</td>
<td>Basic Transportation Electricity</td>
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<tr>
<td>AUT 141</td>
<td>Suspension &amp; Steering Systems</td>
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<tr>
<td>AUT 151</td>
<td>Brake Systems</td>
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<tr>
<td>AUT 114</td>
<td>Safety and Emissions</td>
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<tr>
<td>AUT 141A</td>
<td>Suspension &amp; Steering Lab</td>
<td>1.0</td>
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<tr>
<td>AUT 151A</td>
<td>Brakes Systems Lab</td>
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Total Credits: 17

Baking and Pastry Arts

The Baking and Pastry Arts curriculum is designed to provide students with the skills and knowledge required for employment in the baking/pastry industry, including restaurants, hotels, independent bakery/pastry shops, wholesale/retail markets, and high-volume bakeries or further academic studies.

Students are provided theoretical knowledge and practical applications that develop critical competencies to meet industry demands, including environmental stewardship, operational efficiencies and professionalism. Course work includes specialty/artisanal breads, desserts/pastry, decorative work, high-volume production and food marketing.

Graduates should qualify for entry-level positions, such as pastry/bakery assistant, area pastry chef and assistant pastry chef. An American Culinary Federation certification may be available to graduates.

Visit Career Coach for career information.
Baking and Pastry Arts (A55130)

Degree Awarded
The Associate in Applied Science Degree – Baking and Pastry Arts is awarded by the College upon completion of this program.

Admissions
- Complete a CPCC Admissions Form.
- Submit an official high school diploma as well as college transcripts to the Admission/Records Center.
- Take placement tests in English, reading and arithmetic.
- All needed developmental studies courses must be completed prior to beginning CUL, HRM, and BPA prefix courses.
- Make an appointment to see an academic advisor.
- Make an appointment to see the Baking & Pastry Arts Program Chair, Tessia Harman, 704.330.4642.
- Complete a Baking and Pastry Arts Application.
- Many courses have prerequisites or co-requisites. Check the Courses section for details.
- Students must have a CUL, HRM, or BPA program code.

Notes
- Progression in this program is dependent upon a score of “C” or better in all courses with CUL, HRM and BPA prefixes.
- All CUL and BPA lab classes require student accident medical insurance.
- In the Baking and Pastry Arts program, there are more applications for admittance than space available. Criteria for admission include scores on standardized tests, interview, past academic performance and experience in the field of interest.

Contact Information
The Baking and Pastry Arts program is in the Hospitality Education Division. For more information, call 704.330.4642.

Visit Career Coach for career information.

General Education Requirements

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<td>ENG 113</td>
<td>Literature-Based Research</td>
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<td>Professional Research &amp; Reporting</td>
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<td>COM 120</td>
<td>Intro to Interpersonal Communication</td>
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<td>COM 231</td>
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<td>ART 114</td>
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<td>ART 115</td>
<td>Art History Survey II</td>
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<tr>
<td>ART 116</td>
<td>Survey of American Art</td>
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<td>ART 117</td>
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<td>Oral Interpretation</td>
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<td>Music Appreciation</td>
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<td>MUS 112</td>
<td>Introduction to Jazz</td>
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<td>MUS 210</td>
<td>History of Rock Music</td>
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<td>Opera and Musical Theatre</td>
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<td>Philosophical Issues</td>
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<td>REL 111</td>
<td>Eastern Religions</td>
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<td>ANT 220</td>
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<td>ANT 221</td>
<td>Comparative Cultures</td>
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<td>ECO 151</td>
<td>Survey of Economics</td>
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<td>ECO 251</td>
<td>Principles of Microeconomics</td>
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<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
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<td>GEO 111</td>
<td>World Regional Geography</td>
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<td>HIS 111</td>
<td>World Civilizations I</td>
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<tr>
<td>HIS 131</td>
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<td>HIS 132</td>
<td>American History II</td>
<td></td>
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<tr>
<td>POL 110</td>
<td>Introduction to Political Science</td>
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<td>POL 120</td>
<td>American Government</td>
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<td>POL 210</td>
<td>Comparative Government</td>
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<td>POL 220</td>
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<td>PSY 241</td>
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<td>PSY 281</td>
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<td>SOC 213</td>
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<td>SOC 220</td>
<td>Social Problems</td>
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<td>SOC 225</td>
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Select 3 credits of the following: 3.0
MAT 110 Mathematical Measurement and Literacy
MAT 121 Algebra/Trigonometry I
MAT 143 Quantitative Literacy
MAT 152 Statistical Methods I
MAT 171 Precalculus Algebra
MAT 172 Precalculus Trigonometry
MAT 271 Calculus I

Major Requirements
BPA 150 Artisan & Specialty Bread 4.0
BPA 210 Cake Design and Decorating 3.0
BPA 250 Dessert and Bread Production 5.0
BPA 260 Pastry and Baking Marketing 3.0
CUL 110 Sanitation and Safety 2.0
CUL 160 Baking I 3.0
HRM 245 Human Resource Management-Hospitality 3.0
BPA 165 Hot and Cold Desserts 3.0
BPA 130 European Cakes and Tortes 3.0
WBL 111 Work-Based Learning I 1.0
WBL 121 Work-Based Learning II 1.0
BPA 220 Confection Artistry 4.0
BPA 230 Chocolate Artistry 3.0
BPA 240 Plated Desserts 3.0
CUL 112 Nutrition for Foodservice 3.0
CUL 150 Food Science 2.0
HRM 220 Cost Control-Food and Beverage 3.0
BPA 230A Chocolate Artistry Lab 1.0
CUL 111 Success in Hospitality Studies 1.0
CUL 142 Fundamentals of Food 5.0
CUL 273 Career Development 1.0

Total Credits 75

Notes
• Progression in this program is dependent upon a score of “C” or better in all courses with CUL, HRM and BPA prefixes.
• All CUL and BPA lab classes require student accident medical insurance.
• In the Baking and Pastry Arts program, there are more applications for admittance than space available. Criteria for admission include scores on standardized tests, interview, past academic performance and experience in the field of interest.

Contact Information
The Baking and Pastry Arts program is in the Hospitality Education Division. For more information, call 704.330.4642 or visit the Baking and Pastry website (http://www.cpcc.edu/hospitality-education/baking-pastry-arts-bpa?searchterm=baking+and+pastry).

Baking & Pastry Arts Certificate with a Specialization in Cake Artistry (C55130-C1)
This certificate is designed to prepare students who would like to be employed as a baking professional, cake decorator, or those with some baking experience who want to further their knowledge in this specialized area. This certificate emphasizes on American and European cake construction and artistry.

Major Requirements
CUL 110 Sanitation and Safety 2.0
CUL 160 Baking I 3.0
BPA 210 Cake Design and Decorating 3.0
BPA 130 European Cakes and Tortes 3.0
CUL 111 Success in Hospitality Studies 1.0

Total Credits 12

Baking & Pastry Arts Certificate with a Specialization in Dessert Artistry (C55130-C2)
This certificate is designed to prepare students who would like to be employed as a pastry professional, a la carte pastry cook, or those with some baking experience who want to further their knowledge in this specialized area. This certificate emphasizes on techniques used in a la carte dessert production.

Major Requirements
CUL 110 Sanitation and Safety 2.0
CUL 160 Baking I 3.0
BPA 165 Hot and Cold Desserts 3.0
BPA 240 Plated Desserts 3.0
CUL 111 Success in Hospitality Studies 1.0

Total Credits 12
Baking & Pastry Arts Certificate with a Specialization in Chocolate and Sugar Artistry (C55130-C3)

This certificate is designed to prepare students who would like to be employed as a Candy Professional, Chocolatier, Confectioner, or those with some baking experience who want to further their knowledge in this specialized area. This certificate emphasizes on techniques used in Confectionary and Chocolate production.

Major Requirements

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<td>CUL 110</td>
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<td>CUL 111</td>
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<td>BPA 220</td>
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<td>BPA 230</td>
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<td>BPA 230A</td>
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<td><strong>Total Credits</strong></td>
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<td><strong>14</strong></td>
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</table>

Basic Law Enforcement Training

The Basic Law Enforcement Training program is a curriculum course offered at most community colleges, commonly referred to as a Police Academy. Basic Law Enforcement Training (BLET) is designed to give students essential skills required for entry-level employment as law enforcement officers with state, county, or municipal governments, or with private enterprise.

This program utilizes State commission-mandated topics and methods of instruction. General subjects include, but are not limited to:

- criminal, juvenile, civil, traffic and alcoholic beverage laws
- physical training; investigative, patrol, custody and court procedures
- emergency responses
- ethics and community relations

The program consists of 626 mandated hours and meets for approximately 16 weeks, Monday through Friday from 7 a.m. until 6 p.m. To receive a certificate, students must successfully complete and pass all units of study, including certification examinations mandated by the North Carolina Criminal Justice Education and Training Standards Commission and the North Carolina Sheriffs' Education and Training Standards Commission.

In order to successfully complete Basic Law Enforcement Training, students successfully must complete the Criminal Justice Education and Training Standards Commission’s comprehensive certification examination. Employment with criminal justice agencies is subject to specific agency criteria, therefore, completion of a degree alone does not guarantee eligibility for employment.

Admissions Requirements

1. Must be a citizen of the United States
2. Must be 20 years of age
3. Must provide copy of birth certificate
4. Must provide proof of high school graduation or GED completion
5. Must provide Social Security Card for duplication
6. Must possess a valid N.C. Driver’s License
7. Must provide a certified copy of Driver’s history for all states where a license was obtained since the age of 16 years old
8. Must provide a certified copy of criminal records check (NCIC) for each City/State(s) of residence since the age of 16 years old
9. Must provide a certified copy of DD-214, if applicant has military service
10. Must be of good moral character
11. Must not have committed, been charged with, or convicted of a felony, class B misdemeanor, or more than a total of 3 misdemeanor charges of any kind (this includes civilian or military).

Prior to enrollment, each candidate must call to set up a preliminary interview with the Director of the BLET program.

The purpose of this interview is to determine the eligibility of the candidate to participate in the program. Candidates must have a clean criminal record. No charges, convictions, or proof of a commission of any criminal offenses except minor traffic offenses. Only after the BLET Director determines the eligibility of a candidate will an enrollment packet be issued.

For further information

This program is part of the Public Safety Division. To learn more about the program, or to schedule a preliminary interview contact:

Sgt. Stanley T. Moore, Director
Basic Law Enforcement Training
704.330.4169 or email at stanley.moore@cpcc.edu
Available weekdays from 8 a.m.- 4:30 p.m. Office hours by appointment only.

LaTrease Quigley, BLET Qualified Assistant
Basic Law Enforcement Training
704.330.4110 or email at latrease.quigley@cpcc.edu

No degrees offered.

No diplomas offered.

**Basic Law Enforcement Training (C55120)**

**Major Requirements**

<table>
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<th>Title</th>
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<td>CJC 100</td>
<td>Basic Law Enforcement Training</td>
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</table>

**Total Credits**

| 19          |

**Biomedical Equipment Technology**

*Pending SACSCOC approval*

A course of study that prepares the students to use basic engineering principles and technical skills to install, operate, troubleshoot, and repair sophisticated devices and instrumentation used in the health care delivery system. Includes instruction in instrument calibration, design and installation testing, system safety and maintenance procedures, procurement and installment procedures, and report preparation. With an Associate in Applied Science (A.A.S) degree and two years’ experience, an individual should be able to become a certified Biomedical Equipment Technician.

Developing information on the Biomedical Equipment Technology program may be found on the Engineering Technologies (http://www.cpcc.edu/et/academic-programs) website.

**Biomedical Equipment Technology (A50100) (pending SACSCOC approval)**

**Degree Awarded**

The Associate in Applied Science Degree - Biomedical Equipment Technology is awarded by the College upon completion.

**Admissions**

- A high school diploma or equivalent is required. High school students preparing for an Engineering Technology program should complete courses in algebra, geometry and advanced mathematics. Skills and proficiencies should be developed in writing, computer literacy and science.

- CPCC placement tests are required in English and mathematics. Advancement Studies in mathematics and English courses are available for students to build basic skills and knowledge. A counseling/orientation appointment follows placement testing.

- Many courses require prerequisites or co-requisites; check the Courses section for details.

**Contact Information**

The Biomedical Equipment Technology program is in the Engineering Technology Division. For additional information, visit www.cpcc.edu/et or call 704.330.6860.

**General Education Requirements**

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<td>or ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
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<tr>
<td>or MAT 171</td>
<td>Precalculus Algebra</td>
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<td>PSY 150</td>
<td>General Psychology</td>
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<td>or SOC 210</td>
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Select one of the following courses: 3.0

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<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
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<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
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<tr>
<td>ART 115</td>
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<td>DAN 211</td>
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Select one of the following groups: 4.0

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ELC 131</td>
<td>Circuit Analysis I</td>
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**Major Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BMT 111</td>
<td>Introduction to Biomedical Field</td>
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<tr>
<td>BMT 212</td>
<td>BMET Instrumentation I</td>
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<tr>
<td>NET 125</td>
<td>Networking Basics</td>
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<tr>
<td>SEC 110</td>
<td>Security Concepts</td>
<td>3.0</td>
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<tr>
<td>ATR 112</td>
<td>Introduction to Automation</td>
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<td>BMT 112</td>
<td>Hospital Safety Standards</td>
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<td>BMT 120</td>
<td>Biomedical Anatomy &amp; Physiology</td>
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</tr>
<tr>
<td>BMT 213</td>
<td>BMET Instrumentation II</td>
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</tr>
<tr>
<td>BMT 225</td>
<td>Biomedical Trouble Shooting</td>
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</tr>
<tr>
<td>BMT 223</td>
<td>Imaging Techniques/Laser Fundamentals</td>
<td>4.0</td>
</tr>
</tbody>
</table>
No diplomas offered.
No certificates offered.

Broadcasting and Production Technology

Pending SACSCOC approval

An Associate in Applied Science degree in Broadcast & Production Technology (BPT) at CPCC gives skilled, competent media students opportunities to work in a variety of media-related venues and services. The BPT curriculum is designed to provide competency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the digital journalism and media industry.

The curriculum prepares students for entry-level employment in production support and selected technical areas of film, video, and other media production. The technical electives provide a number of options for students, depending upon their goals and interests within media production, such as the creation, manipulation, and animation of digital images, and for those who are entrepreneurially inclined, the creation of their own media business.

The Associate in Applied Sciences degree in Broadcasting and Production Technology is awarded by the College upon completion of this program.

Admissions

• A high school diploma or equivalent is required.
• Placement tests determine placement in English (ENG) and mathematics (MAT).
• Some courses have prerequisites or co-requisites; check the Courses section for details.

Contact Information

The Broadcast and Production Technology Program is in the Digital Media, Journalism and Communication Division. For more information, call the division office at 704.330.2722 extension 3134.

Admissions

• A high school diploma or equivalent is required.
• Placement tests determine placement in English (ENG) and mathematics (MAT).
• Some courses have prerequisites or co-requisites. Check the Courses section for details.

Contact Information

The Broadcast and Production Technology Program is in the Digital Media, Journalism and Communication Division. For more information, call 704.330.2722 extension 3134.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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Total Credits 64

Select 3 credits from the following:

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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
</tr>
<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
</tr>
<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
</tr>
<tr>
<td>MAT 152</td>
<td>Statistical Methods I</td>
</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
</tr>
</tbody>
</table>

Select 3 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
</tr>
<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
</tr>
<tr>
<td>ENG 231</td>
<td>American Literature I</td>
</tr>
<tr>
<td>ENG 232</td>
<td>American Literature II</td>
</tr>
<tr>
<td>HUM 160</td>
<td>Introduction to Film</td>
</tr>
<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
</tr>
<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
</tr>
<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
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<tr>
<td>PHI 240</td>
<td>Introduction to Ethics</td>
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Major Requirements

<table>
<thead>
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<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BPT 110</td>
<td>Introduction to Broadcasting</td>
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<tr>
<td>BPT 111</td>
<td>Broadcast Law &amp; Ethics</td>
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</tr>
<tr>
<td>BPT 112</td>
<td>Broadcast Writing</td>
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<tr>
<td>BPT 113</td>
<td>Broadcast Sales</td>
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<tr>
<td>ART 266</td>
<td>Videography I</td>
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<tr>
<td>ART 267</td>
<td>Videography II</td>
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</tr>
<tr>
<td>BPT 121</td>
<td>Broadcast Speech I</td>
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</tr>
<tr>
<td>BUS 139</td>
<td>Entrepreneurship I</td>
<td>3.0</td>
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<tr>
<td>CIS 110</td>
<td>Introduction to Computers</td>
<td>3.0</td>
</tr>
<tr>
<td>COM 150</td>
<td>Introduction to Mass Communication</td>
<td>3.0</td>
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<tr>
<td>DME 110</td>
<td>Introduction to Digital Media</td>
<td>3.0</td>
</tr>
<tr>
<td>FVP 220</td>
<td>Editing I</td>
<td>3.0</td>
</tr>
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<td>JOU 110</td>
<td>Introduction to Journalism</td>
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<td>JOU 216</td>
<td>Writing for Mass Media</td>
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Select 6 credits from the following:

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ART 171</td>
<td>Computer Art I</td>
</tr>
<tr>
<td>ART 261</td>
<td>Photography I</td>
</tr>
<tr>
<td>ART 264</td>
<td>Digital Photography I</td>
</tr>
<tr>
<td>ART 265</td>
<td>Digital Photography II</td>
</tr>
<tr>
<td>ART 271</td>
<td>Computer Art II</td>
</tr>
<tr>
<td>BPT 231</td>
<td>Video/TV Production I</td>
</tr>
<tr>
<td>BPT 232</td>
<td>Video/TV Production II</td>
</tr>
<tr>
<td>BUS 115</td>
<td>Business Law I</td>
</tr>
<tr>
<td>DRA 135</td>
<td>Acting for the Camera I</td>
</tr>
<tr>
<td>FVP 114</td>
<td>Camera &amp; Lighting I</td>
</tr>
<tr>
<td>FVP 115</td>
<td>Camera &amp; Lighting II</td>
</tr>
<tr>
<td>FVP 221</td>
<td>Editing II</td>
</tr>
<tr>
<td>HUM 160</td>
<td>Introduction to Film</td>
</tr>
<tr>
<td>JOU 217</td>
<td>Feature/Editorial Writing</td>
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<tr>
<td>MKT 232</td>
<td>Social Media Marketing</td>
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<tr>
<td>SGD 111</td>
<td>Introduction to Simulation and Game Development</td>
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</table>
SGD 162  Simulation and Game 3-D Animation
WBL 111  Work-Based Learning I
WBL 112  Work-Based Learning I
WEB 110  Internet/Web Fundamentals
WEB 120  Introduction to Internet Multimedia

Total Credits 67

No diplomas offered.
No certificates offered.

Business Administration

The Business Administration curriculum is designed to introduce students to the various aspects of the free enterprise system. Students will be provided with a fundamental knowledge of business functions, processes and an understanding of business organizations in today’s global economy. Course work includes business concepts such as accounting, business law, economics, management and marketing. Skills related to the application of these concepts are developed through the study of computer applications, communication, team building and decision-making.

Through these skills, students will have a sound business education base for lifelong learning. Graduates are prepared for employment opportunities in government agencies, financial institutions and large to small business or industry.

Visit Career Coach for career information.

Business Administration (A25120)

Degree Awarded

The Associate in Applied Science Degree – Business Administration is awarded by the College upon completion of this program.

The Business Administration degree is available in four tracks:

• Business Administration (A25120)
• Business Administration - Human Resources Management Track (A25120H)
• Business Administration - Global Business Track (A25120G)
• Business Administration - Marketing Track (A25120M)

Admissions

• Complete required CPCC application.
• A high school diploma or equivalent is required.
• Submit high school transcripts and any college transcripts to the Admissions/Record Center.
• Request college transcripts to be evaluated for transfer credit.
• Accounting, business and economic college level courses taken more than 10 years ago will not be accepted.
• CPCC placement tests are required in reading comprehension and algebra. Developmental courses in English and mathematics are available for students to build basic skills and knowledge. All needed developmental courses must be completed prior to beginning ACC, BUS, ECM, INT, LOG and MKT prefix courses.
• A counseling/orientation appointment follows placement testing.

• See Program Chair for advising of course sequence and registration advisement. Call 704-330-6595 for an appointment.
• Many courses have prerequisites or co-requisites. Check the Courses section for details.

Method of Study

Business Administration Degree courses are offered either fully online or web-enhanced. Testing may be available at one of the campuses of CPCC or online. Check with the instructor or the Business and Accounting Division Office at 704.330.6595 for details.

Transferring to Senior Institution

Students intending to transfer to a senior institution should check with the senior institution for that college’s general education, program requirements and GPA in order to transfer courses more effectively. Information on transfer institutions is available through the Business and Accounting Division Office.

For More Information

The Business Administration program is in the Business and Accounting Division. For information, call the Business and Accounting Division office at 704.330.6595.

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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<tr>
<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
<td>3.0</td>
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<tr>
<td>Select 3 credits of the following:</td>
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<td>3.0</td>
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<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
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<tr>
<td>ENG 113</td>
<td>Literature-Based Research</td>
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</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>Select 3 credits of the following:</td>
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<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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<tr>
<td>Select 3 credits of the following:</td>
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<td>3.0</td>
</tr>
<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
<td></td>
</tr>
<tr>
<td>MAT 152</td>
<td>Statistical Methods I</td>
<td></td>
</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
<td></td>
</tr>
<tr>
<td>Select 3 credits of the following:</td>
<td></td>
<td>3.0</td>
</tr>
<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
<td></td>
</tr>
<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
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<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
</tr>
<tr>
<td>ENG 231</td>
<td>American Literature I</td>
<td></td>
</tr>
<tr>
<td>ENG 232</td>
<td>American Literature II</td>
<td></td>
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<td>HUM 130</td>
<td>Myth in Human Culture</td>
<td></td>
</tr>
<tr>
<td>HUM 160</td>
<td>Introduction to Film</td>
<td></td>
</tr>
<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
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<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
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<td>PHI 215</td>
<td>Philosophical Issues</td>
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<td>World Religions</td>
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<td>REL 111</td>
<td>Eastern Religions</td>
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<td>REL 112</td>
<td>Western Religions</td>
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Major Requirements

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BUS 110</td>
<td>Introduction to Business</td>
<td>3.0</td>
</tr>
</tbody>
</table>
BUS 115  Business Law I  3.0  
BUS 137  Principles of Management  3.0  
MKT 120  Principles of Marketing  3.0  
ACC 120  Principles of Financial Accounting  4.0  
ECO 251  Principles of Microeconomics  3.0  
CIS 110  Introduction to Computers  3.0  

Total Credits  40

Students must complete one of the following tracks to earn the Business Administration degree.

**Business Administration Track (A25120):**

**Major Requirements**

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BUS 135</td>
<td>Principles of Supervision</td>
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<tr>
<td>BUS 139</td>
<td>Entrepreneurship I</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 153</td>
<td>Human Resource Management</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 255</td>
<td>Organizational Behavior in Business</td>
<td>3.0</td>
</tr>
<tr>
<td>ACC 121</td>
<td>Principles of Managerial Accounting</td>
<td>4.0</td>
</tr>
<tr>
<td>INT 110</td>
<td>International Business</td>
<td>3.0</td>
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<tr>
<td>BUS 230</td>
<td>Small Business Management</td>
<td>3.0</td>
</tr>
<tr>
<td>or ECM 210</td>
<td>Introduction to E-Commerce</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Technical Electives**

Select 6 credits from the following: 6.0  
- BUS 125  Personal Finance  
- MKT 224  International Marketing  
- BUS 234  Training and Development  
- BUS 217  Employment Law and Regulations  
- ACC 150  Accounting Software Applications  
- WBL 112  Work-Based Learning I  
- BUS 116  Business Law II  
- BUS 152  Human Relations  
- BUS 112  SIFE Business Development  
- BUS 240  Business Ethics  
- SST 110  Introduction to Sustainability  
- SST 210  Issues in Sustainability  
- BAF 121  Economics for Bankers  
- INT 115  Global Communication  
- MKT 223  Customer Service  
- MKT 232  Social Media Marketing  
- BUS 253  Leadership and Management Skills

Total Credits  28.0

**Global Business Track (A25120G):**

**Major Requirements**

<table>
<thead>
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<th>Title</th>
<th>Credits</th>
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</thead>
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<tr>
<td>ACC 270</td>
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<tr>
<td>INT 110</td>
<td>International Business</td>
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<tr>
<td>INT 210</td>
<td>International Trade</td>
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<tr>
<td>INT 220</td>
<td>International Economics</td>
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</tr>
<tr>
<td>INT 230</td>
<td>International Law</td>
<td>3.0</td>
</tr>
<tr>
<td>LOG 110</td>
<td>Introduction to Logistics</td>
<td>3.0</td>
</tr>
<tr>
<td>MKT 224</td>
<td>International Marketing</td>
<td>3.0</td>
</tr>
<tr>
<td>or LOG 125</td>
<td>Transportation Logistics</td>
<td>3.0</td>
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</table>

Select 4 credits from the following: 4.0  
- FRE 111 & FRE 181  Elementary French I & French Lab 1  
- GER 111 & GER 181  Elementary German I & German Lab 1  
- SPA 111 & SPA 181  Elementary Spanish I & Spanish Lab 1

**Technical Electives**

Select 3 credits from the following: 3.0  
- ACC 121  Principles of Managerial Accounting  
- INT 180  Travel Study Abroad  
- BUS 230  Small Business Management  
- WBL 112  Work-Based Learning I  
- BUS 139  Entrepreneurship I  
- OMT 110  Intro to Operations Mgmt  
- BUS 240  Business Ethics  
- BUS 152  Human Relations  
- MKT 232  Social Media Marketing  
- BUS 253  Leadership and Management Skills  
- BUS 217  Employment Law and Regulations  
- BUS 153  Human Resource Management  
- BUS 234  Training and Development  
- INT 115  Global Communication

Total Credits  28.0

**Marketing Track (A25120M):**

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MKT 220</td>
<td>Advertising and Sales Promotion</td>
<td>3.0</td>
</tr>
<tr>
<td>MKT 225</td>
<td>Marketing Research</td>
<td>3.0</td>
</tr>
<tr>
<td>MKT 227</td>
<td>Marketing Applications</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits  28.0
Central Piedmont Community College

MKT 232  Social Media Marketing  4.0
MKT 224  International Marketing  3.0
MKT 221  Consumer Behavior  3.0
MKT 123  Fundamentals of Selling  3.0
or MKT 223  Customer Service
Select one of the following:  2.0
  MKT 121  Retailing
  MKT 229  Special Events Production
  ENT 211  Entertainment Promotion

Technical Electives
Select 3 credits from the following:
  ECM 210  Introduction to E-Commerce
  BUS 153  Human Resource Management
  INT 110  International Business
  MKT 230  Public Relations
  MKT 228  Service Marketing
  WBL 112  Work-Based Learning I
  BUS 139  Entrepreneurship I
  BUS 112  SIFE Business Development
  LOG 110  Introduction to Logistics
  MKT 223  Customer Service
  BUS 240  Business Ethics
  BUS 152  Human Relations
  BUS 234  Training and Development
  INT 115  Global Communication
  BUS 253  Leadership and Management Skills
  BUS 217  Employment Law and Regulations
  MKT 122  Visual Merchandising
Total Credits  28.0

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No diplomas offered.

- Business Administration Certificate with a Specialization in Business Management (C25120-C1) (p. 109)
- Business Administration Certificate with a Specialization in Workplace Basic Skills (C25120-C3) (p. 109)
- Business Administration Certificate Specialization in Entrepreneurship (C25120-C4) (p. 109)
- Business Administration Certificate Specialization in Business Operations (C25120-C5) (p. 110)
- Business Administration Certificate with a Specialization in Human Resources Generalist (C25120-10) (p. 110)
- Business Administration Certificate with a Specialization in Leadership Development (C25120-11) (p.  )
- Business Administration Certificate with a Specialization in International Business (C25120-20) (p. 110)
- International Business Certificate with a Specialization in Logistics (C25120-21) (p. 110)

Business Management Certificates
(C25120)

Business Administration Certificate with a Specialization in Business Management (C25120-C1)
This certificate is designed to provide the student with a concentrated course of study in the field of business management. Upon completion of the six courses, a certificate will be awarded by the College. The courses for this certificate may be applied toward the Associate Degree in Business Administration.

For more information, call the Business and Accounting office at 704.330.6595.

General Education Requirements
COM 110  Introduction to Communication  3.0
or COM 231  Public Speaking

Major Requirements
BUS 137  Principles of Management  3.0
BUS 110  Introduction to Business  3.0
BUS 153  Human Resource Management  3.0
BUS 255  Organizational Behavior in Business  3.0
ECM 210  Introduction to E-Commerce  3.0
or BUS 230  Small Business Management
Total Credits  18

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Business Administration Certificate with a Specialization in Workplace Basic Skills (C25120-C3)

General Education Requirements
COM 110  Introduction to Communication  3.0

Major Requirements
CIS 110  Introduction to Computers  3.0
BUS 125  Personal Finance  3.0
BUS 135  Principles of Supervision  3.0
BUS 255  Organizational Behavior in Business  3.0
Total Credits  15

Back to Top (p.  )
Business Administration Certificate
Specialization in Entrepreneurship (C25120-C4)

This certificate is designed to provide the student with a concentrated course of study in the field of entrepreneurship and small business start-up and management. Upon completion of the six courses, a certificate will be awarded by the College. The courses for this certificate may be applied toward the Associate in Applied Science Degree in Business Administration. For more information, call 704.330.6595 to reach the division office.

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 120</td>
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<tr>
<td>BUS 110</td>
<td>Introduction to Business</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 230</td>
<td>Small Business Management</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 139</td>
<td>Entrepreneurship I</td>
<td>3.0</td>
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</tbody>
</table>

Accounting Elective

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ACC 150</td>
<td>Accounting Software Applications</td>
<td>2.0</td>
</tr>
<tr>
<td>or ACC 120</td>
<td>Principles of Financial Accounting</td>
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</table>

Business Elective

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BUS 153</td>
<td>Human Resource Management</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 115</td>
<td>Business Law I</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 255</td>
<td>Organizational Behavior in Business</td>
<td>3.0</td>
</tr>
<tr>
<td>INT 110</td>
<td>International Business</td>
<td></td>
</tr>
<tr>
<td>BUS 135</td>
<td>Principles of Supervision</td>
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</tr>
</tbody>
</table>

Total Credits 17

Business Administration Certificate with a Specialization in Leadership Development (C25120-11)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 153</td>
<td>Human Resource Management</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 234</td>
<td>Training and Development</td>
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<tr>
<td>BUS 255</td>
<td>Organizational Behavior in Business</td>
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</tr>
<tr>
<td>BUS 253</td>
<td>Leadership and Management Skills</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits 12

Global Business Certificates

Business Administration Certificate with a Specialization in International Business (C25120-20)

This certificate is designed to provide the student with a concentrated course of study in the field of International Business. Upon completion of the six courses, a certificate will be awarded by the College. This certificate may be applied toward the Associate Degree in Business Administration with a concentration in International Business.

For more information, call the division office at 704.330.6595.

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BUS 137</td>
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<tr>
<td>CIS 110</td>
<td>Introduction to Computers</td>
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<tr>
<td>INT 110</td>
<td>International Business</td>
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<tr>
<td>INT 210</td>
<td>International Trade</td>
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<tr>
<td>GEO 111</td>
<td>World Regional Geography</td>
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<tr>
<td>or INT 115</td>
<td>Global Communication</td>
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<tr>
<td>MKT 224</td>
<td>International Marketing</td>
<td>3.0</td>
</tr>
<tr>
<td>or LOG 110</td>
<td>Introduction to Logistics</td>
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</table>

Total Credits 18

Human Resources Management Certificates

Business Administration Certificate with a Specialization in Human Resources Generalist (C25120-10)

This certificate is designed to provide the student with a concentrated course of study in the field of human resources management. Upon completion of the six courses, a certificate will be awarded by the College.
International Business Certificate with a Specialization in Logistics (C25120-21)

This certificate is designed to provide the student with a concentrated course of study in the field of Logistics. Upon completion of the five courses, a certificate will be awarded by the College. This certificate may be applied toward the Associate Degree in Business Administration with a concentration in International Business.

For more information, call the division office at 704.330.6595.

<table>
<thead>
<tr>
<th>Major Requirements</th>
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</thead>
<tbody>
<tr>
<td>INT 110</td>
</tr>
<tr>
<td>INT 210</td>
</tr>
<tr>
<td>LOG 110</td>
</tr>
<tr>
<td>LOG 125</td>
</tr>
<tr>
<td>OMT 110</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
</tr>
</tbody>
</table>

Back to Top (p.  )

Marketing Certificates

Business Administration Certificate with a Specialization in Event Marketing and Promotion (C25120-30)

This certificate is designed to provide the student with a concentrated course of study in the field of marketing. Upon completion of the six courses, a certificate will be awarded by the College. The courses for this certificate may be applied toward the Associate Degree in Applied Science in Business Administration Marketing and Retailing.

For more information, call 704.330.6595.

<table>
<thead>
<tr>
<th>Major Requirements</th>
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</thead>
<tbody>
<tr>
<td>MKT 120</td>
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<td>MKT 123</td>
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<td>MKT 220</td>
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<tr>
<td>MKT 221</td>
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<tr>
<td>Technical Electives</td>
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<tr>
<td>MKT 229</td>
</tr>
<tr>
<td>or ENT 211</td>
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<tr>
<td><strong>Total Credits</strong></td>
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</tbody>
</table>

Cardiovascular Technology

The Agnes Binder Weisiger Cardiovascular Technology curriculum prepares individuals with the didactical knowledge and specialized skills to evaluate and perform various procedures leading to the diagnosis and treatment of cardiovascular diseases while maintaining quality patient care practices.

In the first year of the program, students gain a fundamental knowledge with associated skill sets of cardiovascular imaging modalities, cardiovascular anatomy and physiology, EKG, cardiac pacemakers, ultrasound physical principles, echocardiography and cardiac catheterization. Emphasis is placed on focused theoretical knowledge and the advancing development of technical and cognitive skills required in the specialized concentration track of non-invasive (echocardiography) or invasive (cardiac catheterization), during the second year of the program.

Visit Career Coach for Career Information.

Cardiovascular Technology (A45170)

Degree Awarded

The Associate in Applied Science Degree Cardiovascular Technology is awarded by the College upon completion of this program.

Admissions

- Complete a CPCC admissions application.
- Admission to the Cardiovascular Technology program is competitive. Please note that students must complete a separate application for the program when they are ready to apply.
- See the Cardiovascular Technology (http://www.cpcc.edu/health-human-services/cvt) website for the program application.
- Students must be selected to enter the program. Upon acceptance and enrollment in the program, students must take all courses as scheduled and sequenced.
Program Accreditation

The Cardiovascular Technology Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Joint Review Committee on Education in Cardiovascular Technology (JRC-CVT) at the associate degree level in the Non-Invasive Cardiology (Adult Echocardiography) concentration and the Invasive Cardiology (Invasive Cardiovascular Technology) concentration.

CAAHEP
1361 Park Street
Clearwater, FL 33756
727.210.2350

Notes

In addition to tuition and textbooks, costs of this program include the following: scrubs, lab coat, radiation monitoring badge, CVT patch; student picture ID; a physical examination including drug screening test; immunizations such as tetanus toxoid, hepatitis B vaccinations; TB test; blood test (VDRL, rubella titer, etc.); current CPR certification and criminal background check.

All students must provide a certificate of health and accident insurance. In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a NC state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

All students enrolled in the Cardiovascular Technology program will take the same Core courses for the first year. Upon admission, applicants select either the Invasive or Noninvasive specialty track. Students will enroll in Core courses of their specialty track in the fall term of the second year.

Graduates selecting the non-invasive track are eligible for the Noninvasive Registry to become a Registered Diagnostic Cardiac Sonographer. Graduates selecting the invasive track are eligible for the Invasive Registry to become a Registered Cardiovascular Invasive Specialist. Graduates may be employed in hospitals, clinics and cardiology offices. Registry status, in specialty field, is required for employment.

Contact Information

The Agnes Binder Weisiger Cardiovascular Technology program is in the Health and Human Services Division. For information, call 704.330.6285. Division offices are located in the Belk (BL) Building, 3rd floor.

For an admission packet, frequently asked questions and other information, visit our program website at Cardiovascular Technology (http://www.cpcc.edu/cvt). For more information, call 704.330.6285 or 704-330-6284.

Visit Career Coach for career information.

Invasive Track

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
<td>3.0</td>
</tr>
<tr>
<td>or MAT 152</td>
<td>Statistical Methods I</td>
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<tr>
<td>PSY 150</td>
<td>General Psychology</td>
<td>3.0</td>
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</table>

Take 3 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 152</td>
<td>Statistical Methods I</td>
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<tr>
<td>PSY 150</td>
<td>General Psychology</td>
<td>3.0</td>
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Select 3 credits of the following:

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
<td>3.0</td>
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<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
<td></td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
</tr>
<tr>
<td>ART 116</td>
<td>Survey of American Art</td>
<td></td>
</tr>
<tr>
<td>ART 117</td>
<td>Non-Western Art History</td>
<td></td>
</tr>
<tr>
<td>DAN 110</td>
<td>Dance Appreciation</td>
<td></td>
</tr>
<tr>
<td>DAN 211</td>
<td>Dance History I</td>
<td></td>
</tr>
<tr>
<td>DAN 212</td>
<td>Dance History II</td>
<td></td>
</tr>
<tr>
<td>DRA 111</td>
<td>Theatre Appreciation</td>
<td></td>
</tr>
<tr>
<td>DRA 112</td>
<td>Literature of the Theatre</td>
<td></td>
</tr>
<tr>
<td>DRA 122</td>
<td>Oral Interpretation</td>
<td></td>
</tr>
<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</td>
<td></td>
</tr>
<tr>
<td>HUM 160</td>
<td>Introduction to Film</td>
<td></td>
</tr>
<tr>
<td>HUM 211</td>
<td>Humanities I</td>
<td></td>
</tr>
<tr>
<td>HUM 212</td>
<td>Humanities II</td>
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<tr>
<td>ENG 231</td>
<td>American Literature I</td>
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<td>ENG 232</td>
<td>American Literature II</td>
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<td>ENG 241</td>
<td>British Literature I</td>
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<td>ENG 242</td>
<td>British Literature II</td>
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<td>ENG 251</td>
<td>Western World Literature I</td>
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<td>ENG 252</td>
<td>Western World Literature II</td>
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<td>MUS 110</td>
<td>Music Appreciation</td>
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<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
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<tr>
<td>MUS 213</td>
<td>Opera and Musical Theatre</td>
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<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
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<tr>
<td>PHI 220</td>
<td>Western Philosophy I</td>
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<tr>
<td>PHI 221</td>
<td>Western Philosophy II</td>
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<tr>
<td>REL 110</td>
<td>World Religions</td>
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<tr>
<td>REL 111</td>
<td>Eastern Religions</td>
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<td>REL 112</td>
<td>Western Religions</td>
<td></td>
</tr>
<tr>
<td>REL 211</td>
<td>Introduction to Old Testament</td>
<td></td>
</tr>
<tr>
<td>PHI 230</td>
<td>Introduction to Logic</td>
<td></td>
</tr>
<tr>
<td>REL 212</td>
<td>Introduction to New Testament</td>
<td></td>
</tr>
<tr>
<td>REL 221</td>
<td>Religion in America</td>
<td></td>
</tr>
<tr>
<td>MUS 210</td>
<td>History of Rock Music</td>
<td></td>
</tr>
</tbody>
</table>

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ICT 114</td>
<td>Intro Cardiovascular Tech</td>
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<tr>
<td>ICT 134</td>
<td>Cv Anatomy &amp; Physiology</td>
<td>4.0</td>
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<tr>
<td>ICT 136</td>
<td>Cardiac Cath I</td>
<td>5.0</td>
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<tr>
<td>NCT 113</td>
<td>Electrocardiography</td>
<td>4.0</td>
</tr>
<tr>
<td>NCT 133</td>
<td>Cardiovascular Ultrasound Principles</td>
<td>3.0</td>
</tr>
<tr>
<td>NCT 143</td>
<td>Echocardiography I</td>
<td>5.0</td>
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</tbody>
</table>

Invasive Track Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ICT 214</td>
<td>Cardiac Cath II</td>
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<tr>
<td>ICT 234</td>
<td>Cardiac Cath III</td>
<td>12.0</td>
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<tr>
<td>ICT 244</td>
<td>Peripheral Vascular Catheterization</td>
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</table>
ICT 254  Introduction to Cardiac Electrophysiology 2.0
Other Major Requirements:
BIO 163  Basic Anatomy & Physiology 5.0
PHY 110  Conceptual Physics 3.0
PHY 110A  Conceptual Physics Lab 1.0
MED 120  Survey of Medical Terminology 2.0
Total Credits 76

Non-Invasive Track

General Education Requirements
ENG 111  Writing and Inquiry 3.0
MAT 143  Quantitative Literacy 3.0
or MAT 152  Statistical Methods I
PSY 150  General Psychology 3.0
COM 231  Public Speaking 3.0
Take 3 credits from the following: 3.0
ENG 112  Writing and Research in the Disciplines
ENG 113  Literature-Based Research
ENG 114  Professional Research & Reporting
Select 3 credits of the following: 3.0
ART 111  Art Appreciation
ART 114  Art History Survey I
ART 115  Art History Survey II
ART 116  Survey of American Art
ART 117  Non-Western Art History
DAN 110  Dance Appreciation
DAN 211  Dance History I
DAN 212  Dance History II
DRA 111  Theatre Appreciation
DRA 112  Literature of the Theatre
DRA 122  Oral Interpretation
HUM 130  Myth in Human Culture
HUM 160  Introduction to Film
HUM 211  Humanities I
HUM 212  Humanities II
ENG 231  American Literature I
ENG 232  American Literature II
ENG 241  British Literature I
ENG 242  British Literature II
ENG 251  Western World Literature I
ENG 252  Western World Literature II
MUS 110  Music Appreciation
MUS 112  Introduction to Jazz
MUS 213  Opera and Musical Theatre
PHI 215  Philosophical Issues
PHI 220  Western Philosophy I
PHI 221  Western Philosophy II
REL 110  World Religions
REL 111  Eastern Religions
REL 112  Western Religions
REL 211  Introduction to Old Testament
PHI 230  Introduction to Logic

REL 212  Introduction to New Testament
REL 221  Religion in America
MUS 210  History of Rock Music

Major Requirements
ICT 114  Intro Cardiovascular Tech 2.0
ICT 134  Cv Anatomy & Physiology 4.0
ICT 136  Cardiac Cath I 5.0
NCT 113  Electrocardiography 4.0
NCT 133  Cardiovascular Ultrasound Principles 3.0
NCT 143  Echocardiography I 5.0
BIO 163  Basic Anatomy & Physiology 5.0
PHY 110  Conceptual Physics 3.0
PHY 110A  Conceptual Physics Lab 1.0
MED 120  Survey of Medical Terminology 2.0

Non-Invasive Track Requirements
NCT 253  Hemodynamic Echo Principles 3.0
NCT 251  Echocardiography II 7.0
NCT 273  Echocardiography III 14.0
Total Credits 76

No diplomas offered.
No certificates offered.

Civil Engineering Technology

The Civil Engineering Technology curriculum provides the application of relevant theory of engineering needed by technicians to carry out planning and supervisory tasks in the design and construction of transportation systems, residential and commercial buildings, bridges, dams and water or wastewater treatment systems.

Coursework includes communication and computational skills required to support fields such as materials testing, structures, estimating, project management, hydraulics, environmental technology and surveying. Additional coursework covers the operation of computers and application software, including computer-aided drafting.

Graduates should qualify for technician level jobs with both public and private engineering, construction and surveying agencies.

Visit Career Coach for career information.

Civil Engineering Technology (A40140)

Degree Awarded

The Associate in Applied Science Degree - Civil Engineering Technology will be awarded by the College upon completion of this program.

Admissions

- A high school diploma or equivalent is required.
- CPCC placement tests are required in English and mathematics. Developmental classes in mathematics and English courses are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- Students should see a faculty advisor before registration.
Many courses have prerequisites or co-requisites; check the Courses section for details.

Contact Information

Civil Engineering Technology is in the Engineering Technologies Division. For more information, call Fred Gore at 704.330.6895 or visit our website at www.cpcc.edu/et.

Note: Students who do not take program-related courses for a one-year period must reenter the program under the Catalog in effect at the time of reentry.

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
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<tr>
<td>ENG 113</td>
<td>Literature-Based Research</td>
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<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<td>Take 1 course from the following:</td>
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<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
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<tr>
<td>or COM 231</td>
<td>Public Speaking</td>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
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<td>MAT 171</td>
<td>Precalculus Algebra</td>
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<tr>
<td>ART 111</td>
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<tr>
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<tr>
<td>DAN 212</td>
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<tr>
<td>ENG 231</td>
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<td>Western World Literature I</td>
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</tr>
<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</td>
<td></td>
</tr>
<tr>
<td>HUM 160</td>
<td>Introduction to Film</td>
<td></td>
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<tr>
<td>HUM 211</td>
<td>Humanities I</td>
<td></td>
</tr>
<tr>
<td>HUM 212</td>
<td>Humanities II</td>
<td></td>
</tr>
<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
<td></td>
</tr>
<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
<td></td>
</tr>
<tr>
<td>MUS 210</td>
<td>History of Rock Music</td>
<td></td>
</tr>
<tr>
<td>MUS 213</td>
<td>Opera and Musical Theatre</td>
<td></td>
</tr>
<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
<td></td>
</tr>
<tr>
<td>PHI 220</td>
<td>Western Philosophy I</td>
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<tr>
<td>PHI 221</td>
<td>Western Philosophy II</td>
<td></td>
</tr>
<tr>
<td>PHI 230</td>
<td>Introduction to Logic</td>
<td></td>
</tr>
<tr>
<td>PHI 240</td>
<td>Introduction to Ethics</td>
<td></td>
</tr>
<tr>
<td>REL 110</td>
<td>World Religions</td>
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</tr>
<tr>
<td>REL 111</td>
<td>Eastern Religions</td>
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<tr>
<td>REL 221</td>
<td>Religion in America</td>
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<td>ANT 210</td>
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<td>Survey of Economics</td>
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<td>ECO 251</td>
<td>Principles of Microeconomics</td>
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<td>HIS 111</td>
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<td>HIS 112</td>
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<tr>
<td>HIS 131</td>
<td>American History I</td>
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<td>HIS 132</td>
<td>American History II</td>
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<td>POL 110</td>
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<td>POL 120</td>
<td>American Government</td>
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<td>POL 210</td>
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<td>POL 220</td>
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<td>PSY 150</td>
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<td>SOC 213</td>
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<td>SOC 225</td>
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Major Requirements

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<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CEG 115</td>
<td>Intro to Tech &amp; Sustainability</td>
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</tr>
<tr>
<td>SRV 110</td>
<td>Surveying I</td>
<td>4.0</td>
</tr>
<tr>
<td>CEG 211</td>
<td>Hydrology &amp; Erosion Control</td>
<td>3.0</td>
</tr>
<tr>
<td>CEG 151</td>
<td>Cad for Engineering Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>EGR 250</td>
<td>Statics/Strength of Mater</td>
<td>5.0</td>
</tr>
<tr>
<td>CEG 212</td>
<td>Introduction to Environmental Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>CIV 111</td>
<td>Soils and Foundations</td>
<td>4.0</td>
</tr>
<tr>
<td>CEG 210</td>
<td>Construction Materials &amp; Methods</td>
<td>3.0</td>
</tr>
<tr>
<td>CEG 235</td>
<td>Project Management and Estimating</td>
<td>3.0</td>
</tr>
<tr>
<td>SRV 111</td>
<td>Surveying II</td>
<td>4.0</td>
</tr>
<tr>
<td>CEG 111</td>
<td>Introduction to Gis and Gns</td>
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<td>Introduction to GIS &amp; Gis</td>
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<td>&amp; GIS 112</td>
<td>and Introduction to GPS</td>
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<tr>
<td>EGR 125</td>
<td>Appl Software for Tech</td>
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Pathways

Complete one of three Pathway (see below) 12.0

Total Credits 71
Pathways

Structures Pathway:

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<tr>
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<tr>
<td>CIV 220</td>
<td>Basic Structural Concepts</td>
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<td>CIV 221</td>
<td>Steel and Timber Design</td>
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</tr>
<tr>
<td>CIV 222</td>
<td>Reinforced Concrete</td>
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</tr>
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<td>CIV 125</td>
<td>Civil/Surveying CAD</td>
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<td>CIV 250</td>
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Total Credits 13

Environmental Engineering Pathway:

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<tr>
<td>ENV 110</td>
<td>Environmental Science</td>
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<tr>
<td>ENV 226</td>
<td>Environmental Law</td>
<td>3.0</td>
</tr>
<tr>
<td>ENV 232</td>
<td>Site Assessment and Remediation</td>
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</tr>
<tr>
<td>CEG 230</td>
<td>Subdivision Planning &amp; Design</td>
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Total Credits 12

Transfer Pathway:

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<tbody>
<tr>
<td>MAT 172</td>
<td>Precalculus Trigonometry</td>
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<tr>
<td>MAT 271</td>
<td>Calculus I</td>
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<td>PHY 131</td>
<td>Physics-Mechanics</td>
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<tr>
<td>PHY 132</td>
<td>Physics-Electricity &amp; Magnetism</td>
<td>4.0</td>
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Total Credits 15

No diplomas offered.

- Civil Engineering Technology Certificate with a Specialization in Construction Materials Testing (C40140-C1) (p. 115)
- Civil Engineering Technology Certificate with a Specialization in Project Supervision (C40140-C2) (p. 115)
- Civil Engineering Technology Certificate Specialization in Civil Engineering Technology Pathway (C40140-C3) (p. 115)

Civil Engineering Technology Certificate (C40140)

Civil Engineering Technology Certificate with a Specialization in Construction Materials Testing (C40140-C1)

This certificate prepares individuals to enter Materials Testing Careers in the Construction Industry. Course study is intended to provide students with the theoretical background and practical experience to understand materials testing; test materials, primarily soils and concrete; and prepare technical reports. The courses for this certificate may be applied toward the Associate in Applied Science Degree – Civil Engineering Technology.

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 250</td>
<td>Statics/Strength of Mater</td>
<td>5.0</td>
</tr>
<tr>
<td>CIV 111</td>
<td>Soils and Foundations</td>
<td>4.0</td>
</tr>
<tr>
<td>CEG 210</td>
<td>Construction Materials &amp; Methods</td>
<td>3.0</td>
</tr>
<tr>
<td>EGR 125</td>
<td>Appl Software for Tech</td>
<td>2.0</td>
</tr>
<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits 17

Civil Engineering Technology Certificate with a Specialization in Project Supervision (C40140-C2)

This certificate prepares individuals to enter Careers in Project Management and Estimating in the Construction Industry. Course study is intended to provide students with the theoretical background and computer skills needed to contribute to Construction Management and Estimating teams. The courses for this certificate may be applied toward the Associate in Applied Science Degree – Civil Engineering Technology.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
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Major Requirements

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<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>CEG 115</td>
<td>Intro to Tech &amp; Sustainability</td>
<td>3.0</td>
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<td>Project Management &amp; Estimating</td>
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<tr>
<td>EGR 125</td>
<td>Appl Software for Tech</td>
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</tbody>
</table>

Total Credits 15

Civil Engineering Technology Certificate Specialization in Civil Engineering Technology Pathway (C40140-C3)

This certificate is intended for high school juniors and seniors enrolled in a Career Technical Education Pathway. Course study is intended to provide students with the theoretical background and practical experience to understand the major areas of Civil Engineering Technology – Structures, Materials and Hydraulics. The courses for this certificate may be applied toward the Associate in Applied Science Degree – Civil Engineering Technology.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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Major Requirements

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<tr>
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<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SRV 110</td>
<td>Surveying I</td>
<td>4.0</td>
</tr>
<tr>
<td>CEG 115</td>
<td>Intro to Tech &amp; Sustainability</td>
<td>3.0</td>
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<tr>
<td>CEG 211</td>
<td>Hydrology &amp; Erosion Control</td>
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<tr>
<td>EGR 250</td>
<td>Statics/Strength of Mater</td>
<td>5.0</td>
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Total Credits 18

Collision Repair and Refinishing Technology

The Collision Repair and Refinishing Technology curriculum provides training in the use of equipment and materials of the collision repair and refinishing trade. The student studies the construction of the automobile body and techniques of repairing, rebuilding and refinishing.

The course work includes collision repair fundamentals, industry overview and safety. Students will perform hands-on repairs in the areas of non-structural and structural repairs, MIG welding, plastics and adhesives, refinishing and other related areas.
Graduates of the curriculum should qualify for entry-level employment opportunities in the collision repair and refinishing industry. Graduates may find employment with franchised independent garages, or they may become self-employed.

Visit Career Coach for career information.

**Collision Repair and Refinishing Technology (A60130)**

**Diploma Awarded**

An Associate in Applied Science degree in Collision Repair and Refinishing Technology is awarded by the College upon completion of this program.

**Admissions**

- Completion of a high school diploma or equivalent is required as the foundation of a career in this area.
- Many courses have prerequisites or corequisites; check the Courses section for details.

Note: Students must furnish required hand tools, textbooks, respirator and protective clothing. A list of these items can be obtained from an instructor or the program chair. Call 704.330.4158 for a list.

**Contact Information**

The Collision Repair and Refinishing Technology program is in the Transport Systems Technologies Division. For more information, call 704.330.4158 or 704.330.4121.

Visit Career Coach for career information.

**General Education Requirements**

**ENG 111** Writing and Inquiry 3.0

Select 3.0 credits from the following:

- **ENG 112** Writing and Research in the Disciplines
- **ENG 113** Literature-Based Research
- **ENG 114** Professional Research & Reporting

Select 3.0 credits from the following:

- **COM 110** Introduction to Communication
- **COM 231** Public Speaking

Select 3.0 credits from the following:

- **MAT 110** Mathematical Measurement and Literacy
- **MAT 143** Quantitative Literacy
- **MAT 152** Statistical Methods I
- **MAT 171** Precalculus Algebra

Select 3.0 credits from the following:

- **ART 111** Art Appreciation
- **ART 114** Art History Survey I
- **ART 115** Art History Survey II
- **ART 116** Survey of American Art
- **ART 117** Non-Western Art History
- **DAN 110** Dance Appreciation
- **DAN 211** Dance History I
- **DAN 212** Dance History II
- **DRA 111** Theatre Appreciation
- **DRA 112** Literature of the Theatre

**DRA 122** Oral Interpretation
**ENG 231** American Literature I
**ENG 232** American Literature II
**ENG 241** British Literature I
**ENG 242** British Literature II
**ENG 251** Western World Literature I
**ENG 252** Western World Literature II
**HUM 130** Myth in Human Culture
**HUM 160** Introduction to Film
**HUM 211** Humanities I
**HUM 212** Humanities II
**MUS 110** Music Appreciation
**MUS 112** Introduction to Jazz
**MUS 210** History of Rock Music
**MUS 213** Opera and Musical Theatre
**PHI 215** Philosophical Issues
**PHI 220** Western Philosophy I
**PHI 221** Western Philosophy II
**PHI 230** Introduction to Logic
**REL 110** World Religions
**REL 111** Eastern Religions
**REL 112** Western Religions
**REL 211** Introduction to Old Testament
**REL 212** Introduction to New Testament
**REL 221** Religion in America

Select 3.0 credits from the following:

- **ANT 210** General Anthropology
- **ANT 220** Cultural Anthropology
- **ANT 221** Comparative Cultures
- **ECO 151** Survey of Economics
- **ECO 251** Principles of Microeconomics
- **ECO 252** Principles of Macroeconomics
- **GEO 111** World Regional Geography
- **HIS 111** World Civilizations I
- **HIS 112** World Civilizations II
- **HUM 131** American History I
- **HIS 131** American History II
- **POL 110** Introduction to Political Science
- **POL 120** American Government
- **POL 130** State & Local Government
- **POL 210** Comparative Government
- **POL 220** International Relations
- **PSY 150** General Psychology
- **PSY 237** Social Psychology
- **PSY 241** Developmental Psychology
- **PSY 281** Abnormal Psychology
- **SOC 210** Introduction to Sociology
- **SOC 213** Sociology of the Family
- **SOC 220** Social Problems
- **SOC 225** Social Diversity

**Major Requirements**

**TRN 110** Introduction to Transport Technology 2.0
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<td>TRN 140</td>
<td>Transportation Climate Control</td>
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<td>TRN 170</td>
<td>Pc Skills for Transportation</td>
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<td>AUB 111</td>
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<td>Painting &amp; Refinishing II</td>
<td>4.0</td>
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<td>AUB 121</td>
<td>Non-Structural Damage I</td>
<td>3.0</td>
</tr>
<tr>
<td>AUB 131</td>
<td>Structural Damage I</td>
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<td>AUB 114</td>
<td>Special Finishes</td>
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<td>Non-Structural Damage II</td>
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<td>AUB 136</td>
<td>Plastics &amp; Adhesives</td>
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<td>TRN 140A</td>
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<tr>
<td>TRN 180</td>
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**Collision Repair and Refinishing Technology (D60130)**

**Diploma Awarded**

A Diploma in Collision Repair and Refinishing Technology is awarded by the College upon completion of this program.

**Admissions**

- Completion of a high school diploma or equivalent is required as the foundation of a career in this area.
- Many courses have prerequisites or corequisites; check the Courses section for details.

Note: Students must furnish required hand tools, textbooks, respirator and protective clothing. A list of these items can be obtained from an instructor or the program chair. Call 704.330.4158 for a list.

**Contact Information**

The Collision Repair and Refinishing Technology program is in the Transport Systems Technologies Division. For more information, call 704.330.4158 or 704.330.4121.

Visit Career Coach for career information.

**General Education Requirements**

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<th>Course Code</th>
<th>Course Title</th>
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<td>or ENG 101</td>
<td>Applied Communications I</td>
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<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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**Major Requirements**

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<td>AUB 112</td>
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<tr>
<td>AUB 114</td>
<td>Special Finishes</td>
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<td>Structural Damage I</td>
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<td>3.0</td>
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<tr>
<td>TRN 110</td>
<td>Introduction to Transport Technology</td>
<td>2.0</td>
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<td>TRN 180</td>
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<td>AUB 162</td>
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<td>2.0</td>
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<td>WBL 112</td>
<td>Work-Based Learning I</td>
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<td>Mechanical &amp; Electrical Components I</td>
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<tr>
<td>TRN 180A</td>
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Total Credits 47

- Collision Repair and Refinishing Technology Certificate with a Specialization in Painting and Refinishing (C60130-C1) (p. 117)
- Collision Repair and Refinishing Technology Certificate with a Specialization in Collision Repair (C60130-C2) (p. 117)
- Collision Repair and Refinishing Technology Certificate with a Specialization in Autobody Estimating (C60130-C3) (p. 118)

**Collision Repair and Refinishing Technology Certificates (C60130)**

The certificates listed below can be earned in the Collision Repair and Refinishing Technology (D60130) program.

**Admissions**

- Completion of a high school diploma or equivalent is required as the foundation of a career in this area.
- Many courses have prerequisites or corequisites; check the Courses section for details.

**Contact Information**

For more information, call 704.330.4158 or 704.330.4121.

**Collision Repair and Refinishing Technology Certificate with a Specialization in Painting and Refinishing (C60130-C1)**

This certificate is also available to students enrolled in Career and College Promise.

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>AUB 111</td>
<td>Painting &amp; Refinishing I</td>
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<td>AUB 112</td>
<td>Painting &amp; Refinishing II</td>
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<td>AUB 114</td>
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<td>AUB 136</td>
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**Collision Repair and Refinishing Technology Certificate with a Specialization in Collision Repair (C60130-C2)**

**Major Requirements**

<table>
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<th>Course Title</th>
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<td>Non-Structural Damage II</td>
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Collision Repair and Refinishing Technology Certificate with a Specialization in Autobody Estimating (C60130-C3)

Major Requirements

<table>
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<th>Course</th>
<th>Credits</th>
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<tbody>
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<td>AUB 132</td>
<td>Structural Damage II</td>
</tr>
<tr>
<td>AUB 162</td>
<td>Autobody Estimating</td>
</tr>
<tr>
<td>WBL 112</td>
<td>Work-Based Learning I</td>
</tr>
</tbody>
</table>

Total Credits 12

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Computer Engineering Technology

The Computer Engineering Technology curriculum provides the skills required to install, service and maintain computers, peripherals, networks as well as microprocessor and computer-controlled equipment. It includes training in both hardware and software, emphasizing operating system concepts to provide a unified view of computer systems.

Course work includes mathematics, physics, electronics, digital circuits and programming, with emphasis on the operation, use and interfacing of memory and devices to the CPU.

The A.A.S. degree in Computer Engineering Technology is accepted at some colleges and universities as the first two years of a 2+2 bachelor’s-level engineering technology program. These students are advised to complete a second Physics class (PHY132 or PHY152) to ensure they are not considered deficient with credit hours in Physics.

Graduates should qualify for employment opportunities in computer and electronics technology, computer service, computer networks, server maintenance, programming and other areas requiring knowledge of electronic and computer systems. Graduates may also qualify for certification in electronics, computers, or networks.

Visit Career Coach for career information.

Computer Engineering Technology (A40160)

Degree Awarded

The Associate in Applied Science Degree - Computer Engineering Technology is awarded by the College upon completion of the program track.

Note: Students in the Computer Engineering Technology (A40160) program desiring to earn an additional degree in Electrical Engineering Technology (A40180), or Electronics Engineering Technology (A40200), or an additional track under Computer Engineering Technology (A40160) must meet the specified course requirements.

Admissions

- A high school diploma or equivalent is required. High school students preparing for an Engineering Technology program should complete courses in algebra, geometry and advanced mathematics. Skills and proficiencies should be developed in writing, computer literacy and science.
- CPCC placement tests are required in English and mathematics. Advancement Studies in mathematics and English courses are available for students to build basic skills and knowledge. A counseling/orientation appointment follows placement testing.
- Many courses require prerequisites or co-requisites; check the Courses section for details.

Program Accreditation

The Computer Engineering Technology program at CPCC is accredited by the Engineering Technology Accreditation Commission of the Accreditation Board of Engineering and Technology (TAC of ABET), http://www.abet.org.

Notes

The Computer Engineering Technology program prepares students with skills and knowledge in both hardware and software aspects of computers and related systems. It provides a comprehensive background in the practical application of both computer and electronic circuits from the component to the system level. Courses are designed to present technical content in an order that provides students with progressive levels of job related skills and knowledge. From fundamental programming and electrical circuits, students advance to specialized courses in computer circuits, microprocessors, microcomputer system design, software development, computer maintenance and installation and technical support of local area networks.

In addition, this degree focuses on the knowledge and skills associated with the installation, maintenance and troubleshooting of computer hardware and embedded systems. Coursework includes microprocessor, microcomputer applications, networking, internet configuration and design, operating systems, C++ programming, assembly language programming, I/O hardware interfacing, industrial applications and data acquisition using LabView.

The Computer/Electrical/Electronics Engineering Technology laboratories are staffed during day and evening hours so that students may devote as much time as possible to laboratory assignments. These modern facilities include adequate equipment to support practical laboratory activity in all courses. Completion of the program requires that students use college-level algebra, trigonometry and physics in the application of scientific principles to technological problems. Students who do not take program-related courses for two consecutive semesters must re-enter the program under the Catalog in effect at the time of re-entry.

Contact Information

The Computer Engineering Technology program is in the Engineering Technology Division. For additional information, visit www.cpcc.edu/et or dave.ross@cpcc.edu or call 704.330.6860.

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 113</td>
<td>Literature-Based Research</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
<td>3.0</td>
</tr>
<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>COM 120</td>
<td>Intro to Interpersonal Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>COM 231</td>
<td>Public Speaking</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 271</td>
<td>Calculus I</td>
<td>3.0</td>
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Select 3 credits of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ANT 210</td>
<td>General Anthropology</td>
<td>3.0</td>
</tr>
<tr>
<td>ANT 220</td>
<td>Cultural Anthropology</td>
<td>3.0</td>
</tr>
<tr>
<td>ANT 221</td>
<td>Comparative Cultures</td>
<td>3.0</td>
</tr>
<tr>
<td>ECO 151</td>
<td>Survey of Economics</td>
<td>3.0</td>
</tr>
<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</td>
<td>3.0</td>
</tr>
<tr>
<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
<td>3.0</td>
</tr>
<tr>
<td>GEO 111</td>
<td>World Regional Geography</td>
<td>3.0</td>
</tr>
<tr>
<td>HIS 111</td>
<td>World Civilizations I</td>
<td>3.0</td>
</tr>
<tr>
<td>HIS 112</td>
<td>World Civilizations II</td>
<td>3.0</td>
</tr>
<tr>
<td>HIS 131</td>
<td>American History I</td>
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</tr>
<tr>
<td>HIS 132</td>
<td>American History II</td>
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<tr>
<td>POL 120</td>
<td>American Government</td>
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</tr>
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<td>POL 210</td>
<td>Comparative Government</td>
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<tr>
<td>POL 220</td>
<td>International Relations</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY 150</td>
<td>General Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY 241</td>
<td>Developmental Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY 281</td>
<td>Abnormal Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
<td>3.0</td>
</tr>
<tr>
<td>SOC 213</td>
<td>Sociology of the Family</td>
<td>3.0</td>
</tr>
<tr>
<td>SOC 225</td>
<td>Social Diversity</td>
<td>3.0</td>
</tr>
<tr>
<td>POL 110</td>
<td>Introduction to Political Science</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY 237</td>
<td>Social Psychology</td>
<td>3.0</td>
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<td>SOC 220</td>
<td>Social Problems</td>
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Select 3 credits of the following:

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<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 116</td>
<td>Survey of American Art</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 117</td>
<td>Non-Western Art History</td>
<td>3.0</td>
</tr>
<tr>
<td>DAN 110</td>
<td>Dance Appreciation</td>
<td>3.0</td>
</tr>
<tr>
<td>DAN 211</td>
<td>Dance History I</td>
<td>3.0</td>
</tr>
<tr>
<td>DAN 212</td>
<td>Dance History II</td>
<td>3.0</td>
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<tr>
<td>DRA 111</td>
<td>Theatre Appreciation</td>
<td>3.0</td>
</tr>
<tr>
<td>DRA 112</td>
<td>Literature of the Theatre</td>
<td>3.0</td>
</tr>
<tr>
<td>DRA 122</td>
<td>Oral Interpretation</td>
<td>3.0</td>
</tr>
<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</td>
<td>3.0</td>
</tr>
<tr>
<td>HUM 160</td>
<td>Introduction to Film</td>
<td>3.0</td>
</tr>
<tr>
<td>HUM 211</td>
<td>Humanities I</td>
<td>3.0</td>
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Select 3 credits of the following:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HUM 212</td>
<td>Humanities II</td>
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</tr>
<tr>
<td>ENG 231</td>
<td>American Literature I</td>
<td>3.0</td>
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<tr>
<td>ENG 232</td>
<td>American Literature II</td>
<td>3.0</td>
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<tr>
<td>ENG 241</td>
<td>British Literature I</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 242</td>
<td>British Literature II</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 251</td>
<td>Western World Literature I</td>
<td>3.0</td>
</tr>
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<td>ENG 252</td>
<td>Western World Literature II</td>
<td>3.0</td>
</tr>
<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
<td>3.0</td>
</tr>
<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
<td>3.0</td>
</tr>
<tr>
<td>MUS 210</td>
<td>History of Rock Music</td>
<td>3.0</td>
</tr>
<tr>
<td>MUS 213</td>
<td>Opera and Musical Theatre</td>
<td>3.0</td>
</tr>
<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
<td>3.0</td>
</tr>
<tr>
<td>PHI 220</td>
<td>Western Philosophy I</td>
<td>3.0</td>
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<tr>
<td>PHI 221</td>
<td>Western Philosophy II</td>
<td>3.0</td>
</tr>
<tr>
<td>PHI 230</td>
<td>Introduction to Logic</td>
<td>3.0</td>
</tr>
<tr>
<td>PHI 240</td>
<td>Introduction to Ethics</td>
<td>3.0</td>
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<tr>
<td>REL 110</td>
<td>World Religions</td>
<td>3.0</td>
</tr>
<tr>
<td>REL 111</td>
<td>Eastern Religions</td>
<td>3.0</td>
</tr>
<tr>
<td>REL 112</td>
<td>Western Religions</td>
<td>3.0</td>
</tr>
<tr>
<td>REL 211</td>
<td>Introduction to Old Testament</td>
<td>3.0</td>
</tr>
<tr>
<td>REL 212</td>
<td>Introduction to New Testament</td>
<td>3.0</td>
</tr>
<tr>
<td>REL 221</td>
<td>Religion in America</td>
<td>3.0</td>
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</table>

**Major Requirements**

**Required Courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ELC 131</td>
<td>Circuit Analysis I</td>
<td>4.0</td>
</tr>
<tr>
<td>ELC 133</td>
<td>Circuit Analysis II</td>
<td>4.0</td>
</tr>
<tr>
<td>ELC 135</td>
<td>Electrical Machines</td>
<td>3.0</td>
</tr>
<tr>
<td>PCI 173</td>
<td>Programmable Systems</td>
<td>4.0</td>
</tr>
<tr>
<td>ELC 232</td>
<td>Introduction to Microprocessors</td>
<td>4.0</td>
</tr>
<tr>
<td>ELC 260</td>
<td>Prog Logic Controllers</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Take 1 of the following groups:

**Group 1:**

- ELC 131 Circuit Analysis I
- ELC 132 DC Circuit Analysis
- ELC 139 AC Circuit Analysis

**Group 2:**

- ELC 138 DC Circuit Analysis
- ELC 139 AC Circuit Analysis

**Other Major Requirements:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELC 133</td>
<td>Circuit Analysis II</td>
<td>4.0</td>
</tr>
<tr>
<td>ELC 135</td>
<td>Electrical Machines</td>
<td>3.0</td>
</tr>
<tr>
<td>PCI 173</td>
<td>Programmable Systems</td>
<td>4.0</td>
</tr>
<tr>
<td>ELC 150</td>
<td>Computer-Aided Drafting for Electronics</td>
<td>2.0</td>
</tr>
<tr>
<td>MAT 223</td>
<td>Applied Calculus</td>
<td>3.0</td>
</tr>
<tr>
<td>SEL 193</td>
<td>Selected Topics in __________</td>
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</tr>
<tr>
<td>CSC 134</td>
<td>C++ Programming</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Take 4 credits from the following:

Students interested in continuing to UNCC for their BS degree should take PHY 151, PHY 251.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHY 131</td>
<td>Physics-Mechanics</td>
<td>3.0</td>
</tr>
<tr>
<td>PHY 151</td>
<td>College Physics I</td>
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</tr>
<tr>
<td>PHY 251</td>
<td>General Physics I</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Take 3 credits from the following:

- ENG 112 Writing and Research in the Disciplines
- ENG 113 Literature-Based Research
- ENG 114 Professional Research & Reporting
- COM 110 Introduction to Communication
- COM 120 Intro to Interpersonal Communication
- COM 231 Public Speaking
- MAT 121 Algebra/Trigonometry I
- MAT 171 Precalculus Algebra
- MAT 271 Calculus I
- ANT 210 General Anthropology
- ANT 220 Cultural Anthropology
- ANT 221 Comparative Cultures
- ECO 151 Survey of Economics
- ECO 251 Principles of Microeconomics
- ECO 252 Principles of Macroeconomics
- GEO 111 World Regional Geography
- HIS 111 World Civilizations I
- HIS 112 World Civilizations II
- HIS 131 American History I
- HIS 132 American History II
- POL 120 American Government
- POL 210 Comparative Government
- POL 220 International Relations
- PSY 150 General Psychology
- PSY 241 Developmental Psychology
- PSY 281 Abnormal Psychology
- SOC 210 Introduction to Sociology
- SOC 213 Sociology of the Family
- SOC 225 Social Diversity
- POL 110 Introduction to Political Science
- PSY 237 Social Psychology
- SOC 220 Social Problems
- ART 111 Art Appreciation
- ART 114 Art History Survey I
- ART 115 Art History Survey II
- ART 116 Survey of American Art
- ART 117 Non-Western Art History
- DAN 110 Dance Appreciation
- DAN 211 Dance History I
- DAN 212 Dance History II
- DRA 111 Theatre Appreciation
- DRA 112 Literature of the Theatre
- DRA 122 Oral Interpretation
- HUM 130 Myth in Human Culture
- HUM 160 Introduction to Film
- HUM 211 Humanities I
- HUM 212 Humanities II
- ENG 231 American Literature I
- ENG 232 American Literature II
- ENG 241 British Literature I
- ENG 242 British Literature II
- ENG 251 Western World Literature I
- ENG 252 Western World Literature II
- MUS 110 Music Appreciation
- MUS 112 Introduction to Jazz
- MUS 210 History of Rock Music
- MUS 213 Opera and Musical Theatre
- PHI 215 Philosophical Issues
- PHI 220 Western Philosophy I
- PHI 221 Western Philosophy II
- PHI 230 Introduction to Logic
- PHI 240 Introduction to Ethics
- REL 110 World Religions
- REL 111 Eastern Religions
- REL 112 Western Religions
- REL 211 Introduction to Old Testament
- REL 212 Introduction to New Testament
- REL 221 Religion in America
- PHI 215 Philosophical Issues
- PHI 240 Introduction to Ethics
- ELC 131 Circuit Analysis I
- ELC 133 Circuit Analysis II
- ELC 135 Electrical Machines
- PCI 173 Programmable Systems
- ELC 232 Introduction to Microprocessors
- ELC 260 Prog Logic Controllers
Students interested in continuing to UNCC for their BS degree should take MAT 172, MAT 272.

**MAT 122** Algebra/Trigonometry II  
**MAT 172** Precalculus Trigonometry  
**MAT 272** Calculus II

**Major Electives:**

Take 3 credits from: 3.0

Students interested in continuing to UNCC for their BS degree should take MAT 285.

**ELN 233** Microprocessor Systems  
**ELC 136** Electrical Machines II  
**ELC 231** Electric Power Systems  
**ELN 132** Analog Electronics II  
**ELC 233** Energy Management  
**CTI 130** Operating Systems and Device Foundation  
**ELC 234** Electrical System Design  
**ELC 213** Instrumentation  
**PCI 162** Instrumentation Controls  
**ELN 237** Local Area Networks  
**PCI 170** DAQ and Control  
**PCI 172** SCADA Systems  
**DFT 151** CAD I  
**DFT 152** CAD II  
**DFT 153** CAD III  
**NET 125** Networking Basics  
**WBL 112** Work-Based Learning I  
**WBL 122** Work-Based Learning II  
**CSC 151** JAVA Programming  
**MAT 273** Calculus III  
**CSC 139** Visual BASIC Programming  
**MAT 285** Differential Equations  
**PHY 252** General Physics II  
**PHY 253** Modern Physics  
**MEC 130** Mechanics  
**ATR 211** Robot Programming  
**CSC 153** C# Programming  
**MEC 210** Applied Mechanics  
**MEC 265** Fluid Mechanics  
**ATR 112** Introduction to Automation

**Total Credits** 76

No diplomas offered.  
No certificates offered.

**Computer Technology Integration**

The Computer Technology Integration (CTI) curriculum is designed to prepare graduates for employment with organizations that use computers to design, process, manage and communicate information. This is a flexible curriculum that can be customized to meet community technology integration needs.

Course work develops a student’s ability to communicate and solve complex technical issues related to information support and services, interactive media, network systems, programming and software development and other converging technologies. Classes cover computer operations and terminology, operating systems, database, networking, communications, security, programming and technical support.

Graduates should qualify for employment in entry-level positions with businesses, educational systems and governmental agencies which rely on computer systems to design and manage information.

Graduates should be prepared to sit for various industry-recognized certification exams, depending on the specialty chosen.

Visit Career Coach ([https://cpcc.emsicareercoach.com/#action=loadCourseSearchResults&Search=computer+technology+integration&Featured=&WageLimit=0&OccSearchSort=&EdLevel=all&Clusters=&CourseSearchSort=&CourseLength=&CourseLocation=&CourseDepartment=1096&CourseID=121572](https://cpcc.emsicareercoach.com/#action=loadCourseSearchResults&Search=computer+technology+integration&Featured=&WageLimit=0&OccSearchSort=&EdLevel=all&Clusters=&CourseSearchSort=&CourseLength=&CourseLocation=&CourseDepartment=1096&CourseID=121572)) for career information.

**Program Design**

This program is designed so students may complete one of eight diplomas to satisfy technical requirements while completing this degree program; they may also complete one or more of the certificates. Students may complete a certificate or diploma without embarking upon the degree.

Students should begin with the Computer Technology Integration Foundations certificate (C25500-C3), which consists of five courses. Four of these courses cover the IT competencies defined by the Department of Education within the four IT Career Clusters; the fifth is to fulfill the state technology requirement.

The Computer Technology Integration degree (A25500) is designed to be completed in conjunction with one of the following diplomas. Additionally, students may complete one or more of the certificates.

After completing the core classes and required general education classes, the student will choose a specialty on which to focus. These specialties are specific to the needs of the local IT Industry and include diplomas comprised of:

1. D25500-12 – CTI with an emphasis on Mobile Apps Development  
2. D25500-13 – CTI with an emphasis on Web Technologies  
3. D25500-14 - CTI with an emphasis in Database Analysis/Programming  
4. D25500-16 - CTI with an emphasis in Information Assurance & Digital Forensics  
5. D25500-17 - CTI with an emphasis in Networking Technology  
6. D25500-18 - CTI with an emphasis in Cloud & Virtualization Technology  
7. D25500-19 - CTI with an emphasis in IT Business Analysis  
8. D25500-20 - CTI with an emphasis in Software Development

Graduating students in this CTI degree will complete:

- **General Education** 18.0  
- **CTI Core Courses** 15.0  
- **Technical Courses** 25.0-30.0  
- **Technical Electives** 4.0-9.0  
- **Total hours** 67.0

Computer Technology Integration
Computer Technology Integration (A25500)

Degree Awarded

The Associate in Applied Science Degree in Computer Technology Integration is awarded by the College upon completion of this program. Graduates must also earn a diploma within their area of specialization.

Admissions

The following is required for program admissions:

- A high school diploma or equivalent is required;
- Placement tests determine placement in English (ENG courses) and Mathematics (MAT courses);
- Many courses have prerequisites or co-requisites; check the Courses of the Catalog for these details.

Contact Information

The Computer Technology Integration program is in the Information Technology Division. For more information, check http://www.cpcc.edu/it or call 704.330.6549.

Visit Career Coach [https://cpcc.emsicareercoach.com/#action=loadCourseSearchResults&Search=computer+technology+integration&Featured=&WageLimit=0&OccSearchSort=&EdLevel=all&Clusters=&CourseSearchSort=&CourseLength=&CourseLocation=&CourseDepartment=1096&CourseID=121572] for career information.

General Education Requirements

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<tr>
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<th>Title</th>
<th>Credits</th>
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<tbody>
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<td>Writing and Inquiry</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
<td>3.0</td>
</tr>
<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>Select 3 credits of the following:</td>
<td></td>
<td>3.0</td>
</tr>
<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
<td></td>
</tr>
<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
<td></td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
</tr>
<tr>
<td>DAN 110</td>
<td>Dance Appreciation</td>
<td></td>
</tr>
<tr>
<td>DRA 111</td>
<td>Theatre Appreciation</td>
<td></td>
</tr>
<tr>
<td>DRA 112</td>
<td>Literature of the Theatre</td>
<td></td>
</tr>
<tr>
<td>ENG 231</td>
<td>American Literature I</td>
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<td>ENG 232</td>
<td>American Literature II</td>
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<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
<td></td>
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<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
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Major Requirements

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Database Analysis/Programming Track:

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<td>Introduction to Computers</td>
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<td>CTS 240</td>
<td>Project Management</td>
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**Computer Technology Integration**

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<td>Database Driven Websites</td>
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### Information Assurance & Digital Forensics Track:

- CCT 110: Introduction to Cyber Crime 3.0
- CCT 121: Computer Crime Investigation 4.0
- SEC 110: Security Concepts 3.0
- SEC 150: Secure Communications 3.0
- NOS 120: Linux/UNIX Single User 3.0
- CTT 240: Data Recovery Techniques 3.0
- CTT 231: Technology Crimes & Law 3.0
- CTT 241: Advanced Data Recovery 3.0
- CTT 250: Network Vulnerabilities I 3.0
- SEC 160: Security Administration I 3.0
- CTT 289: Capstone Project 3.0

### Networking Technology Track:

- NET 125: Networking Basics 3.0
- NET 126: Routing Basics 3.0
- NOS 120: Linux/UNIX Single User 3.0
- NOS 130: Windows Single User 3.0
- CIS 110: Introduction to Computers 3.0
- NET 225: Routing & Switching I 3.0
- NET 226: Routing and Switching II 3.0
- SEC 110: Security Concepts 3.0
- NOS 230: Windows Administration I 3.0
- NOS 231: Windows Administration II 3.0
- NET 289: Networking Project 3.0
- NOS 232: Windows Administration III 3.0

### Cloud & Virtualization Technology Track:

- NET 125: Networking Basics 3.0
- NET 126: Routing Basics 3.0
- NOS 120: Linux/UNIX Single User 3.0
- NOS 130: Windows Single User 3.0
- CIS 110: Introduction to Computers 3.0
- SEC 110: Security Concepts 3.0
- NOS 230: Windows Administration I 3.0
- CTI 140: Virtualization Concepts 3.0
- CTI 141: Cloud and Storage Concepts 3.0
- CTI 240: Virtualization Administration I 3.0
- CTI 241: Virtualization Administration II 3.0
- NET 289: Networking Project 3.0

### IT Business Analysis Track:

- DBA 110: Database Concepts 3.0
- DBA 112: Database Utilization 3.0
- DBA 120: Database Programming I 3.0
- CSC 152: SAS 3.0
- DBA 120: Database Programming I 3.0
- WEB 110: Internet/Web Fundamentals 3.0
- CIS 110: Introduction to Computers 3.0
- BAS 120: Introduction to Analytics 3.0
- CTS 130: Spreadsheet 3.0

- CTS 118: IS Professional Communications 2.0
- CTS 230: Advanced Spreadsheet 3.0

Select one of the following:

- CSC 119: Programming Orientation 3.0
- CIS 115: Intro to Programming & Logic 3.0
- CSC 120: Computing Fundamentals I 3.0
- CSC 134: C++ Programming 3.0
- CSC 139: Visual BASIC Programming 3.0
- CSC 143: Object-Oriented Programming 3.0
- CSC 151: JAVA Programming 3.0
- CSC 153: C# Programming 3.0

### Software Development Track:

- CSC 143: Object-Oriented Programming 3.0
- CSC 151: JAVA Programming 3.0
- CSC 153: C# Programming 3.0
- CSC 251: Advanced JAVA Programming 3.0
- CSC 253: Advanced C# Programming 3.0
- CIS 110: Introduction to Computers 3.0
- NOS 110: Operating Systems Concepts 3.0
- WEB 110: Internet/Web Fundamentals 3.0
- CTS 240: Project Management 3.0
- DBA 120: Database Programming I 3.0
- WEB 115: Web Markup and Scripting 3.0
- WEB 215: Advanced Markup and Scripting 3.0
- CTI 289: Computer Technology Integration Capstone Project 3.0

- Diploma in Computer Technology Integration with an emphasis in Mobile Apps Development (D25500-12) (p. 122)
- Diploma in Computer Technology Integration with an emphasis in Web Technologies (D25500-13) (p. 123)
- Diploma in Computer Technology Integration with an emphasis in Database Analysis/Programming (D25500-14) (p. 124)
- Diploma in Computer Technology Integration with an emphasis in Information Assurance and Digital Forensics (D25500-16) (p. 124)
- Diploma in Computer Technology Integration with an emphasis in Networking Technology (D25500-17) (p. 124)
- Diploma in Computer Technology Integration with an emphasis in Cloud & Virtualization Technology (D25500-18) (p. 125)
- Diploma in Computer Technology Integration with an emphasis in IT Business Analysis (D25500-19) (p. 125)
- Diploma in Computer technology Integration with an emphasis in Software Development (D25500-20) (p. 125)

### Computer Technology Integration Diplomas (D25500)

**Diploma in Computer Technology Integration with an emphasis in Mobile Apps Development (D25500-12)**

**General Education Requirements**

- ENG 111: Writing and Inquiry 3.0
Select one of the following: 3.0
ART 111 Art Appreciation
ART 114 Art History Survey I
ART 115 Art History Survey II
DAN 110 Dance Appreciation
DRA 111 Theatre Appreciation
DRA 112 Literature of the Theatre
ENG 231 American Literature I
ENG 232 American Literature II
MUS 110 Music Appreciation
MUS 112 Introduction to Jazz
PHI 215 Philosophical Issues
REL 221 Religion in America

Major Requirements
CTI 110 Web, Programming, and Database Foundation 3.0
CTI 120 Network and Security Foundation 3.0
CTS 115 Information Systems Business Concepts 3.0
WEB 110 Internet/Web Fundamentals 3.0
WEB 115 Web Markup and Scripting 3.0
WEB 141 Mobile Interface Design 3.0
WEB 151 Mobile Application Development I 3.0
CSC 143 Object-Oriented Programming 3.0
DBA 110 Database Concepts 3.0
WEB 125 Mobile Web Design 3.0
WEB 214 Social Media 3.0
WEB 251 Mobile Application Development II 3.0
CTS 240 Project Management 3.0
CIS 110 Introduction to Computers 3.0

Total Credits 48

Diploma in Computer Technology Integration with an emphasis in Web Technologies (D25500-13)

The diploma is designed to provide students with a foundation in working with the design and development of Web pages, websites, and applications using current web standards. Students will also be introduced to the development of data driven applications.

Graduates should qualify for career opportunities as designers, administrators, or developers in the areas of web applications, websites, and applications, and related areas of distributed computing.

This diploma is designed to be completed in conjunction with the Computer Technology Integration Degree (A25500).

General Education Requirements
ENG 111 Writing and Inquiry 3.0
Select 3 credits of the following: 3.0
ART 111 Art Appreciation
ART 114 Art History Survey I
ART 115 Art History Survey II
DAN 110 Dance Appreciation
DRA 111 Theatre Appreciation
DRA 112 Literature of the Theatre

English 231 American Literature I
ENG 232 American Literature II
MUS 110 Music Appreciation
MUS 112 Introduction to Jazz
PHI 215 Philosophical Issues
REL 221 Religion in America

Major Requirements
CTI 110 Web, Programming, and Database Foundation 3.0
CTI 120 Network and Security Foundation 3.0
WEB 115 Web Markup and Scripting 3.0
WEB 110 Internet/Web Fundamentals 3.0
WEB 210 Web Design 3.0
WEB 215 Advanced Markup and Scripting 3.0
WEB 140 Web Development Tools 3.0
WEB 250 Database Driven Websites 3.0
CSC 143 Object-Oriented Programming 3.0
NOS 110 Operating Systems Concepts 3.0
DBA 110 Database Concepts 3.0
CIS 111 Basic PC Literacy 2.0
or CIS 110 Introduction to Computers

Total Credits 47

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Computer Technology Integration Database Administration Diplomas

Overview
As society increases its dependency on technology, in particular information systems; databases have been the engine in charge of supporting these systems. Given the exponential growth of the data managed for these information systems, database engine vendors have increased the sophistication and complexity of their platform every year. Develop the skills to handle these complexity requires students to follow a plan of study that not only teach the foundations of database administration, but also review the complexity of a specific vendor’s platform.

Admissions
- A high school diploma or equivalent is required.
- CPCC placement tests are required in English and mathematics.
- Developmental studies mathematics and English courses are available for students to build basic skills and knowledge.
Students are expected to have a working knowledge of Computer Hardware, the Windows Operating System environment and common applications.

Students are expected to own a computer meeting the hardware specifications of the current program minimum requirements which can be obtained from the program chair.

Students pursuing a career in Database Administration should be in good mental and physical health.

Students pursuing a career in Database Administration should be able to perform well in a high stress environment.

**Diploma in Computer Technology Integration with an emphasis in Database Analysis/Programming (D25500-14)**

The diploma is designed to provide students with the skills necessary to design, implement, and manage databases. Data warehouse and mining concepts are introduced. Course work includes Database Design, Programming in detail covering Administration concepts briefly. Some database tools are introduced.

This diploma is designed to be completed in conjunction with the Computer Technology Integration Degree (A25500)

**General Education Requirements**

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**Total Credits**

48

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**Diploma in CTI with an emphasis in Information Assurance and Digital Forensics (D25500-16)**

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**Total Credits**

46

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**Diploma in CTI with an emphasis in Networking Technology (D25500-17)**

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**Major Requirements**

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NOS 231  Windows Administration II  3.0

Total Credits  48

Diploma in CTI with an emphasis in Cloud & Virtualization Technology (D25500-18)

General Education Requirements
ENG 111  Writing and Inquiry  3.0
Select one of the following:  3.0
MAT 110  Mathematical Measurement and Literacy
MAT 121  Algebra/Trigonometry I
MAT 143  Quantitative Literacy
MAT 152  Statistical Methods I
MAT 171  Precalculus Algebra

Major Requirements
CTI 110  Web, Programming, and Database Foundation  3.0
CTI 120  Network and Security Foundation  3.0
CTS 115  Information Systems Business Concepts  3.0
CTI 130  Operating Systems and Device Foundation  6.0
CIS 110  Introduction to Computers  3.0
SEC 110  Security Concepts  3.0
NOS 130  Windows Single User  3.0
NOS 230  Windows Administration I  3.0
NET 125  Networking Basics  3.0
CTI 140  Virtualization Concepts  3.0
CTI 141  Cloud and Storage Concepts  3.0
CTI 240  Virtualization Administration I  3.0
CTI 241  Virtualization Administration II  3.0

Total Credits  48

Diploma in Computer Technology Integration with an Emphasis in Software Development (D25500-20)

General Education Requirements
ENG 111  Writing and Inquiry  3.0
COM 110  Introduction to Communication  3.0
or COM 231  Public Speaking

Major Requirements
CTI 110  Web, Programming, and Database Foundation  3.0
CTI 120  Network and Security Foundation  3.0
CTS 115  Information Systems Business Concepts  3.0
CIS 110  Introduction to Computers  3.0
CSC 143  Object-Oriented Programming  3.0
NOS 110  Operating Systems Concepts  3.0
WEB 110  Internet/Web Fundamentals  3.0
CSC 151  JAVA Programming  3.0
or CSC 153  C# Programming
CTS 240  Project Management  3.0
DBA 120  Database Programming I  3.0
WEB 115  Web Markup and Scripting  3.0
or CSC 251  Advanced JAVA Programming  3.0
or CSC 253  Advanced C# Programming
CSC 284  3.0
WEB 215  Advanced Markup and Scripting  3.0

Total Credits  48

• Computer Technology Integration Certificate Specialization in Integration Foundations (C25500-C3) (p. 125)
• Computer Technology Integration Certificate Specialization in Mobile Apps Development Fundamentals (C25500-20) (p. 126)
• Computer Technology Integration Certificate Specialization in Web Development Fundamentals (C25500-21) (p. 126)
• Computer Technology Integration Certificate Specialization in Applications Software Fundamentals (C25500-40) (p. 126)
• Computer Technology Integration Certificate Specialization in Computer Programming Fundamentals (C25500-41) (p. 126)

Computer Technology Integration Certificates (C25500)
Computer Technology Integration Certificate Specialization in Integration Foundations (C25500-C3)

**Major Requirements**

- CTI 110 Web, Programming, and Database Foundation 3.0
- CTI 120 Network and Security Foundation 3.0
- CTS 115 Information Systems Business Concepts 3.0
- CTI 130 Operating Systems and Device Foundation 6.0
- CIS 111 Basic PC Literacy 2.0

**Total Credits** 17

---

Computer Technology Integration Certificate Specialization in Mobile Apps Development Fundamentals (C25500-20)

**Major Requirements**

- WEB 110 Internet/Web Fundamentals 3.0
- WEB 115 Web Markup and Scripting 3.0
- WEB 141 Mobile Interface Design 3.0
- WEB 151 Mobile Application Development I 3.0

**Total Credits** 12

---

Computer Technology Integration Certificate Specialization in Web Development Fundamentals (C25500-21)

**Major Requirements**

- WEB 110 Internet/Web Fundamentals 3.0
- WEB 115 Web Markup and Scripting 3.0
- WEB 120 Introduction to Internet Multimedia 3.0
- WEB 140 Web Development Tools 3.0

**Total Credits** 12

---

Computer Technology Integration Certificate Specialization in Applications Software Fundamentals (C25500-40)

**Major Requirements**

- CIS 110 Introduction to Computers 3.0
- CTI 110 Web, Programming, and Database Foundation 3.0
- CSC 143 Object-Oriented Programming 3.0
- DBA 110 Database Concepts 3.0
- WEB 110 Internet/Web Fundamentals 3.0
  or WEB 115 Web Markup and Scripting 3.0

**Total Credits** 15

---

Computer Technology Integration Certificate Specialization in Computer Programming Fundamentals (C25500-41)

**Major Requirements**

- CSC 120 Computing Fundamentals I 4.0
- CSC 134 C++ Programming 3.0
- CSC 143 Object-Oriented Programming 3.0

**Total Credits** 13

---

Computer-Integrated Machining Technology

Computer-Integrated Machining Technology curriculum is designed to develop skills in the theory and safe use of hand tools, power machinery, computerized machining equipment and sophisticated precision measurement instruments. Students learn to interpret blueprints, set up manual and CNC machines, perform basic and advanced machining operations and make decisions to insure that work quality is maintained. Employment opportunities for machining technicians exist in manufacturing industries, public institutions, government agencies and in a wide range of specialty machining shops.

The Computer-Integrated Machining Technology Program at CPCC provides students with the opportunity to expand their knowledge and skills in CNC programming and a broader knowledge in CNC Graphics Programming. All projects are performed on full-scale industrial equipment used in local industry.

Visit Career Coach for career information.

---

Computer-Integrated Machining Technology (A50210)

**Degree Awarded**

The Associate in Applied Science degree - Computer-Integrated Machining Technology will be awarded by the College upon completion of the program.

**Admissions**

- High school diploma or equivalent is required.
- CPCC placement tests are required in English and mathematics. Developmental mathematics and English courses are available for students to build skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Note: Students who do not take program-related courses for two consecutive semesters must reenter the program under the Catalog in effect at the time of reentry.

**Contact Information**

The Computer-Integrated Machining Technology program is in the Engineering Technologies Division. For more information, call 704.330.6608.

Visit Career Coach for career information.

**General Education Requirements**

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**Total Credits**: 72

**Computer-Integrated Machining Technology Diploma (D50210)**

Computer-Integrated Machining Technology Diploma gives individuals the opportunity to gain entry-level employment in the metal working industries. A basic knowledge of conventional machine tools, CNC programming and CNC operations is provided by hands-on activities on equipment.
commonly used in industry. Coursework will apply toward Computer-
Integrated Machining Technology A.A.S. Degree program.

**Degree Awarded**

A Diploma in Computer-Integrated Machining Technology is awarded by the College upon completion of this program.

**Admissions**

Completion of a high school diploma or the equivalent is encouraged as a foundation of a career in this area. Many courses have prerequisites or co-
requisites; check the Course Descriptions section for details.

Note: Students who do not enroll in program-related courses for two consecutive semesters must reenter the program under the Catalog in effect at the time of reentry.

**Contact Information**

Computer-Integrated Machining Technology program is in the Engineering Technologies Division. For more information, call 704.330.6608.

**General Education Requirements**

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<td>MAC 114</td>
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**Total Credits**

43

• Computer-Integrated Machining Technology Certificate with a Specialization in CNC Programming and Operations (C50210-C1) (p. 128)

• Computer-Integrated Machining Technology Certificate with a Specialization in Fundamentals of Machine Tools Certificate (C50210-C2) (p. 128)

• Computer-Integrated Machining Technology Certificate Specialization in Basic Machining Skills (C50210-C3) (p. 129)

• Computer-Integrated Machining Technology Certificate with a Specialization in Motorsports Machining Certificate I (C50210-C4) (p. 129)

• Computer-Integrated Machining Technology Certificate with a Specialization in Computer-Integrated Machining Pathway (C50210-C6) (p. 129)

• Computer-Integrated Machining Technology Certificate with a Specialization in Advanced CNC Technology (C50210-C7) (p. 129)

**Computer-Integrated Machining Technology Certificates (C50210)**

**Computer-Integrated Machining Technology Certificate with a Specialization in CNC Programming and Operations (C50210-C1)**

This certificate provides study in CNC programming and machining operations. Coursework includes manual programming, set-up and operation and provides in-depth study in both 2-D and 3-D Graphics programming. Coursework will apply toward Computer-Integrated Machining Technology A.A.S. degree program. Certificate Awarded - A certificate is awarded in CNC Programming and Operations upon completion of this program.

**Certificate Awarded**

A certificate is awarded in CNC Programming and Operations upon completion of this program.

**Admissions**

• Completion of a high school diploma or equivalent is required as a foundation of a career in this area.

• Individuals entering this certificate program should have a basic knowledge of manual machining and/or minimum experience with CNC machine tools.

• Many courses have prerequisites or co-requisites; check the Courses section for details.

**Contact Information**

Computer-Integrated Machining Technology Program is in the Engineering Technologies Division. For more information, call 704.330.6608.

**Major Requirements**

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**Total Credits**

16

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Computer-Integrated Machining Technology
Certificate with a Specialization in
Fundamentals of Machine Tools Certificate
(C50210-C2)

This certificate provides the graduate with enhanced skills in the set up and operation of conventional machine tools. Course work will apply toward Computer-Integrated Machining Technology Degree Program.

Certificate Awarded
A certificate is awarded in Fundamental of Machine Tools by the College upon completion of this program.

Admissions
- Completion of a high school diploma or equivalent is encouraged as a foundation of a career in this area.
- Some courses have prerequisites; check the Courses section for details.

Contact Information
Computer-Integrated Machining Technology Program is in the Engineering Technologies Division. For more information, call 704.330.6608.

Major Requirements

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Computer-Integrated Machining Technology Certificate Specialization in Basic Machining Skills (C50210-C3)

Major Requirements

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Computer-Integrated Machining Technology Certificate with a Specialization in Motorsports Machining Certificate I (C50210-C4)

This certificate provides the graduate with basic skills in the set-up and operation of conventional and computer numerical control machine tools used in the Motorsports machining labs.

Certificate Awarded
A certificate is awarded in Motorsports Machining by the College upon completion of the program.

Admissions
Completion of a high school diploma or equivalent is encouraged as a foundation of a career in this area.

Contact Information
Computer-Integrated Machining Technology Program is in the Engineering Technologies Division. For more information, call 704.330.6608.

Major Requirements

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Computer-Integrated Machining Technology Certificate with a Specialization in Advanced CNC Technology (C50210-C7)

This certificate provides the graduate with enhanced skills in the operation and set up of multi-axis CNC machining centers. This certificate will provide additional studies in multi-axis CNC machine tool operation.

Certificate Awarded
A certificate is awarded in Advanced CNC Technology by the College upon completion of this program.

Admissions
- Completion of a high school diploma or equivalent is encouraged as a foundation of a career in this area.
- Some courses have pre-requisites; check the Courses section for details.

Contact Information
Computer Integrated Machining Technology Program is in the Engineering Technologies Division. For more information, call 704.330.6608.

Major Requirements

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Construction Management Technology

The Construction Management Technology curriculum is designed to prepare individuals for careers in the construction management field. Instruction includes safety, planning, scheduling, cost control, productivity, human relations, estimating and building codes.

Students will also gain proficiency in specific construction-related skills. Successful graduates of the Construction Management Technologies curriculum will qualify for entry-level positions in the field of construction management. Such positions may include project manager, superintendent, estimator, or foreman.

Visit Career Coach for career information.

Construction Management Technology (A35190)

Degree Awarded
An A.A.S. degree in Construction Management Technology is awarded by the College upon completion of this program.

Admissions
- Completion of a high school diploma or equivalent is required.
- Many courses have prerequisites; check the Courses section for details.

For More Information
The Construction Management program is in the Construction Technologies Division. For more information contact the program chair at 704.330.4421 or the division office at 704.330.4445, weekdays from 8 a.m.–5 p.m. Program counselors can be reached by calling 704.330.4437.

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
<td>3.0</td>
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<td>ENG 113</td>
<td>Literature-Based Research</td>
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<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<td>COM 110</td>
<td>Introduction to Communication</td>
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<tr>
<td>COM 120</td>
<td>Intro to Interpersonal Communication</td>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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Select 3 credits from the following:

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<tr>
<td>ANT 210</td>
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<td>ANT 220</td>
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<td>ANT 221</td>
<td>Comparative Cultures</td>
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<td>ECO 151</td>
<td>Survey of Economics</td>
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<td>ECO 251</td>
<td>Principles of Microeconomics</td>
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<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
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<td>GEO 111</td>
<td>World Regional Geography</td>
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<td>HIS 111</td>
<td>World Civilizations I</td>
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<tr>
<td>HIS 132</td>
<td>American History II</td>
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<tr>
<td>POL 110</td>
<td>Introduction to Political Science</td>
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<td>POL 120</td>
<td>American Government</td>
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POL 210 Comparative Government
POL 220 International Relations
PSY 150 General Psychology
PSY 241 Developmental Psychology
PSY 281 Abnormal Psychology
SOC 210 Introduction to Sociology
SOC 213 Sociology of the Family
SOC 220 Social Problems
SOC 225 Social Diversity

Major Requirements
CST 241 Planning/Estimating I 3.0
BPR 130 Print Reading-Construction 3.0
CMT 210 Construction Management Fundamentals 3.0
CMT 212 Total Safety Performance 3.0
CMT 214 Planning and Scheduling 3.0
CMT 216 Costs and Productivity 3.0
SST 140 Green Building and Design Concepts 3.0
CMT 120 Codes and Inspections 3.0
CMT 218 Human Relations Issues 3.0
CST 111 Construction I 4.0
CIS 110 Introduction to Computers 3.0
WBL 111 Work-Based Learning I 1.0

Select one of the following: 3.0
ACC 120 Principles of Financial Accounting
BUS 139 Entrepreneurship I
BUS 230 Small Business Management

Technical Electives
Select 12 credits of the following: 12.0
AHR 111 HVACR Electricity
AHR 113 Comfort Cooling
AHR 114 Heat Pump Technology
AHR 130 HVAC Controls
CAR 110 Introduction to Carpentry
CAR 111 Carpentry I
CAR 120 Commercial Carpentry I
CAR 125 Commercial Carpentry II
CAR 135 Commercial Carpentry IV
CAR 150 Concrete Construction
CST 131 OSHA/Safety/Certification
CST 231 Soils & Site Work
CST 242 Planning/Estimating II
CIV 111 Soils and Foundations
CIV 222 Reinforced Concrete
CIV 230 Construction Estimating
ELC 111 Introduction to Electricity
WBL 121 Work-Based Learning II
WBL 131 Work-Based Learning III
WBL 211 Work-Based Learning IV
ELC 112 DC/AC Electricity
ELC 113 Residential Wiring
ELC 115 Industrial Wiring
EUS 110 Introduction to Electric Utility Industry
SPA 120 Spanish for the Workplace
SRV 110 Surveying I
SRV 111 Surveying II
SST 110 Introduction to Sustainability
SST 120 Energy Use Analysis
SST 130 Modeling Renewable Energy
SST 210 Issues in Sustainability
WLD 112 Basic Welding Processes
WOL 110 Basic Construction Skills
CST 150 Building Science
ARC 112 Construction Materials & Methods
ARC 131 Building Codes
ARC 132 Specifications & Contracts
ARC 133 Construction Document Analysis
ARC 225 Architectural Building Information Modeling I
ARC 226 Architectural Building Information Modeling II
BUS 110 Introduction to Business

Total Credits 68

No diplomas offered.

- Construction Management Technology Certificate with a Specialization
  - Fast Track Carpentry (C35190-C1) (p. 131)
- Construction Management Technology Certificate with a Specialization
  - Entry Level Construction Supervision (C35190-C2) (p. 132)
- Construction Management Technology Certificate with a Specialization
  - Entry Level Estimating I (C35190-C3) (p. 132)
- Construction Management Technology Certificate with a Specialization
  - Entry Level Estimating II (C35190-C4) (p. 132)
- Construction Management Technology Certificate Specialization in
  - Energy Infrastructure (C35190-C5) (p. 132)
- Construction Management Technology Certificate Specialization in
  - Green Building (C35190-C7) (p. 132)

Construction Management Technology
Certificates (C35190)

The certificates listed below can be earned in the Construction Management (A35190) program.

Admissions

- Completion of a high school diploma or equivalent is encouraged as
  the foundation of a career in this area.
- Many courses have prerequisites or corequisites: check the Courses
  section for details

Contact Information

For more information, call 704.330.4421 or 704.330.4408.
Construction Management Technology
Certificate with a Specialization – Fast Track Carpentry (C35190-C1)

Major Requirements

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<tr>
<td>CAR 110</td>
<td>Introduction to Carpentry</td>
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<tr>
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<td>Carpentry I</td>
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Total Credits: 13

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Construction Management Technology
Certificate with a Specialization – Entry Level Construction Supervision (C35190-C2)

This certificate is also available to students enrolled in Career & College Promise.

Major Requirements

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<th>Credits</th>
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<td>BUS 139</td>
<td>Entrepreneurship I</td>
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<td>CMT 210</td>
<td>Construction Management Fundamentals</td>
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<td>CMT 218</td>
<td>Human Relations Issues</td>
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<tr>
<td>SST 140</td>
<td>Green Building and Design Concepts</td>
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Total Credits: 18

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Construction Management Technology
Certificate with a Specialization – Entry Level Estimating I (C35190-C3)

Major Requirements

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<td>BUS 230</td>
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<td>CST 241</td>
<td>Planning/Estimating I</td>
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<td>CMT 210</td>
<td>Construction Management Fundamentals</td>
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<td>CIS 110</td>
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Total Credits: 15-16

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Construction Management Technology
Certificate with a Specialization – Entry Level Estimating II (C35190-C4)

Major Requirements

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<td>CMT 216</td>
<td>Costs and Productivity</td>
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Total Credits: 16

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Construction Management Technology
Certificate Specialization in Entry Level Project Supervision (C35190-C5)

Major Requirements

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<td>CMT 212</td>
<td>Total Safety Performance</td>
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<td>CMT 216</td>
<td>Costs and Productivity</td>
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Total Credits: 18

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Construction Management Technology
Certificate Specialization in Energy Infrastructure (C35190-C6)

Major Requirements

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<tr>
<th>Course</th>
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<td>Print Reading-Construction</td>
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<td>CMT 120</td>
<td>Codes and Inspections</td>
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<td>EUS 110</td>
<td>Introduction to Electric Utility Industry</td>
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Total Credits: 16

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Construction Management Technology
Certificate Specialization in Green Building (C35190-C7)

Major Requirements

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<tr>
<td>CST 150</td>
<td>Building Science</td>
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Total Credits: 16

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Cosmetology

The Cosmetology curriculum is designed to provide competency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the cosmetology industry. The curriculum provides a simulated salon environment which enables students to develop manipulative skills.

Course work includes instruction in all phases of professional imaging, hair design, chemical processes, skin care, nail care, multi-cultural practices, business/computer principles, product knowledge, and other selected topics.

Graduates should qualify to sit for the State Board of Cosmetic Arts examination. Upon successfully passing the State Board exam, graduates will be issued a license. Employment is available in beauty salons and related businesses.

http://www.cpcc.edu/medicalcareers/cosmetology

Visit Career Coach for career information.

Cosmetology, Associate Degree (A55140)

Degree Awarded

The Associate in Applied Science Degree – Cosmetology is awarded by the College upon completion of this program.

Admissions

• CPCC Application
• High School transcript
• College transcripts
• CPCC placement tests
• Cosmetology Program Application

Notes

Progression in this program is dependent upon a grade of “C” or better in all general education courses, as well as major and related courses.

Students making application to the CPCC Cosmetology Program will be required to submit a copy of his/her Social Security Card or Tax ID card or student visa information; government issued ID and proof of date of birth; and submit an acknowledgement of the NC State Board of Cosmetic Arts felony policy, found on the program application.

Visit Career Coach for career information.

General Education Requirements

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<td>Literature-Based Research</td>
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<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<td>Select 3 credits of the following:</td>
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<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
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<td>Intro to Interpersonal Communication</td>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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<td>MAT 110</td>
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<td>ART 114</td>
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<td>ART 115</td>
<td>Art History Survey II</td>
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<td>ART 116</td>
<td>Survey of American Art</td>
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<tr>
<td>ART 117</td>
<td>Non-Western Art History</td>
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<td>DAN 110</td>
<td>Dance Appreciation</td>
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<tr>
<td>DAN 211</td>
<td>Dance History I</td>
<td></td>
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<td>DAN 212</td>
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<td>DRA 111</td>
<td>Theatre Appreciation</td>
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<td>DRA 112</td>
<td>Literature of the Theatre</td>
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<td>DRA 122</td>
<td>Oral Interpretation</td>
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<td>ENG 232</td>
<td>American Literature II</td>
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<td>ENG 241</td>
<td>British Literature I</td>
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<td>British Literature II</td>
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<td>ENG 251</td>
<td>Western World Literature I</td>
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<td>ENG 252</td>
<td>Western World Literature II</td>
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<td>HUM 160</td>
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<td>HUM 211</td>
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<td>HUM 212</td>
<td>Humanities II</td>
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<td>MUS 110</td>
<td>Music Appreciation</td>
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<td>MUS 112</td>
<td>Introduction to Jazz</td>
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<td>MUS 210</td>
<td>History of Rock Music</td>
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<td>MUS 213</td>
<td>Opera and Musical Theatre</td>
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<td>PHI 215</td>
<td>Philosophical Issues</td>
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<td>PHI 221</td>
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<td>PHI 240</td>
<td>Introduction to Ethics</td>
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<td>REL 111</td>
<td>Eastern Religions</td>
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<tr>
<td>REL 112</td>
<td>Western Religions</td>
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<tr>
<td>REL 211</td>
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<td>REL 221</td>
<td>Religion in America</td>
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Major Requirements

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<tr>
<td>COS 113</td>
<td>Cosmetology Concepts II</td>
<td>4.0</td>
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<td>COS 114</td>
<td>Salon II</td>
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<td>Cosmetology Concepts III</td>
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<td>COS 116</td>
<td>Salon III</td>
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<td>COS 118</td>
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<td>COS 223</td>
<td>Contemp Hair Coloring</td>
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<tr>
<td>BUS 230</td>
<td>Small Business Management</td>
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Criminal Justice Technology

The Criminal Justice Technology curriculum is designed to provide knowledge of criminal justice systems and operations. Study will focus on local, state and federal law enforcement, judicial processes, corrections and security services. The criminal justice system’s role within society will be explored.

Emphasis is on criminal justice systems, criminology, juvenile justice, criminal and constitutional law, investigative principles, ethics and community relations. Additional study may include issues and concepts of government, counseling, communications, computers and technology.

Employment opportunities exist in a variety of local, state and federal law enforcement, corrections and security fields. Examples include police officer, deputy sheriff, county detention officer, state trooper, intensive probation/parole surveillance officer, correctional officer and loss prevention specialist. Employment with criminal justice agencies is subject to specific agency criteria; therefore, completion of a degree alone is no guarantee of eligibility of employment.

Visit Career Coach for career information.

Criminal Justice Technology (A55180)

Degree Awarded

The Associate in Applied Science Degree - Criminal Justice is awarded by the College upon completion of this program.

Admissions

- A high school diploma or equivalent is required.
- Some courses require placement tests prior to registration.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Notes

- Students should complete CJC 111 during their first semester
- A minimum grade of “C” in all CJC prefix courses is required for successful completion of the program.
- Students enrolling in WBL 112J must meet the following eligibility requirements: 2.5 GPA; 12 SHC within the program of study (A55180); and satisfactory completion of the following CJC courses: CJC 111, CJC 112, CJC 113, CJC 131, CJC 212, CJC 221 and CJC 231.
- It is recommended that students meet with the Criminal Justice Program Chair or faculty advisor prior to initial registration and for information on program certificates.

Contact Information

The Criminal Justice program is in the Public Safety Division. For more information, call 704.330.4107 or 704.330.4138.

Visit Career Coach for career information.

General Education Requirements

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<tr>
<th>Course</th>
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<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
<td>3.0</td>
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<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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<td>Algebra/Trigonometry I</td>
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Select 3 credits from the following:

COS 271  Instructor Concepts I  5.0
COS 272  Instructor Practicum I  7.0
COS 273  Instructor Concepts II  5.0
COS 274  Instructor Practicum II  7.0

Total Credits  34

Criminal Justice Technology (C55160)

Major Requirements

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Total Credits  24

Cosmetology Certificate (C55140-C1)

This certificate is available to students through Career and College Promise.

The beauty industry offers highly skilled and personable professionals many employment opportunities in beauty salons, department stores, barbershops, hospitals, hotels, spas and resorts. Entrepreneurial careers include salon ownership, beauty product creation, freelance cosmetic artistry for movie sets and magazine photo shoots. Get started on your career in cosmetology by enrolling in our CCP Fundamentals program today.

<table>
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<tr>
<th>Course</th>
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Total Credits  34

Cosmetology Instructor Certificate (C55160)

Major Requirements

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Total Credits  24

No diplomas offered.

Contact Information

The Criminal Justice program is in the Public Safety Division. For more information, call 704.330.4107 or 704.330.4138.

Visit Career Coach for career information.

General Education Requirements

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<td>Court Procedure &amp; Evidence</td>
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<td>Organization &amp; Administration</td>
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<td>CJC 170</td>
<td>Critical Incident Mgmt for Public Safety</td>
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<td>CJC 162</td>
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No diplomas offered.

- Criminal Justice Technology Certificate with a Specialization in Criminal Justice Management and Administration (C55180-C2) (p. 136)
- Criminal Justice Technology Certificate with a Specialization in Essentials of the Criminal Justice System (C55180-C3) (p. 136)
- Criminal Justice Technology Certificate with a Specialization in Essential Police Operations (C55180-C4) (p. 136)
- Criminal Justice Technology Certificate with a Specialization in Courts and the Law (C55180-C5) (p. 136)
- Criminal Justice Technology Certificate with a Specialization in Corrections (C55180-C6) (p. 136)
- Criminal Justice Technology Certificate with a Specialization in Criminal Justice and Special Populations (C55180-C7) (p. 136)
- Criminal Justice Technology Certificate with a Specialization in Crime Scene and Criminal Investigations (C55180-C8) (p. 136)
- Criminal Justice Technology Certificate Specialization in Basics of Criminal Justice (C55180-C9) (p. 137)
- Criminal Justice Technology Certificate Specialization in Homeland Security (C55180-10) (p. 137)
- Criminal Justice Technology Certificate Specialization in Crime Causation (C55180-11) (p. 137)

Criminal Justice Certificate (C55180)

In addition to the Criminal Justice Technology degree (A55180), students can earn the following certificates:

Criminal Justice Technology Certificate with a Specialization in Criminal Justice Management and Administration (C55180-C2)

<table>
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<td>CJC 211 Counseling</td>
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<td>CJC 215 Organization &amp; Administration</td>
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Criminal Justice Technology Certificate with a Specialization in Essentials of the Criminal Justice System (C55180-C3)

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<td>CJC 112 Criminology</td>
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Criminal Justice Technology Certificate with a Specialization in Essential Police Operations (C55180-C4)

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<td>CJC 122 Community Policing</td>
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Criminal Justice Technology Certificate with a Specialization in Courts and the Law (C55180-C5)

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<tbody>
<tr>
<td>CJC 131 Criminal Law</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 132 Court Procedure &amp; Evidence</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 231 Constitutional Law</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 232 Civil Liability</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
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Criminal Justice Technology Certificate with a Specialization in Corrections (C55180-C6)

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CJC 141 Corrections</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 233 Correctional Law</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 241 Community-Based Corrections</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 213 Substance Abuse</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
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</tr>
</tbody>
</table>

Criminal Justice Technology Certificate with a Specialization in Criminal Justice and Special Populations (C55180-C7)

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJC 113 Juvenile Justice</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 213 Substance Abuse</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 214 Victimology</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 223 Organized Crime</td>
<td>3.0</td>
</tr>
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<td><strong>Total Credits</strong></td>
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</tbody>
</table>
Criminal Justice Technology Certificate with a Specialization in Crime Scene and Criminal Investigations (C55180-C8)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJC 221</td>
<td>Investigative Principles</td>
<td>4.0</td>
</tr>
<tr>
<td>CJC 114</td>
<td>Investigative Photography</td>
<td>2.0</td>
</tr>
<tr>
<td>CJC 120</td>
<td>Interviews/Interrogations</td>
<td>2.0</td>
</tr>
<tr>
<td>CJC 222</td>
<td>Criminalistics</td>
<td>3.0</td>
</tr>
<tr>
<td>CCT 121</td>
<td>Computer Crime Investigation</td>
<td>4.0</td>
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<tr>
<td></td>
<td><strong>Total Credits</strong></td>
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</tr>
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Criminal Justice Technology Certificate Specialization in Basics of Criminal Justice (C55180-C9)

This certificate is also available to students enrolled in Career & College Promise.

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJC 111</td>
<td>Introduction to Criminal Justice</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 112</td>
<td>Criminology</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 131</td>
<td>Criminal Law</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 231</td>
<td>Constitutional Law</td>
<td>3.0</td>
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<tr>
<td></td>
<td><strong>Total Credits</strong></td>
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Criminal Justice Technology Certificate Specialization in Homeland Security (C55180-10)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CJC 160</td>
<td>Terrorism: Underlying Issues</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 161</td>
<td>Introduction to Homeland Security</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 162</td>
<td>Intelligence Analysis and Security Management</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 163</td>
<td>Transportation and Border Security</td>
<td>3.0</td>
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<tr>
<td></td>
<td><strong>Total Credits</strong></td>
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Criminal Justice Technology Certificate Specialization in Crime Causation (C55180-11)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CJC 112</td>
<td>Criminology</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 113</td>
<td>Juvenile Justice</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 211</td>
<td>Counseling</td>
<td>3.0</td>
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<tr>
<td>CJC 214</td>
<td>Victimology</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
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</tbody>
</table>

Culinary Arts

The Culinary Arts curriculum provides specific training required to prepare students to assume positions as trained culinary professionals in a variety of foodservice settings including full-service restaurants, hotels, resorts, clubs, catering operations, contract foodservice and health care facilities.

Students will be provided theoretical knowledge/practical applications that provide critical competencies to meet industry demands, including environmental stewardship, operational efficiencies and professionalism. Courses include sanitation/safety, baking, garde manger, culinary fundamentals/production skills, nutrition, customer service, purchasing/cost control and human resource management.

Graduates should qualify for entry-level opportunities including prep cook, line cook and station chef. American Culinary Federation certification may be available to graduates. With experience, graduates may advance to positions including sous chef, pastry chef, executive chef, or foodservice manager.

Visit Career Coach for career information.

Culinary Arts (A55150)

Degree Awarded

The Associate in Applied Science degree – Culinary Arts is awarded by the College upon completion of this program.

Admissions

- Complete a CPCC Admissions Form.
- Submit an official high school diploma as well as college transcripts to the Admission/Records Center.
- All needed developmental studies courses must be completed prior to beginning CUL, HRM and BPA prefix courses.
- Make an appointment to see an academic advisor.
- Make an appointment to see Culinary Arts Program Chair, Jim Bowen 704.330.6770.
- Many courses have prerequisites or co-requisites. Check the Courses section for details.
- Students must have a CUL, HRM, or BPA program code.

Notes

- Progression in this program is dependent upon a score of “C” or better in all courses with CUL, HRM and BPA prefixes.
- All CUL and BPA lab classes require student accident medical insurance.

Contact Information

The Culinary Arts program is in the Hospitality Education Division. For more information, call 704.330.6770 or 704.330.6721.

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
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<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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<td>Select 3 credits from the following:</td>
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</tr>
<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
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<tr>
<td>ENG 113</td>
<td>Literature-Based Research</td>
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<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select 3 credits from the following:</td>
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</tr>
<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
<td></td>
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<tr>
<td>COM 120</td>
<td>Intro to Interpersonal Communication</td>
<td></td>
</tr>
<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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</tr>
<tr>
<td></td>
<td>Select 3 credits from the following:</td>
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<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
<td></td>
</tr>
<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
<td></td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
</tr>
</tbody>
</table>
Cytotechnology

Cytotechnology is an advanced allied health career which prepares the individual to use specialized equipment to study cells for detecting cancer, hormonal abnormalities and other pathological disease processes. Individuals entering this curriculum must have earned a bachelor’s degree with a concentration in the biological sciences.
Course work includes entry-level knowledge and skills in cell collection and preparation and microscopic use to interpret specimens. Graduates work in conjunction with pathologists to perform special diagnostic procedures.

Upon successful completion of the program, graduates receive a certificate in cytotechnology and are eligible to take the National Board of Certification Examination of the American Society for Clinical Pathology (ASCP). Cytotechnologists may find employment in hospital and university laboratories, private laboratories, private companies and research facilities.

Visit Career Coach for career information.

No degrees offered.

No diplomas offered.

**Cytotechnology (C45220)**

**Certificate Awarded**

A Certificate in Cytotechnology is awarded by the College upon successful completion of the program.

**Admissions**

Students wishing to apply to the Cytotechnology Program must complete the following requirements prior to admission:

- Bachelors degree from an accredited college or university that includes:
  - Biology: 20 semester hours (30 quarter hours)
  - Chemistry: 8 semester hours (12 quarter hours)
  - Mathematics: 3 semester hours (5 quarter hours)
  - Humanities: min. of 4 semester hours (6 quarter hours)
- 2.5 GPA in sciences courses as well as an overall 2.0 GPA is recommended.
- International students must submit scores from both the Test of Spoken English (TSE) and the Test of English as a Foreign Language (TOEFL) prior to the application deadline.
- International students must submit transcript evaluation for course work completed outside the U.S. from an agency approved by the American Society for Clinical Pathology. A list of these agencies may be obtained by calling the ASCP at 800.267.2727.
- All students must submit (1) an application to the college, (2) two letters of recommendation to the Cytotechnology Program Chair from previous science professors and (3) all college transcripts. Each applicant must also complete an interview with the program chair.

**Notes**

The Cytotechnology program is a full-time, 12-month program that begins fall semester of each year. Progression in the program is dependent on satisfying course prerequisites, co-requisites and meeting minimal levels of performance for each course. Graduates of this program may apply to take the Cytotechnology Certification Examination administered by the Board of Certification of the American Society for Clinical Pathology.

The Cytotechnology program at CPCC is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) on recommendation of the Cytotechnology Programs Review Committee (CPRC) of the American Society of Cytopathology (ASC).

CAAHEP

1361 Park Street
Clearwater, FL 33756
727.210.2350
www.caahep.org (http://www.caahep.org)

In addition to tuition and textbooks, costs of the program include the following: uniforms, lab coat, a physical examination including immunizations (tetanus toxoid, Hepatitis B vaccinations [series of three], TB test, color blindness test, etc.), costs associated with clinical travel and housing and registration fee for the Board of Certification Examination.

In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a NC state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

**Contact Information**

The Cytotechnology program is in the Medical Careers and Cosmetology Division. For more information, first go to the website at http://www.cpcc.edu/medicalcareers/cytotechnology. If further assistance is needed, contact the Program Chair at 704.330.6283.

Visit Career Coach for career information.

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYT 210</td>
<td>Intro to Clinical Cyto</td>
<td>4.0</td>
</tr>
<tr>
<td>CYT 212</td>
<td>Intro to Cyto Techniques</td>
<td>4.0</td>
</tr>
<tr>
<td>CYT 214</td>
<td>Gynecological Cytology</td>
<td>14.0</td>
</tr>
<tr>
<td>CYT 216</td>
<td>Clin &amp; Diag Int &amp; I</td>
<td>4.0</td>
</tr>
<tr>
<td>CYT 220</td>
<td>Non-Gynecological Cytology</td>
<td>12.0</td>
</tr>
<tr>
<td>CYT 222</td>
<td>Cytopreparation Technique</td>
<td>2.0</td>
</tr>
<tr>
<td>CYT 224</td>
<td>Gynecological Cytology Clinical Practicum</td>
<td>4.0</td>
</tr>
<tr>
<td>CYT 226</td>
<td>Clinical &amp; Diagnostic Interpretation II</td>
<td>4.0</td>
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<tr>
<td>CYT 230</td>
<td>Non-Gynecological Cytology Practicum</td>
<td>2.0</td>
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<td>CYT 232</td>
<td>Clinical Cytology Practicum</td>
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<td>CYT 234</td>
<td>Gynecological Cytology Pract II</td>
<td>3.0</td>
</tr>
<tr>
<td>CYT 236</td>
<td>Cytology Literature Review</td>
<td>1.0</td>
</tr>
<tr>
<td>CYT 238</td>
<td>Cyt Professional Issues</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Total Credits** 57

**Dental Assisting**

The Dental Assisting curriculum prepares individuals to assist the dentist in the delivery of dental treatment and to function as integral members of the dental team while performing chairside and related office and laboratory procedures.

Coursework includes instruction in general studies, biomedical sciences, dental sciences, clinical sciences and clinical practice. A combination of lecture, laboratory and clinical experiences provide students with knowledge in infection/hazard control, radiography, dental materials, preventive dentistry and clinical procedures.

Graduates may be eligible to take the Dental Assisting National Board Examination to become Certified Dental Assistants. As a Dental Assistant II, defined by the Dental Laws of North Carolina, graduates work in dental offices and other related areas.
Dental Hygiene

Dental Assisting Diploma (D45240)

Diploma Awarded

A Diploma in Dental Assisting is awarded by the college upon completion of this program.

Program Accreditation

The Dental Assisting Program at CPCC is accredited by the American Dental Association, Commission on Dental Accreditation (CODA).

Admissions

Please refer to the Admission Steps for degree, diploma, or certificate students:

- Complete a CPCC general application for admission.
- Submit high school, as well as college transcripts to Student Records.
- Schedule a meeting with an academic advisor to determine if placement tests are required. If so, take tests and review placement test scores, program information and select courses for registration.
- Complete and submit a Dental Assisting Program Application by deadline date of April 30 for the following fall semester.
- Progression in this program is dependent upon a grade of “C” or better in all general education courses, as well as major and related courses.
- Students encouraged to attend available Program Information Sessions.

Notes

Costs of this program, in addition to tuition and textbooks, will include school uniforms and supplies, fees for professional organization dues and national board testing, a current physical examination, blood and drug screen tests and updated immunizations.

Reliable transportation is needed to meet off campus clinical rotation requirements.

Students must demonstrate proficiency in basic computer skills through completed course work in CIS 110 or CIS 111 or testing.

Students must be certified by the American Heart Association in “Health Care Provider Level” CPR or by the American Red Cross in “CPR for the Professional Rescuer” prior to registering for DEN 101 or DEN 112.

Students must successfully complete all prerequisite DEN courses prior to beginning clinical rotations.

In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a NC state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

Contact Information

The Dental Assisting program is in the Health Sciences Division. For more information, first go to the website at http://www.cpcc.edu/health_sciences/

dental-assisting. If further assistance is needed, contact the Program Chair at 704.330.4687.

Visit Career Coach for career information.

Dental Hygiene

The Dental Hygiene curriculum prepares individuals with the knowledge and skills to assess, plan, implement and evaluate dental hygiene care for the individual and the community.

Students learn to prepare the operatory, take patient histories, note abnormalities, plan care, teach oral hygiene techniques, provide periodontal therapy, expose radiographs, apply preventive agents, complete necessary chart entries and perform other procedures related to dental hygiene care.

Graduates of this program may be eligible to take national and state/regional examinations for licensure which are required to practice dental hygiene. Employment opportunities include positions in dental offices, hospital clinics, schools, public health agencies, industry and professional education.

Visit Career Coach for career information.

Dental Hygiene (A45260)

Degree Awarded

The Associate in Applied Science degree - Dental Hygiene Degree is awarded by the College upon completion of this program.

Program Admission Steps

Also refer to Admission Steps for Degree-Seeking or Transfer students (http://www.cpcc.edu/getstarted/14) from the Get Started icon on the College’s home page:

- Complete a CPCC application.
- Submit high school transcripts, as well as any college transcripts, to Student Records on second floor of the Central High Building.
• Take required placement tests or obtain a waiver.
• Meet with a counselor or an advisor to review placement test scores, program information and select courses for registration.
• Complete and submit a Dental Hygiene Application by the deadline date.
• Take applicable Developmental Education courses.
• Take the Test of Essential Academic Skills (TEAS), version V
• Check the Courses section for details, as many courses have prerequisite or co-requisite requirements.
• As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

In any Associate Degree Health Sciences program for which there are more applicants who have completed pre-admission requirements than there are positions, admission points are assigned according to the applicant’s documented record. Criteria for selection includes scores on the TEAS test, past academic performance and experience in the field of interest.

Additional Credentials
• All students are required to be certified in First Aid and Health Care Provider CPR or CPR for Professional Rescuer before entering the Dental Hygiene Program.
• Students must have completed at least a high school chemistry course with a laboratory or its equivalent prior to being accepted into the dental hygiene program. CHM 121 and CHM 121A is an acceptable substitute for high school chemistry. The chemistry requirement must be completed not more than five years prior to acceptance.
• Students must demonstrate basic computer competencies through course work or testing. The division director of Computer Office and Information Systems will determine equivalent competency.
• In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a NC state or national criminal background check at their own expense.

Notes
Licensure to practice dental hygiene is required prior to working in any state or jurisdiction. The North Carolina State Board of Dental Examiners may request information regarding conviction of a felony and/or misdemeanor and/or current charges on the application for licensure and may decide not to license an individual based on the results of an investigation.

Costs of this program, in addition to tuition and textbooks, include uniforms, instruments, physical examination and specific vaccinations.

Progression in this program is dependent upon a grade of “C” or better in all general education courses, as well as major and related courses.

Contact Information
The Dental Hygiene program is in the Health Sciences Division. For more information, first go to the website at http://www.cpcc.edu/health_sciences. If further assistance is needed, contact the Program Chair at 704.330.6365.

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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</table>

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO 175</td>
<td>General Microbiology</td>
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</tr>
<tr>
<td>DEN 110</td>
<td>Orofacial Anatomy</td>
<td>3.0</td>
</tr>
<tr>
<td>DEN 111</td>
<td>Infection/Hazard Control</td>
<td>2.0</td>
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<tr>
<td>DEN 112</td>
<td>Dental Radiography</td>
<td>3.0</td>
</tr>
<tr>
<td>DEN 120</td>
<td>Dental Hygiene Preclinic Lecture</td>
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</tr>
<tr>
<td>DEN 121</td>
<td>Dental Hygiene Preclinical Lab</td>
<td>2.0</td>
</tr>
</tbody>
</table>
Diesel and Heavy Equipment Technology

The Diesel and Heavy Equipment Technology program prepares individuals for employment as entry-level transportation service technicians. The program provides an introduction to transportation industry careers and increases student awareness of the diverse technologies associated with this dynamic and challenging field. The degree program prepares individuals to apply technical knowledge and skills to repair, service, and maintain diesel engines in vehicles such as Heavy Duty Trucks over one ton classification, buses, ships, railroad locomotives, and equipment as well as stationary diesel engines in electrical generators and related equipment.

Visit Career Coach for career information.

Diesel and Heavy Equipment Technology (A60460)

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
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<td>ENG 111</td>
<td>Writing and Inquiry</td>
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<tr>
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<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
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<tr>
<td>ENG 113</td>
<td>Literature-Based Research</td>
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<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>Take 1 course:</td>
<td></td>
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<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
<td>3.0</td>
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<tr>
<td>or COM 231</td>
<td>Public Speaking</td>
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<tr>
<td>Select 3 credits from the following:</td>
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<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
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<tr>
<td>MAT 152</td>
<td>Statistical Methods I</td>
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<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
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<td>Select one of the following:</td>
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<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
<td></td>
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<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
<td></td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
</tr>
<tr>
<td>ART 116</td>
<td>Survey of American Art</td>
<td></td>
</tr>
<tr>
<td>ART 117</td>
<td>Non-Western Art History</td>
<td></td>
</tr>
<tr>
<td>DAN 110</td>
<td>Dance Appreciation</td>
<td></td>
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<tr>
<td>DAN 211</td>
<td>Dance History I</td>
<td></td>
</tr>
<tr>
<td>DAN 212</td>
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<tr>
<td>DRA 111</td>
<td>Theatre Appreciation</td>
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<tr>
<td>DRA 112</td>
<td>Literature of the Theatre</td>
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<tr>
<td>DRA 122</td>
<td>Oral Interpretation</td>
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<tr>
<td>ENG 231</td>
<td>American Literature I</td>
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<tr>
<td>ENG 232</td>
<td>American Literature II</td>
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<tr>
<td>ENG 241</td>
<td>British Literature I</td>
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<tr>
<td>ENG 242</td>
<td>British Literature II</td>
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<tr>
<td>ENG 251</td>
<td>Western World Literature I</td>
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<tr>
<td>ENG 252</td>
<td>Western World Literature II</td>
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<tr>
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<td>Myth in Human Culture</td>
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<td>Medium/Heavy Duty Tune Up</td>
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Select 8 credits from the following: 8.0

- WBL 112 Work-Based Learning I
- WBL 122 Work-Based Learning II
- WBL 132 Work-Based Learning III
- WBL 212 Work-Based Learning IV
- HET 126 Preventive Maintenance Lab
- HET 232 Medium/Heavy Duty Brake Systems Lab
- HYD 134 Hydraulic/Hydrostatic Construction
- HYD 210 Advanced Hydraulics
- TRN 145 Advanced Transportation Electronics
- TRN 180A Basic Welding for Transportation Lab
- TRN 140A Transportation Climate Control Lab
- TRN 120A Basic Transportation Electrical Lab
- ATT 130 Biofuels for Transportation
- ATT 135 Gaseous Fuels for Transportation
- ATT 150 Sustainable Transportation Technology
- HYD 110 Hydraulics/Pneumatics I

Total Credits 68

**Diplomas**

**Diesel and Heavy Equipment Technology Diploma (D60460-D1)**

**General Education Requirements**

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**Major Requirements**

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Select 4.0 credits from the following courses: 4.0

- HET 126 Preventive Maintenance Lab
- WBL 112 Work-Based Learning I
- WBL 122 Work-Based Learning II
- HET 231 Medium/Heavy Duty Brake Systems Lab
- HET 232 Medium/Heavy Duty Brake Systems Lab

Total Credits 42

**Diesel and Heavy Equipment Technology/Construction Equipment Diploma (D60460-D2)**

**General Education**

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**Major Requirements**

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Total Credits 45

- Diesel and Heavy Equipment Technology Certificate Specialization in Forklift Repair (C60460-C1) (p. 144)
- Diesel and Heavy Equipment Technology Certificate Specialization in Trailer Mechanic Services (C60460-C2) (p. 144)
- Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair I (C60460-C3) (p. 144)
• Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair II (C60460-C4) (p. 144)

• Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair III (C60460-C5) (p. 144)

• Diesel and Heavy Equipment Technology Certificate Specialization in Braking Systems (C60460-C6) (p. 144)

• Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Engine Systems (C60460-C7) (p. 144)

• Diesel and Heavy Equipment Technology Certificate Specialization in Suspension and Alignment Systems (C60460-C8) (p. 145)

Diesel and Heavy Equipment Technology Certificates

Dielectric and Heavy Equipment Technology Certificate Specialization in Forklift Repair (C60460-C1)

Major Requirements

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Total Credits 17

Diesel and Heavy Equipment Technology Certificate Specialization in Trailer Mechanic Services (C60460-C2)

Major Requirements

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Total Credits 15

Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair I (C60460-C3)

Major Requirements

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Total Credits 15

Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair II (C60460-C4)

Major Requirements

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Total Credits 17

Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair III (C60460-C5)

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Total Credits 16

Diesel and Heavy Equipment Technology Certificate Specialization in Braking Systems (C60460-C6)

Major Requirements

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Total Credits 16

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Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Engine Systems (C60460-C7)

Major Requirements

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Total Credits: 16

Diesel and Heavy Equipment Technology Certificate Specialization in Suspension and Alignment Systems (C60460-C8)

Major Requirements

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<td>HET 233</td>
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Total Credits: 16

Early Childhood Education (A55220)

Degree Awarded
The Associate in Applied Science degree in Early Childhood Education is awarded by the College upon completion of this program.

Admissions
1. A high school diploma or equivalent is required.
2. Complete application for admission to CPCC.
3. Complete or waive placement tests. Students with appropriate transcripts or official score reports can waive placement testing by meeting with a CPCC academic advisor.
4. Meet with an academic advisor to declare program goals/major and receive the name of the assigned Early Childhood faculty advisor.
5. Meet with your Early Childhood faculty advisor.

Program Accreditation
The Early Childhood Education Associate Degree program at CPCC is accredited by the National Association for the Education of Young Children (NAEYC, www.naeyc.org).

Early Childhood Education
The Early Childhood Education curriculum prepares individuals to work with children from infancy through middle childhood in diverse learning environments. Students will combine learned theories with practice in actual settings with young children under the supervision of qualified teachers.

Coursework includes: child growth and development, physical/nutritional needs of children, care and guidance of children, and communication skills with parents and children. Students will foster the cognitive/language, physical/motor, social/emotional and creative development of young children.

Graduates are prepared to plan and implement developmentally appropriate programs in early childhood settings. Employment opportunities include child development and child care programs, preschools, public and private schools, recreational centers, Head Start Programs and school-age programs.

Visit Career Coach for career information.

Four-Year Articulation Agreements
CPCC Early Childhood Education Program has articulation agreements with UNC-Charlotte and Catawba College.

Students planning to transfer to UNCC should take PSY 150 (Introduction to Psychology) and a natural sciences course with a lab (4 SHC). This agreement allows students to complete a B.A. in Child and Family Development and the Birth-Kindergarten (B-K) teaching license at UNC-Charlotte in four to five additional semesters.

Students planning to transfer to Catawba College will be eligible to enroll in the Bachelor of Arts in Education (B.A.E.) degree through the Department of Teacher Education. This articulation agreement allows students to complete a B.A. in three to four semesters. Catawba College offers two concentrations in the B-K Education major: the Licensure concentration and the None-Licensure concentration.

Students interested in transferring to other higher education institutions should contact the admissions counselor at that individual school.

General Course Information
1. Many courses have prerequisites or co-requisites; check the Courses section of this catalog for details.
2. 100-level EDU courses (with the exception of EDU 119) have a corequisite of DRE 097.
3. 200-level EDU courses have a corequisite of DRE 098.
4. Courses with a lab must register for the lab course as well as the lecture section. Ex. EDU 280 Language and Literacy Experiences and EDU 280A Language and Literacy Lab.
5. Students must have faculty permission to register for EDU 184 and EDU 284.
Contact Information

The Early Childhood Education program is in the Nursing, Human Services and Early Childhood Education Division. For more information, check the Early Childhood webpage at www.cpcc.edu/ec or call 704.330.4762.

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<td>SOC 210</td>
<td>Introduction to Sociology</td>
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Take 3 credits from the following:

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<td>ENG 112</td>
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<td>ENG 113</td>
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<td>MAT 143</td>
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Select 3 credits of the following:

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<td>Art History Survey I</td>
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<td>ART 115</td>
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<td>ART 116</td>
<td>Survey of American Art</td>
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<td>ART 117</td>
<td>Non-Western Art History</td>
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<td>Dance Appreciation</td>
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<td>Dance History I</td>
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<td>MUS 110</td>
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<td>MUS 215</td>
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<td>REL 212</td>
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Total Credits: 67

Early Childhood Education Certificates (C55220)

Early Childhood Education Certificate with a Specialization in Early Childhood (C55220-C1) (p. 146)

Early Childhood Education Certificate with a Specialization in Administration (C55220-C2) (p. 147)

Early Childhood Education Certificate Specialization in Beginnings in Early Childhood Education (For High School Juniors and Seniors Only) (C55220-C4) (p. 147)

School-Age Care Certificate (C55450) (p. 147)

Infant/Toddler Care Certificate (C55290) (p. 147)

No diplomas offered.

Major Requirements

<table>
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<tr>
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<td>EDU 151</td>
<td>Creative Activities</td>
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<td>EDU 153</td>
<td>Health, Safety and Nutrition</td>
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<td>EDU 221</td>
<td>Children With Exceptionalities</td>
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<td>EDU 271</td>
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<td>EDU 280</td>
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<td>EDU 145</td>
<td>Child Development II</td>
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<td>EDU 234</td>
<td>Infants, Toddlers, &amp; Twos</td>
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Total Credits: 16
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**Early Childhood Education Certificate with a Specialization in Administration (C55220-C2)**

**Major Requirements**

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<td>EDU 146</td>
<td>Child Guidance</td>
<td>3.0</td>
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<tr>
<td>EDU 119</td>
<td>Introduction to Early Childhood Education</td>
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**Total Credits** 16

Back to Top (p. )

**Early Childhood Education Certificate Specialization in Beginnings in Early Childhood Education (For High School Juniors and Seniors Only) (C55220-C4)**

**Major Requirements**

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<tr>
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<tbody>
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<td>EDU 144</td>
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<td>EDU 146</td>
<td>Child Guidance</td>
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<tr>
<td>EDU 153</td>
<td>Health, Safety and Nutrition</td>
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**Total Credits** 13

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**School-Age Care Certificate (C55450)**

**Major Requirements**

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<tr>
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<td>EDU 131</td>
<td>Child, Family, and Community</td>
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<td>EDU 158</td>
<td>Healthy Lifestyles-Youth</td>
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<td>School-Age Development and Programs</td>
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<td>EDU 145</td>
<td>Child Development II</td>
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**Total Credits** 17

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**Infant/Toddler Care Certificate (C55290)**

**Major Requirements**

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<th>Course Title</th>
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<tbody>
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<tr>
<td>EDU 144</td>
<td>Child Development I</td>
<td>3.0</td>
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<tr>
<td>EDU 131</td>
<td>Child, Family, and Community</td>
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<td>EDU 153</td>
<td>Health, Safety and Nutrition</td>
<td>3.0</td>
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<tr>
<td>EDU 234</td>
<td>Infants, Toddlers, &amp; Twos</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Total Credits** 16

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**Electrical Engineering Technology**

The Electrical Engineering Technology curriculum is designed to provide training for entry-level technicians desiring a career in electrical maintenance and management, design, planning, construction, development and installation of electrical systems, machines, automation and power generating equipment.

Beginning with electrical fundamentals, coursework progressively introduces electronics, circuit simulation using Electronics Workbench, AutoCAD and Visual Basic Programming. Other coursework includes the study of various fields associated with the electrical/electronic industry.

In the second year, students have the option to choose one of three tracks: Automation, Electrical Design, or Power Systems & Alternative Energy Sources. The tracks are designed to guide students to curriculum paths that cover the appropriate knowledge and skills.

**Automation Track**

This track focuses on the knowledge and skills associated with the installation, maintenance, integration and troubleshooting of automated systems. Coursework includes control equipment such as PLCs, PACs, networking, instrumentation, electrical machines such as transformers, generators, AC, DC, stepper and servo motors, variable frequency drives and data acquisition using LabView.

**Electrical Design Track**

This track focuses on the knowledge and skills associated with electrical system design using computer-aided drafting software packages. Coursework includes 2D and 3D CAD software, networking, electrical machines such as transformers, generators, AC, DC, stepper and servo motors, variable frequency drives and the generation and distribution of electrical power.

**Power Systems & Alternative Energy**

This track focuses on the knowledge and skills associated with the generation, management and distribution of electrical power. Coursework includes control equipment such as PLCs, networking, electrical machines such as transformers, generators, AC, DC, stepper and servo motors, variable frequency drives and the generation, distribution and management of electrical power.

Visit Career Coach for career information.

**Note**

The A.A.S. degree in Electrical Engineering Technology is accepted at some colleges and universities as the first two years of a 2+2 bachelor’s-level engineering technology program. These students are advised to complete a second Physics class (PHY 132 or PHY 152) to ensure they are not considered deficient with credit hours in Physics.

Graduates may seek employment as technicians, engineering assistants, field service engineers, technical managers, or salespersons in electrical generation/distribution, industrial maintenance, automation, electronic repair or other fields requiring a broad-based knowledge of electrical and electronic concepts.

**Electrical Engineering Technology (A40180)**

**Degree Awarded**

The Associate in Applied Science Degree - Electrical Engineering Technology is awarded by the College upon completion of any of the program tracks.
Note
Students in the Electrical Engineering Technology (A40180) program desiring to earn an additional degree in Computer Engineering Technology (A40160), or Electronics Engineering Technology (A40200), or an additional track under Electrical Engineering Technology (A40180) must meet the specified course requirements.

Admissions
- A high school diploma or equivalent is required. High school students preparing for an Engineering Technology program should complete courses in algebra, geometry and advanced mathematics. Skills and proficiencies should be developed in writing, computer literacy and science.
- CPCC placement tests are required in English and mathematics. Advancement Studies in mathematics and English courses are available for students to build basic skills and knowledge. A counseling/orientation appointment follows placement testing.
- Many courses require prerequisites or co-requisites; check the Courses section for details.

Program Accreditation
The Electrical Engineering Technology program at CPCC is accredited by the Engineering Technology Accreditation Commission of the Accreditation Board of Engineering and Technology (TAC of ABET), http://www.abet.org.

Notes
The Electrical Engineering Technology program provides a basic background in the practical application of both fundamental and specialized electrical and electronic principles. Courses are designed to present technical content in an order that provides students with progressive levels of job-related knowledge and skills. There are fundamental electrical and electronic courses and concentrated study in various fields of the electrical industry, including industrial controls, electrical machines and programmable logic controllers and automated manufacturing systems.

The Computer/Electrical/Electronics Engineering Technology laboratories are staffed during day and evening hours so that students may devote as much time as possible to laboratory assignments. These modern facilities include adequate equipment to support practical laboratory activity in all courses. Students who do not take program-related courses for two consecutive semesters must re-enter the program under the Catalog in effect at the time of re-entry.

Contact Information
The Electrical Engineering Technology program is in the Engineering Technology Division. For additional information, visit www.cpcc.edu/et or call the Program Chair at 704.330.6479.

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<td>Art History Survey I</td>
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<td>Art History Survey II</td>
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<td>Survey of American Art</td>
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<td>DAN 211</td>
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<td>ECO 251</td>
<td>Principles of Microeconomics</td>
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<td>Principles of Macroeconomics</td>
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<td>GEO 111</td>
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HIS 111 World Civilizations I
HIS 112 World Civilizations II
HIS 131 American History I
HIS 132 American History II
POL 110 Introduction to Political Science
POL 120 American Government
POL 210 Comparative Government
POL 220 International Relations
PSY 150 General Psychology
PSY 237 Social Psychology
PSY 241 Developmental Psychology
PSY 281 Abnormal Psychology
SOC 210 Introduction to Sociology
SOC 213 Sociology of the Family
SOC 220 Social Problems
SOC 225 Social Diversity

**Major Requirements**

**ELC 135** Electrical Machines 3.0
**ELN 133** Digital Electronics 4.0
**ELC 231** Electric Power Systems 4.0
**ELN 131** Analog Electronics I 4.0
**ELN 232** Introduction to Microprocessors 4.0
**ELN 260** Prog Logic Controllers 4.0
Select one of the following:

- **ELC 138** & **ELC 139** DC Circuit Analysis and AC Circuit Analysis 4.0
- **ELC 131** Circuit Analysis I 4.0
- **ELC 133** Circuit Analysis II 4.0
- **ELC 136** Electrical Machines II 4.0
- **ELN 150** Computer-Aided Drafting for Electronics 2.0
- **MAT 223** Applied Calculus 3.0
- **ELN 193** Selected Topics in Electronics 3.0
- **CSC 134** C++ Programming 3.0
Select 4 credits from the following:

- **PHY 131** Physics-Mechanics
- **PHY 151** College Physics I
- **PHY 251** General Physics I
Select 3 credits from the following:

- **MAT 122** Algebra/Trigonometry II
- **MAT 172** Precalculus Trigonometry
- **MAT 272** Calculus II

**Technical Electives**

Select two courses from the following:

- **ELN 233** Microprocessor Systems
- **ELN 132** Analog Electronics II
- **PCI 173** Programmable Systems
- **ELC 233** Energy Management
- **CTI 130** Operating Systems and Device Foundation
- **ELC 234** Electrical System Design
- **ELC 213** Instrumentation
- **ELN 237** Local Area Networks
- **PCI 162** Instrumentation Controls

PCI 170 DAQ and Control
PCI 172 SCADA Systems
DFT 151 CAD I
DFT 152 CAD II
DFT 153 CAD III
WBL 112 Work-Based Learning I
WBL 122 Work-Based Learning II
NET 125 Networking Basics
CSC 151 JAVA Programming
CSC 139 Visual BASIC Programming
MAT 273 Calculus III
PHY 253 Modern Physics
MEC 130 Mechanisms
ATR 211 Robot Programming
CSC 153 C# Programming
MEC 210 Applied Mechanics
MEC 265 Fluid Mechanics
ATR 112 Introduction to Automation

**Total Credits** 75

No diplomas offered.

**Electrical Engineering Technology Certificates (C40180)**

**Electrical Engineering Technology with a Specialization in Electrical Engineering Technology Pathway(C40180-C5)**

This certificate is also available to students enrolled in Career and College Promise.

**General Education Requirements**

**MAT 121** Algebra/Trigonometry I 3.0

**Major Requirements**

**ELC 131** Circuit Analysis I 4.0
**ELN 131** Analog Electronics I 4.0
**MAT 223** Applied Calculus 3.0
**ELN 193** Selected Topics in Electronics 3.0
**CSC 134** C++ Programming 3.0
Select 4 credits from the following:

- **PHY 131** Physics-Mechanics
- **PHY 151** College Physics I
- **PHY 251** General Physics I
Select 3 credits from the following:

- **MAT 122** Algebra/Trigonometry II
- **MAT 172** Precalculus Trigonometry
- **MAT 272** Calculus II

**Technical Electives**

Select two courses from the following:

- **ELN 233** Microprocessor Systems
- **ELN 132** Analog Electronics II
- **PCI 173** Programmable Systems
- **ELC 233** Energy Management
- **CTI 130** Operating Systems and Device Foundation
- **ELC 234** Electrical System Design
- **ELC 213** Instrumentation
- **ELN 237** Local Area Networks
- **PCI 162** Instrumentation Controls
- **PCI 170** DAQ and Control
- **PCI 172** SCADA Systems
- **DFT 151** CAD I
- **DFT 152** CAD II
- **DFT 153** CAD III
- **WBL 112** Work-Based Learning I
- **WBL 122** Work-Based Learning II
- **NET 125** Networking Basics
- **CSC 151** JAVA Programming
- **CSC 139** Visual BASIC Programming
- **MAT 273** Calculus III
- **PHY 253** Modern Physics
- **MEC 130** Mechanisms
- **ATR 211** Robot Programming
- **CSC 153** C# Programming
- **MEC 210** Applied Mechanics
- **MEC 265** Fluid Mechanics
- **ATR 112** Introduction to Automation

**Total Credits** 15

**Electrical Systems Technology**

This curriculum is designed to provide training for persons interested in the installation and maintenance of electrical systems found in residential, commercial, and industrial facilities. Coursework, most of which is hands-on, includes such topics as AC/DC theory, basic wiring practices, programmable logic controllers, industrial motor controls, applications of the National Electric Code and other subjects as local needs require. Graduates should qualify for a variety of jobs in the electrical field as an on-the-job trainee or apprentice assisting in the layout, installation, and maintenance of electrical systems.

Visit Career Coach for career information.
Electrical Systems Technology (A35130)

Degree Awarded

The Associate in Applied Science Degree – Electrical Systems Technology is awarded by the College upon completion of this program.

Admissions

Completion of the high school diploma or equivalent is required. Many courses have prerequisites or co-requisites; check the Course Descriptions section for details.

Contact Information

The Electrical Systems Technology program is in the Construction Technologies Division. For more information, call 704.330.4452 or 704.330.4408.

Visit Career Coach for career information.

General Education Requirements

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Electrical Systems Technology Diploma (D35130)

The Electrical Systems Technology curriculum is designed to provide training for persons interested in the installation and maintenance of electrical/electronic systems found in residential, commercial and industrial facilities. Training, most of which is hands-on, will include such topics as AC/DC theory, basic wiring practices, digital electronics, programmable logic controllers, industrial motor controls, the National Electric Code and other subjects as local needs require. Graduates should qualify for a variety of jobs in the electrical systems field as an on-the-job trainee or apprentice, assisting in the layout, installation and maintenance of electrical/electronic systems.

Diploma Awarded

A diploma in Electrical Systems Technology is awarded by the College upon completion of this program.

Admissions

Completion of the high school diploma or equivalent is required as the foundation of a career in this area. Many courses have prerequisites or corequisites; check the Course Descriptions section for details.

Contact Information

The Electrical Systems Technology program is in the Construction Technologies Division. For more information, call 704.330.4452 or 704.330.4408.

General Education Requirements

Select one of the following:

- MAT 110 Mathematical Measurement and Literacy 3.0
- MAT 143 Quantitative Literacy
- MAT 171 Precalculus Algebra

Major Requirements

Complete one of two tracks (See below) 13.0

Total Credits 72

Solar Track

ELC 130 Advanced Motors and Controls 3.0
ELC 220 Photovoltaic System Technology 3.0
ELC 221 Advanced Photovoltaic System Designs 3.0
ELC 228 Programmable Logic Controllers Applications 4.0

Total Credits 13

Design Track

ELC 115 Industrial Wiring 4.0
ELC 215 Electrical Maintenance 3.0
ELC 234 Electrical System Design 3.0
BPR 130 Print Reading-Construction 3.0

Total Credits 13

Total Credits 44

- Electrical Systems Technology Certificate Specialization in Electrical Installation and Maintenance Commercial (C35130-C1) (p. 152)
- Electrical Systems Technology Certificate Specialization in Electrical Installation and Maintenance Control Wiring (C35130-C2) (p. 152)
- Electrical Systems Technology Certificate Specialization in Electrical Installation and Maintenance Residential (C35130-C3) (p. 152)
- Electrical Systems Technology Certificate Specialization in Electrical Installation and Maintenance Industrial (C35130-C4) (p. 152)
- Electrical Systems Technology Certificate Specialization in Installation and Maintenance Construction Wiring (C35130-C6) (p. 152)
- Electrical Systems Technology Certificate Specialization in Installation and Maintenance (C35130-C7) (p. 152)
- Electrical Systems Technology Certificate Specialization in Electrical Installation and Maintenance (C35130-C8) (p. 153)
Electrical Systems Technology Certificate Specialization in Electrical Installation and Maintenance Control Wiring (C35130-C2)

Major Requirements

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Total Credits 18

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Electrical Systems Technology Certificate Specialization in Electrical Installation and Maintenance Residential (C35130-C3)

Major Requirements

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Total Credits 16

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Electrical Systems Technology Certificate Specialization in Installation and Maintenance Construction Wiring (C35130-C6)

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Total Credits 15

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Electrical Systems Technology Certificate Specialization in Installation and Maintenance (C35130-C7)

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Total Credits 14

Electrical Systems Technology Certificate Specialization in Electrical Installation and Maintenance (C35130-C8)

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Total Credits 16

Electrical Systems Technology Certificate Specialization in Fast Track Residential (C35130-C9)

Major Requirements

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Total Credits 16

Electrical Systems Technology Certificate Specialization in Applied Electrical Technology Electrical Design (C35130-11)

Major Requirements

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Total Credits 18

Electrical Systems Technology Certificate Specialization in Applied Electrical Technology AHR Controls (C35130-12)

Major Requirements

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Electrical Systems Technology Certificate Specialization in Applied Electrical Technology Electrical Physical Design I (C35130-13)

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Total Credits 11

Electrical Systems Technology Certificate Specialization in Applied Electrical Technology Physical Design II (C35130-14)

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<td>ELC 115</td>
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<td>ELC 121</td>
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</tr>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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</tbody>
</table>
A broad-based core of courses, including basic electricity, solid-state fundamentals, digital concepts and microprocessors, ensures the student will develop the skills necessary to perform entry-level tasks. Emphasis is placed on developing the student ability to analyze and troubleshoot electronic systems.

During the 2nd year of study, Electronics Engineering Technology students focus on acquiring more specific skills and knowledge. Areas of study include setup, calibration and maintenance of instrumentation devices, piping & instrumentation diagrams (P&ID), programmable logic controllers (PLC), programmable application controllers (PAC), networking, programming, human-machine interfaces (HMI), distributed control system (DCS) configuration, process control loop tuning, data acquisition using products such as LabView, and advanced topics in microprocessors and analog electronics.

Note

The A.A.S. degree in Electronics Engineering Technology is accepted at some colleges and universities as the first two years of a 2+2 bachelor’s-level engineering technology program. These students are advised to complete a second Physics class (PHY 132 or PHY 152) to ensure they are not considered deficient with credit hours in physics.

Graduates should qualify for employment as engineering assistants or electronic technicians with job titles such as electronics engineering technician, field service technician, maintenance technician, communications technician, electronic tester, electronic systems integrator, electronics and instrumentation technician, control technician, bench technician and production control technician.

Visit Career Coach for career information.

Electronics Engineering Technology (A40200)

Degree Awarded

The Associate in Applied Science degree - Electronics Engineering Technology is awarded by the College upon completion of any of the program tracks.

Note

Students in the Electronics Engineering Technology (A40200) program desiring to earn an additional degree in Computer Engineering Technology (A40160), or Electrical Engineering Technology (A40180), or an additional track under Electronics Engineering Technology (A40200) must meet the specified course requirements.

Admissions

- A high school diploma or equivalent is required. High school students preparing for an Engineering Technology program should complete courses in algebra, geometry and advanced mathematics. Skills and proficiencies should be developed in writing, computer literacy and science.
- CPCC placement tests are required in English and mathematics. Advancement Studies in mathematics and English courses are available for students to build basic skills and knowledge. A counseling/orientation appointment follows placement testing.
- Many courses require prerequisites or co-requisites; check the Courses section for details.
Program Accreditation
The Electronics Engineering Technology program at CPCC is accredited by the Engineering Technology Accreditation Commission of the Accreditation Board of Engineering and Technology (TAC of ABET), http://www.abet.org.

Note
The Computer/Electrical/Electronics Engineering Technology laboratories are staffed during day and evening hours so that students may devote as much time as possible to laboratory assignments. These modern facilities include adequate equipment to support practical laboratory activity in all courses. Students who do not take program-related courses for two consecutive semesters must re-enter the program under the Catalog in effect as the time of re-entry.

Contact Information
The Electronics Engineering Technology program is in the Engineering Technology Division. For additional information, visit www.cpcc.edu/et or call the Engineering Division at 704.330.6860.

Visit Career Coach for career information.

General Education Requirements

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<td>Introduction to Jazz</td>
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<td>Cultural Anthropology</td>
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<td>Survey of Economics</td>
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<td>Principles of Microeconomics</td>
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<td>International Relations</td>
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<td>ELN 133</td>
<td>Digital Electronics</td>
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<td>ELN 260</td>
<td>Prog Logic Controllers</td>
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<td>ELN 232</td>
<td>Introduction to Microprocessors</td>
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<td>ELN 150</td>
<td>Computer-Aided Drafting for Electronics</td>
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<td>ELC 133</td>
<td>Circuit Analysis II</td>
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<td>Take 1 of two groups:</td>
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Select 3 credits of the following:

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</table>
Group 1:
- ELC 131 Circuit Analysis I

Group 2:
- ELC 138 DC Circuit Analysis
- ELC 139 AC Circuit Analysis

Other Major Requirements:
- PCI 173 Programmable Systems 4.0
- MAT 223 Applied Calculus 3.0
- SEL 193 Selected Topics in __________ 3.0
- CSC 134 C++ Programming 3.0
- ELC 135 Electrical Machines 3.0

Physics:
Take 4 credits:
- PHY 131 Physics-Mechanics
- PHY 151 College Physics I
- PHY 251 General Physics I

Algebra II/Trigonometry:
Take 3 credits:
- MAT 122 Algebra/Trigonometry II
- or UNCC Transfer 2+2, take
  - MAT 172 Precalculus Trigonometry
  - MAT 272 Calculus II

Technical Electives:
Take 6 credits:
- ELN 233 Microprocessor Systems
- ELC 136 Electrical Machines II
- ELC 231 Electric Power Systems
- ELN 132 Analog Electronics II
- ELC 233 Energy Management
- CTI 130 Operating Systems and Device Foundation
- ELC 234 Electrical System Design
- ELC 213 Instrumentation
- ELN 237 Local Area Networks
- PCI 162 Instrumentation Controls
- PCI 170 DAQ and Control
- PCI 172 SCADA Systems
- DFT 151 CAD I
- DFT 152 CAD II
- DFT 153 CAD III
- WBL 112 Work-Based Learning I
- WBL 122 Work-Based Learning II
- NET 125 Networking Basics
- CSC 151 JAVA Programming
- CSC 139 Visual BASIC Programming
- MAT 273 Calculus III
- PHY 253 Modern Physics
- MEC 130 Mechanisms
- ATR 211 Robot Programming
- CSC 153 C# Programming
- MEC 210 Applied Mechanics
- MEC 265 Fluid Mechanics

Total Credits: 73

No diplomas offered.
No certificates offered.

Emergency Medical Science

The Emergency Medical Science curriculum is designed to prepare graduates for careers as entry-level paramedics. The program can provide students with an Associate’s Degree, thus allowing them to advance their emergency medical services (EMS) careers.

The curriculum is divided into two paths: traditional and bridge

1. Traditional path: Students that have no EMS background.
2. Bridge path: Currently credentialed paramedics

While in the program, students will acquire basic and advanced life support knowledge and skills in cutting edge learning environments including classroom and laboratory instruction. Students have unique hospital clinical opportunities at a regional level one trauma center. The field internship portion is completed at one of the nation’s top EMS providers.

The core EMS curriculum will focus on EMS management, rescue operations management and methods of EMS education, giving graduates experience in all facets of EMS leadership.

Students that successfully complete the program will be eligible for the North Carolina and National Paramedic certification examinations.

Employment opportunities include: Emergency Medical Services (EMS) agencies, fire and rescue agencies, critical care transport services, special events, and government agencies.

Visit Career Coach for career information.

Emergency Medical Science (A45340)*

Degree Awarded

The Associate of Applied Science Degree - Emergency Medical Science is awarded by the College upon completion of this program.

Admissions

- A high school diploma or equivalent is required.
- CPCC placement tests are required in English and mathematics. Developmental Studies for English and mathematics classes are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- It is recommended that students meet with an EMS program advisor prior to initial registration.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Contact Information

The Emergency Medical Science Program is in the Public Safety Division of Central Piedmont Community College. For more information, contact Mike Price at 704-330-2722, ext. 3289 or mike.price@cpcc.edu.
General Education Requirements

Required Course:

ENG 111 Writing and Inquiry 3.0

Research English

Take 3 credits: 3.0

ENG 112 Writing and Research in the Disciplines
ENG 113 Literature-Based Research
ENG 114 Professional Research & Reporting

Communication

Take 3 credits: 3.0

COM 110 Introduction to Communication
COM 120 Intro to Interpersonal Communication
COM 231 Public Speaking

Humanities and Fine Arts

Take 3 credits: 3.0

ART 111 Art Appreciation
ART 114 Art History Survey I
ART 115 Art History Survey II
ART 116 Survey of American Art
ART 117 Non-Western Art History
DAN 110 Dance Appreciation
DAN 211 Dance History I
DAN 212 Dance History II
DRA 111 Theatre Appreciation
DRA 112 Literature of the Theatre
DRA 122 Oral Interpretation
ENG 231 American Literature I
ENG 232 American Literature II
ENG 241 British Literature I
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REL 112 Western Religions
REL 211 Introduction to Old Testament
REL 212 Introduction to New Testament
REL 221 Religion in America

Behavioral/Social Sciences

Take 3 credits: 3.0

PSY 150 General Psychology
PSY 241 Developmental Psychology
PSY 281 Abnormal Psychology
SOC 210 Introduction to Sociology
SOC 213 Sociology of the Family
SOC 225 Social Diversity

Mathematics

Take 3 credits: 3.0

MAT 143 Quantitative Literacy
MAT 152 Statistical Methods I
MAT 171 Precalculus Algebra

Major Requirements

Required Courses

EMS 110 EMT 8.0
BIO 168 Anatomy and Physiology I 4.0
BIO 169 Anatomy and Physiology II 4.0

Medical Terminology

EMS 120 Survey of Medical Terminology 2.0

Paramedic

EMS 122 EMS Clinical Practicum I 1.0
EMS 130 Pharmacology 4.0
EMS 131 Advanced Airway Management 2.0
EMS 160 Cardiology I 2.0
EMS 220 Cardiology II 3.0
EMS 221 EMS Clinical Practicum II 2.0
EMS 231 EMS Clinical Practicum III 3.0
EMS 240 Patients With Special Challenges 2.0
EMS 241 EMS Clinical Practicum IV 4.0
EMS 250 Medical Emergencies 4.0
EMS 260 Trauma Emergencies 2.0
EMS 270 Life Span Emergencies 3.0
EMS 285 EMS Capstone 2.0

Select 4.0 credits from the following: 4.0

EMS 125 EMS Instructor Methodology
EMS 235 EMS Management
EMS 140 Rescue Scene Management
EMS 150 Emergency Vehicles and EMS Communication
EMS 280 EMS Bridging Course

Total Credits 74

No diplomas offered.

No certificates offered.

Fire Protection Technology

The Fire Protection Technology curriculum is designed to provide individuals with technical and professional knowledge to make decisions regarding fire protection for both public and private sectors. It also provides a sound foundation for continuous higher learning in fire protection, administration and management.

Course work includes classroom and laboratory exercises to introduce the student to various aspects of fire protection. Students will learn technical
and administrative skills such as hydraulics, hazardous materials, arson investigation, fire protection safety, fire suppression management, law and code.

Graduates should qualify for employment in governmental agencies, industrial firms, insurance rating organizations, educational organizations and municipal fire departments. Employed persons should have opportunities for skilled and supervisory level positions within their current organizations.

Visit Career Coach for career information.

Fire Protection Technology (A55240)

Degree Awarded

The Associate in Applied Science degree - Fire Protection Technology is awarded by the College upon completion of the program.

Admissions

- A high school diploma or equivalent is required.
- Placement tests are required for admission to particular courses.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Notes

- A minimum grade of “C” is required in all FIP prefix courses for successful completion of the program.
- Students may obtain a suggested course sequence list from the program chair.
- It is recommended that students meet with a Fire Protection Program faculty advisor prior to initial registration.

Contact Information

The Fire Protection Technology program is a part of the Public Safety Division. For more information, call 704.330.4619.

Visit Career Coach for career information.

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<tr>
<td>ENG 231</td>
<td>American Literature I</td>
<td></td>
</tr>
<tr>
<td>ENG 232</td>
<td>American Literature II</td>
<td></td>
</tr>
<tr>
<td>ENG 241</td>
<td>British Literature I</td>
<td></td>
</tr>
<tr>
<td>ENG 242</td>
<td>British Literature II</td>
<td></td>
</tr>
<tr>
<td>ENG 251</td>
<td>Western World Literature I</td>
<td></td>
</tr>
<tr>
<td>ENG 252</td>
<td>Western World Literature II</td>
<td></td>
</tr>
<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
<td></td>
</tr>
<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
<td></td>
</tr>
<tr>
<td>MUS 210</td>
<td>History of Rock Music</td>
<td></td>
</tr>
<tr>
<td>MUS 213</td>
<td>Opera and Musical Theatre</td>
<td></td>
</tr>
<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
<td></td>
</tr>
<tr>
<td>PHI 220</td>
<td>Western Philosophy I</td>
<td></td>
</tr>
<tr>
<td>PHI 221</td>
<td>Western Philosophy II</td>
<td></td>
</tr>
<tr>
<td>PHI 230</td>
<td>Introduction to Logic</td>
<td></td>
</tr>
<tr>
<td>REL 110</td>
<td>World Religions</td>
<td></td>
</tr>
<tr>
<td>REL 111</td>
<td>Eastern Religions</td>
<td></td>
</tr>
<tr>
<td>REL 112</td>
<td>Western Religions</td>
<td></td>
</tr>
<tr>
<td>REL 211</td>
<td>Introduction to Old Testament</td>
<td></td>
</tr>
<tr>
<td>REL 212</td>
<td>Introduction to New Testament</td>
<td></td>
</tr>
<tr>
<td>REL 221</td>
<td>Religion in America</td>
<td></td>
</tr>
</tbody>
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Major Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIP 120</td>
<td>Introduction to Fire Protection</td>
<td>3.0</td>
</tr>
<tr>
<td>FIP 124</td>
<td>Fire Prevention &amp; Public Education</td>
<td>3.0</td>
</tr>
<tr>
<td>FIP 132</td>
<td>Building Construction</td>
<td>3.0</td>
</tr>
<tr>
<td>FIP 152</td>
<td>Fire Protection Law</td>
<td>3.0</td>
</tr>
<tr>
<td>FIP 220</td>
<td>Fire Fighting Strategies</td>
<td>3.0</td>
</tr>
<tr>
<td>FIP 228</td>
<td>Local Government Finance</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Select 4 credits of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIP 230</td>
<td>Chemistry of Hazardous Materials I</td>
<td></td>
</tr>
<tr>
<td>CHM 151</td>
<td>General Chemistry I</td>
<td></td>
</tr>
<tr>
<td>PHY 151</td>
<td>College Physics I</td>
<td></td>
</tr>
</tbody>
</table>

Take 1 course from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIP 231</td>
<td>Chemistry of Hazardous Materials II</td>
<td></td>
</tr>
<tr>
<td>CHM 152</td>
<td>General Chemistry II</td>
<td></td>
</tr>
<tr>
<td>PHY 152</td>
<td>College Physics II</td>
<td></td>
</tr>
</tbody>
</table>

Major Electives

Select 18 credits of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIP 128</td>
<td>Detection and Investigation</td>
<td></td>
</tr>
<tr>
<td>FIP 136</td>
<td>Inspections and Codes</td>
<td></td>
</tr>
<tr>
<td>FIP 140</td>
<td>Industrial Fire Protection</td>
<td></td>
</tr>
</tbody>
</table>

18.0
**Geomatics Technology**

The Geomatics Technology curriculum provides training for technicians in the many areas of geomatics and surveying. Surveyors are involved in land surveying, route surveying, construction surveying, photogrammetry, mapping, global positioning systems, geographical information systems and other areas of property description and measurements.

Course work includes the communication and computational skills required for boundary, construction, route and control surveying, photogrammetry, topography, drainage, surveying law and subdivision design, with emphasis upon applications of electronic data collection and related software including CAD.

Graduates should qualify for jobs as survey party chief, instrument person, surveying technician, highway surveyor, mapper, GPS technician and CAD operator. Graduates will be prepared to pursue the requirements necessary to become a Professional Land Surveyor in North Carolina.

Visit Career Coach for career information.

**Geomatics Technology (A40420)**

**Degree Awarded**

The Associate in Applied Science Degree - Geomatics Technology will be awarded by the College upon completion of this program.

**Admissions**

- A high school diploma or equivalent is required.
- CPCC placement tests are required in English and Mathematics. Developmental classes in English and Mathematics courses are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- Students should see a Faculty Advisor before registration.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

**Note**

Students who do not take program-related courses for a one year period must reenter the program under the Catalog in effect at the time of reentry.

**Contact Information**

The Geomatics Technology program is in the Engineering Technology Division. For more information, call Fred Gore at 704.330.6895, or visit our website at www.cpcc.edu/et.

Visit Career Coach for career information.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
<td>3.0</td>
</tr>
<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>or COM 231</td>
<td>Public Speaking</td>
<td></td>
</tr>
</tbody>
</table>

Select 3 credits of the following: 3.0

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td></td>
</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
<td></td>
</tr>
<tr>
<td>MAT 172</td>
<td>Precalculus Trigonometry</td>
<td></td>
</tr>
<tr>
<td>MAT 271</td>
<td>Calculus I</td>
<td></td>
</tr>
</tbody>
</table>

Select 3 credits of the following: 3.0

---

**Fire Protection Technology Certificate Specialization in Fire Management (C55240-C1)**

**Major Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIP 240</td>
<td>Fire Service Supervision</td>
<td>3.0</td>
</tr>
<tr>
<td>FIP 248</td>
<td>Fire Service Personnel Administration</td>
<td>3.0</td>
</tr>
<tr>
<td>FIP 256</td>
<td>Municipal Public Relations</td>
<td>3.0</td>
</tr>
<tr>
<td>EPT 140</td>
<td>Emergency Management</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits 12

**Fire Protection Technology Certificate Specialization in Basics in Fire Protection (C55240-C2)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIP 120</td>
<td>Introduction to Fire Protection</td>
<td>3.0</td>
</tr>
<tr>
<td>FIP 124</td>
<td>Fire Prevention &amp; Public Education</td>
<td>3.0</td>
</tr>
<tr>
<td>FIP 128</td>
<td>Detection and Investigation</td>
<td>3.0</td>
</tr>
<tr>
<td>FIP 220</td>
<td>Fire Fighting Strategies</td>
<td>3.0</td>
</tr>
<tr>
<td>FIP 140</td>
<td>Industrial Fire Protection</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits 15

**Fire Protection Technology Certificate with a Specialization in Firefighting Strategy and Tactics (C55240-C3)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>FIP 132</td>
<td>Building Construction</td>
<td>3.0</td>
</tr>
<tr>
<td>FIP 220</td>
<td>Fire Fighting Strategies</td>
<td>3.0</td>
</tr>
<tr>
<td>FIP 221</td>
<td>Advanced Fire Fighting Strategies</td>
<td>3.0</td>
</tr>
<tr>
<td>FIP 224</td>
<td>Fire Instructor I &amp; II</td>
<td>4.0</td>
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</table>

Total Credits 13
### Geomatics Technology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
<td></td>
</tr>
<tr>
<td>ART 116</td>
<td>Survey of American Art</td>
<td></td>
</tr>
<tr>
<td>DRA 111</td>
<td>Theatre Appreciation</td>
<td></td>
</tr>
<tr>
<td>ENG 231</td>
<td>American Literature I</td>
<td></td>
</tr>
<tr>
<td>ENG 251</td>
<td>Western World Literature I</td>
<td></td>
</tr>
<tr>
<td>HUM 160</td>
<td>Introduction to Film</td>
<td></td>
</tr>
<tr>
<td>HUM 211</td>
<td>Humanities I</td>
<td></td>
</tr>
<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
<td></td>
</tr>
<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
<td></td>
</tr>
<tr>
<td>MUS 210</td>
<td>History of Rock Music</td>
<td></td>
</tr>
<tr>
<td>PHI 220</td>
<td>Western Philosophy I</td>
<td></td>
</tr>
<tr>
<td>PHI 230</td>
<td>Introduction to Logic</td>
<td></td>
</tr>
<tr>
<td>Select 3 credits of the following:</td>
<td></td>
<td>3.0</td>
</tr>
<tr>
<td>ANT 210</td>
<td>General Anthropology</td>
<td></td>
</tr>
<tr>
<td>ECO 151</td>
<td>Survey of Economics</td>
<td></td>
</tr>
<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</td>
<td></td>
</tr>
<tr>
<td>GEO 111</td>
<td>World Regional Geography</td>
<td></td>
</tr>
<tr>
<td>HIS 131</td>
<td>American History I</td>
<td></td>
</tr>
<tr>
<td>POL 120</td>
<td>American Government</td>
<td></td>
</tr>
<tr>
<td>POL 210</td>
<td>Comparative Government</td>
<td></td>
</tr>
<tr>
<td>POL 220</td>
<td>International Relations</td>
<td></td>
</tr>
<tr>
<td>PSY 150</td>
<td>General Psychology</td>
<td></td>
</tr>
<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
<td></td>
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<tr>
<td><strong>Major Requirements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEG 115</td>
<td>Intro to Tech &amp; Sustainability</td>
<td>3.0</td>
</tr>
<tr>
<td>SRV 110</td>
<td>Surveying I</td>
<td>4.0</td>
</tr>
<tr>
<td>CEG 211</td>
<td>Hydrology &amp; Erosion Control</td>
<td>3.0</td>
</tr>
<tr>
<td>CEG 151</td>
<td>Cad for Engineering Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>SRV 111</td>
<td>Surveying II</td>
<td>4.0</td>
</tr>
<tr>
<td>SRV 210</td>
<td>Surveying III</td>
<td>4.0</td>
</tr>
<tr>
<td>SRV 220</td>
<td>Surveying Law</td>
<td>3.0</td>
</tr>
<tr>
<td>CEG 230</td>
<td>Subdivision Planning &amp; Design</td>
<td>3.0</td>
</tr>
<tr>
<td>SRV 240</td>
<td>Topo/Site Surveying</td>
<td>4.0</td>
</tr>
<tr>
<td>CEG 111</td>
<td>Introduction to GIS and Gnss</td>
<td>4.0</td>
</tr>
<tr>
<td>or GIS 111</td>
<td>Introduction to GIS</td>
<td></td>
</tr>
<tr>
<td>&amp; GIS 112</td>
<td>and Introduction to GPS</td>
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<tr>
<td>EGR 125</td>
<td>Appl Software for Tech</td>
<td>2.0</td>
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<tr>
<td><strong>Geomatics Tracks</strong></td>
<td></td>
<td></td>
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<tr>
<td>Complete one of three groups (See below)</td>
<td>13.0</td>
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<tr>
<td><strong>Total Credits</strong></td>
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</table>

### Geomatics Technology Certificates (C40420)

**Geomatics Technology Certificate with a Specialization in Geomatics Fundamentals (C40420-C1)**

This certificate prepares individuals for entry-level positions in surveying, as well as provides survey technicians with basic knowledge that supports the Survey Technician Certification Program sponsored by the National Society of Professional Surveyors and the American Congress on Surveying and Mapping (NSPS-ACSM). Course work includes fundamental mathematics, computer fundamentals, principles of surveying and CAD drafting. Course work will apply toward the Associate in Applied Science Geomatics Technology degree or the Associate in Applied Science Civil Engineering Technology degree.

**Certificate Awarded**

A certificate is awarded in Geomatics Fundamentals upon completion of this program.

**Admissions**

- Completion of a high school diploma or equivalent is required.
- CPCC placement test is required in mathematics. Developmental courses are available for students to build basic skills and knowledge.
- Many courses have prerequisites; check the Courses section of the catalog for details.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Major Requirements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIV 111</td>
<td>Soils and Foundations</td>
<td>4.0</td>
</tr>
<tr>
<td>CEG 212</td>
<td>Introduction to Environmental Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>CIV 125</td>
<td>Civil/Surveying CAD</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
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</table>

**Geospatial Track:**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIS 120</td>
<td>Introduction to Geodesy</td>
<td>3.0</td>
</tr>
<tr>
<td>GIS 246</td>
<td>Principles of Property Mapping</td>
<td>3.0</td>
</tr>
<tr>
<td>SRV 250</td>
<td>Advanced Surveying</td>
<td>4.0</td>
</tr>
<tr>
<td>GIS 125</td>
<td>CAD for GIS</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td>13</td>
</tr>
</tbody>
</table>

No diplomas offered.

- Geomatics Technology Certificate with a Specialization in Geomatics Fundamentals (C40420-C1) (p. 160)
- Geomatics Technology Certificate with a Specialization in Route Surveying (C40420-C2) (p. 161)
- Geomatics Technology Certificate with a Specialization in Boundary Surveying (C40420-C3) (p. 161)
- Geomatics Technology Certificate with a Specialization in Land Development (C40420-C4) (p. 161)
- Geomatics Technology Certificate Specialization in Mapping (C40420-C5) (p. 162)
- Geomatics Technology Certificate Specialization in Geomatics Technology Pathway (C40420-C6) (p. 162)
Central Piedmont Community College

CEG 115 Intro to Tech & Sustainability 3.0
CEG 111 Introduction to Gis and Gns 4.0
CEG 151 Cad for Engineering Technology 3.0
SRV 110 Surveying I 4.0

Total Credits 17

Geomatics Technology Certificate with a Specialization in Route Surveying (C40420-C2)

This certificate prepares individuals for entry-level positions in route surveying. Course work includes fundamental mathematics, principles of surveying, fundamentals of route surveying, field practices and procedures associated with roadway, pipeline, transmission line and similar linear layouts and CAD drafting. Course work will apply toward the Associates in Applied Science Geomatics Technology or the Associate in Applied Science Civil Engineering Technology degrees.

Certificate Awarded
A certificate is awarded in Route Surveying upon completion of this program.

Admissions
• Completion of a high school diploma or equivalent is required.
• CPCC placement test is required in mathematics. Developmental courses are available for students to build basic skills and knowledge.
• Students should see a faculty advisor before registration.
• Many courses have prerequisites or co-requisites; check the Courses section for details.

Prerequisite for Enrollment
The Geomatics Fundamentals Certificate, C40420-C1, must be completed prior to enrolling in this certificate.

Contact Information
The Geomatics Technology program is in the Engineering Technology Division. For more information, call 704.330.6895.

Major Requirements
SRV 240 Topo/Site Surveying 4.0
SRV 210 Surveying III 4.0
SRV 220 Surveying Law 3.0
SRV 260 Field & Office Practices 2.0

Total Credits 13

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Geomatics Technology Certificate with a Specialization in Boundary Surveying (C40420-C3)

This certificate prepares individuals for entry-level positions in boundary surveying. Course work includes fundamental mathematics, principles of surveying, fundamentals of boundary surveying, field practices and procedures associated with boundary surveying, legal aspects of boundary location and CAD drafting. Course work will apply toward the Associate in Applied Science – Geomatics Technology.

Certificate Awarded
A certificate is awarded in Boundary Surveying upon completion of this program.

Admissions
• Completion of a high school diploma or equivalent is required.
• CPCC placement test is required in mathematics. Developmental courses are available for students to build basic skills and knowledge.
• Students should see a faculty advisor before registration.
• Many courses have prerequisites or co-requisites; check the Courses section for details.

Prerequisite For Enrollment
The Geomatics Fundamentals Certificate, C40420-C1, must be completed prior to enrolling in this certificate.

Contact Information
The Geomatics Technology program is in the Engineering Technology Division. For more information, call 704.330.6895.

Major Requirements
SRV 111 Surveying II 4.0
SRV 210 Surveying III 4.0
SRV 220 Surveying Law 3.0
SRV 260 Field & Office Practices 2.0

Total Credits 13

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Geomatics Technology Certificate with a Specialization in Land Development (C40420-C4)

This certificate prepares individuals for entry-level positions in the development of land for residential use. Course work includes fundamental mathematics; fundamentals of open channel hydraulics; fundamentals of hydrology with applications of the Rational Method; principles of boundary, topographic and site surveying; field practices and procedures associated with boundary, topographic and site surveying; fundamentals of residential subdivision layout; and CAD drafting. Course work will apply toward the Associate in Applied Science – Geomatics Technology.

Certificate Awarded
A certificate is awarded in Land Development upon completion of this program.

Admissions
• Completion of a high school diploma or equivalent is required.
• CPCC placement test is required in mathematics. Developmental courses are available for students to build basic skills and knowledge.
• Students should see a faculty advisor before registration.
• Many courses have prerequisites or co-requisites; check the Courses section for details.
Prerequisite for Enrollment
Geomatics Fundamentals Certificate, C40420-C1 and Boundary Surveying Certificate, C40420-C3, must be completed prior to enrolling in this certificate.

Contact Information
The Geomatics Technology program is in the Engineering Technology Division. For more information, call 704.330.6895.

Major Requirements
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEG 211</td>
<td>Hydrology &amp; Erosion Control</td>
<td>3.0</td>
</tr>
<tr>
<td>CEG 230</td>
<td>Subdivision Planning &amp; Design</td>
<td>3.0</td>
</tr>
<tr>
<td>SRV 111</td>
<td>Surveying II</td>
<td>4.0</td>
</tr>
<tr>
<td>SRV 210</td>
<td>Surveying III</td>
<td>4.0</td>
</tr>
<tr>
<td>SRV 240</td>
<td>Topo/Site Surveying</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

Geomatics Technology Certificate Specialization in Mapping (C40420-C5)
This certificate prepares individuals for entry-level positions in the mapping of land. Course work includes fundamental mathematics; principles of boundary and topographic surveying; field practices and procedures associated with boundary and topographic surveying; fundamentals of mapping and map development; and CAD drafting. Course work will apply toward an Associate in Applied Science Surveying Technology degree.

Certificate Awarded
A certificate is awarded in Mapping upon completion of this program.

Prerequisite for Enrollment
The Geomatics Fundamentals Certificate, C40420-C1, must be completed prior to enrolling in this certificate.

Admissions
- Completion of a high school diploma or equivalent is required.
- CPCC placement test is required in mathematics. Develop mental courses are available for students to build basic skills and knowledge.
- Many courses have prerequisites; check the Courses section of the catalog for details.

Major Requirements
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIS 111</td>
<td>Introduction to GIS</td>
<td>3.0</td>
</tr>
<tr>
<td>GIS 246</td>
<td>Principles of Property Mapping</td>
<td>3.0</td>
</tr>
<tr>
<td>SRV 210</td>
<td>Surveying III</td>
<td>4.0</td>
</tr>
<tr>
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<td>Topo/Site Surveying</td>
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Geomatics Technology Certificate Specialization in Geomatics Technology Pathway (C40420-C6)
This certificate is intended for high school juniors and seniors enrolled in a Career Technical Education Pathway. Course work includes fundamental mathematics; principles of Plane Surveying; principles of Route Surveying; principles of Hydrology and basic study of Geographic Information Systems. All course work may be applied toward an Associate in Applied science Degree – Geomatics Technology.

General Education Requirements
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Geospatial Technology

The Geospatial Technology curriculum provides a broad background in Geographic Information System (GIS) and Global Positioning System (GPS) technologies with practical applications in municipal, industrial, natural resources management and other fields.

Coursework consists of class and hands-on experience with GIS/GPS technologies, including running and modifying current GIS software, creating and manipulating GIS databases and operating GPS technology.

Graduates should find employment as field technicians or as database and mapping assistants.

Visit Career Coach for career information.

Geospatial Technology (A40220)
Degree Awarded
The Associate in Applied Science degree – Geospatial Technology will be awarded by the College upon completion of this program.

Admissions
- A high school diploma or equivalent is required.
- CPCC placement tests are required in English and mathematics. Developmental classes in mathematics and English courses are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- Students should see a faculty advisor before registration.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Note
Students who do not take program-related courses for a one year period must re-enter the program under the Catalog in effect at the time of re-entry.

Contact Information
Geospatial Technology is in the Sciences Division. For more information, call Adam Spillman at 704.330.6652, or visit our website at www.cpcc.edu/science.

Visit Career Coach for career information.

General Education Requirements
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**Total Credits**: 68

- Geospatial Technology Diploma - Geography (D40220-D1) (p. 164)
- Geospatial Technology Diploma - Geographic Information Science (D40220-D2) (p. 164)
- Geospatial Technology Diploma - Geomatics (D40220-D3) (p. 165)

## Geospatial Technology Diplomas (D40220)

### Geospatial Technology Diploma - Geography (D40220-D1)

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**Total Credits**: 37

### Geospatial Technology Diploma - Geographic Information Science (D40220-D2)

#### General Education Requirements

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**Total Credits**: 37

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<td>GEO 110</td>
<td>Introduction to Geography</td>
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<td>GEO 111</td>
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<td>GIS 230</td>
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<td>GIS 241</td>
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<td>3.0</td>
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**Total Credits**: 37

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**Geospatial Technology Diplomas (D40220)**

Geospatial Technology Diploma - Geography (D40220-D1)
GIS 261  Programming in GIS  3.0
GEO 110  Introduction to Geography  3.0

Total Credits  36

Back to Top (p. )

Geospatial Technology Diploma - Geomatics (D40220-D3)

General Education Requirements
ENG 111  Writing and Inquiry  3.0
Select 3 credits of the following:  3.0
  ANT 210  General Anthropology
  ANT 220  Cultural Anthropology
  ANT 221  Comparative Cultures
  ECO 151  Survey of Economics
  ECO 251  Principles of Microeconomics
  ECO 252  Principles of Macroeconomics
  GEO 111  World Regional Geography
  HIS 111  World Civilizations I
  HIS 112  World Civilizations II
  HIS 131  American History I
  HIS 132  American History II
  POL 120  American Government
  POL 210  Comparative Government
  POL 220  International Relations
  PSY 150  General Psychology
  PSY 241  Developmental Psychology
  PSY 281  Abnormal Psychology
  SOC 210  Introduction to Sociology
  SOC 213  Sociology of the Family
  SOC 225  Social Diversity

Major Requirements
GIS 111  Introduction to GIS  3.0
GIS 121  Georeferencing & Mapping  3.0
GIS 120  Introduction to Geodesy  3.0
GIS 125  CAD for GIS  3.0
GIS 240  Air Photo Interpretation  3.0
SRV 110  Surveying I  4.0
CEG 115  Intro to Tech & Sustainability  3.0
SRV 210  Surveying III  4.0
SRV 240  Topo/Site Surveying  4.0

Total Credits  15

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Geospatial Technology Certificate - Geographic Information Science (C40220-C1)

Major Requirements
GIS 111  Introduction to GIS  3.0
GIS 121  Georeferencing & Mapping  3.0
GIS 120  Introduction to Geodesy  3.0
GIS 240  Air Photo Interpretation  3.0
GIS 125  CAD for GIS  3.0

Total Credits  14

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Geospatial Technology Certificate - Geospatial Specialist (C40220-C2)

Major Requirements
GIS 111  Introduction to GIS  3.0
GIS 121  Georeferencing & Mapping  3.0
GIS 221  Advanced Topics in GIS  2.0

Technical Electives
Select 6 credits of the following:  6.0
  GIS 240  Air Photo Interpretation
  GIS 215  GIS Data Models
  GIS 230  GIS Data Creation
  GIS 232  Spatial Databases
  GIS 225  Advanced Methods in GIS
  GIS 241  Cartographic Production
  GIS 235  Raster GIS
  GIS 222  Internet Mapping
  GIS 246  Principles of Property Mapping
  GIS 245  Introduction to Spatial Analysis
  GIS 249  Remote Sensing
  GIS 259  Photogrammetry

Total Credits  14

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- Geospatial Technology Certificate - Geographic Information Science (C40220-C1) (p. 164)
- Geospatial Technology Certificate - Geospatial Specialist (C40220-C2) (p. 165)
- Geospatial Technology Certificate - Database Specialist (C40220-C3) (p. 165)
- Geospatial Technology Certificate - Programming Specialist (C40220-C4) (p. 166)
## Geospatial Technology Certificate - Database Specialist (C40220-C3)

**Major Requirements**
- GIS 111 Introduction to GIS 3.0
- GIS 121 Georeferencing & Mapping 3.0
- DBA 110 Database Concepts 3.0
- CIS 110 Introduction to Computers 3.0

**Technical Electives**
Select 6 credits of the following:
- DBA 115 Database Applications
- DBA 112 Database Utilization
- GIS 215 GIS Data Models
- GIS 232 Spatial Databases

**Total Credits**: 18

## Geospatial Technology Certificate - Programming Specialist (C40220-C4)

**Major Requirements**
- GIS 111 Introduction to GIS 3.0
- GIS 121 Georeferencing & Mapping 3.0
- GIS 261 Programming in GIS 3.0

**Technical Electives**
Select one of the following:
- CSC 133 C Programming & CSC 233 Advanced C Programming
- CSC 134 C++ Programming & CSC 234 Advanced C++ Programming
- CSC 141 Visual C++ Programming & CSC 241 Advanced Visual C++ Programming
- CSC 151 JAVA Programming & CSC 251 Advanced JAVA Programming
- CSC 153 C# Programming & CSC 253 Advanced C# Programming

**Total Credits**: 15

## Geospatial Technology Certificate - Geodetic Specialist (C40220-C5)

**Major Requirements**
- GIS 111 Introduction to GIS 3.0
- GIS 112 Introduction to GPS 3.0
- SRV 110 Surveying I 4.0

**Technical Electives**
- GIS 120 Introduction to Geodesy 3.0
- or SRV 250 Advanced Surveying
- SRV 210 Surveying III
- SRV 240 Topo/Site Surveying

**Total Credits**: 13

## Geospatial Technology Certificate - Photogrammetry Specialist (C40220-C6)

**Major Requirements**
- GIS 111 Introduction to GIS 3.0
- GIS 121 Georeferencing & Mapping 3.0
- GIS 240 Air Photo Interpretation 3.0
- GIS 249 Remote Sensing 3.0
- GIS 259 Photogrammetry 3.0

**Total Credits**: 15

## Geospatial Technology Certificate - Cartography Specialist (C40220-C7)

**Major Requirements**
- GIS 111 Introduction to GIS 3.0
- GIS 121 Georeferencing & Mapping 3.0
- GIS 232 Spatial Databases 3.0
- GIS 222 Internet Mapping 3.0
- GIS 241 Cartographic Production 3.0

**Total Credits**: 15

## Geospatial Technology Certificate - Land Records Specialist (C40220-C9)

**Major Requirements**
- GIS 111 Introduction to GIS 3.0
- GIS 121 Georeferencing & Mapping 3.0
- GIS 246 Principles of Property Mapping 3.0
- SRV 220 Surveying Law 3.0

**Total Credits**: 12

## Geospatial Technology Certificate - Geospatial Analyst (C40220-C10)

**Major Requirements**
- GIS 111 Introduction to GIS 3.0
- GIS 225 Advanced Methods in GIS 3.0
- GIS 215 GIS Data Models 3.0
- GIS 221 Advanced Topics in GIS 2.0
- GIS 235 Raster GIS 3.0

**Electives**
Select 1 of the following courses:
- GIS 230 GIS Data Creation
- GIS 232 Spatial Databases
- GIS 246 Principles of Property Mapping
- GIS 245 Introduction to Spatial Analysis

**Total Credits**: 3.0
Global Logistics and Distribution Technology

Pending SACSCOC approval

The Global Logistics / Distribution Management Technology curriculum prepares individuals for a multitude of career opportunities in distribution, transportation, warehousing, supply chain, and manufacturing organizations.

Course work includes the international and domestic movement of goods from the raw materials source(s) through production and ultimately to the consumer. Courses in transportation, warehousing, inventory control, material handling, purchasing, computerization, OSHA regulations, supply chain operations and federal transportation are emphasized.

Graduates should qualify for positions in a wide range of logistics-related positions in government agencies, manufacturing, and service organizations. Employment opportunities include entry-level purchasing, material management, warehousing, inventory, transportation, international freight, and logistics analysts. Upon completion, graduates may be eligible to pursue professional credentials through APICS - the American Production & Inventory Control Society, AST&L - the American Society of Transportation and Logistics, CSCMP - the Council of Supply Chain Management Professionals, and ISM - the Institute for Supply Management.

Global Logistics and Distribution Management (A25610) (pending SACSCOC approval)

Degree Awarded

The Associate in Applied Science Degree – Global Logistics and Distribution Management is awarded by the College upon completion of this program.

Admissions

- Complete required CPCC application.
- A high school diploma or equivalent is required.
- Submit high school transcripts and any college transcripts to the Admissions/Record Center.
- Request college transcripts to be evaluated for transfer credit.
- CPCC placement tests are required in reading comprehension and algebra. Developmental courses in English and mathematics are available for students to build basic skills and knowledge. All needed developmental courses must be completed prior to beginning ACC, BUS, ECM, INT, LOG and MKT prefix courses.
- A counseling/orientation appointment follows placement testing.
- See Program Chair for advising of course sequence and registration advisement. Call 704-330-6595 for an appointment.
- Many courses have prerequisites or co-requisites. Check the Courses section for details.

For More Information

The Global Logistics and Distribution Management program is in the Business and Accounting Division. For information, call the Business and Accounting Division office at 704.330.6595.

General Education Requirements

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
<td>3.0</td>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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<td>MAT 143</td>
<td>Quantitative Literacy</td>
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<td>Statistical Methods I</td>
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<td>ECO 251</td>
<td>Principles of Microeconomics</td>
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<td>or ECO 252</td>
<td>Principles of Macroeconomics</td>
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<td>ART 111</td>
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<td>ART 114</td>
<td>Art History Survey I</td>
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<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
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</tr>
<tr>
<td>ENG 231</td>
<td>American Literature I</td>
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<tr>
<td>ENG 232</td>
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<td>MUS 110</td>
<td>Music Appreciation</td>
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<td>MUS 112</td>
<td>Introduction to Jazz</td>
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<td>PHI 215</td>
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Major Requirements

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<td>BUS 137</td>
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<td>LOG 110</td>
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<td>MKT 120</td>
<td>Principles of Management</td>
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<td>CIS 110</td>
<td>Introduction to Computers</td>
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<td>LOG 125</td>
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<td>LOG 215</td>
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<td>LOG 235</td>
<td>Import/Export Management</td>
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<td>Purchasing Logistics</td>
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<td>LOG 250</td>
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<td>ACC 120</td>
<td>Principles of Financial Accounting</td>
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<td>OMT 110</td>
<td>Intro to Operations Mgmt</td>
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<td>INT 110</td>
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<td>or INT 230</td>
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<td>GER 111</td>
<td>Elementary German I</td>
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<td>and German Lab 1</td>
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<td>Elementary French I</td>
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<td>FRE 181</td>
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Technical Electives

Select 4 credits from the following: 4.0

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<td>ACC 121</td>
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<td>Entrepreneurship I</td>
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<td>BUS 153</td>
<td>Human Resource Management</td>
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<td>BUS 240</td>
<td>Business Ethics</td>
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<td>INT 180</td>
<td>Travel Study Abroad</td>
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<tr>
<td>MKT 224</td>
<td>International Marketing</td>
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</table>
Graphic Arts and Imaging Technology

The Graphics Arts and Imaging Technology curriculum is designed to provide students with knowledge and skills necessary for employment in the printing, publishing, packaging and related industries.

Students will receive hands-on training in computer publishing, imaging technology, offset lithography, screen printing, flexography and emerging printing technologies.

Graduates should qualify for career opportunities within the printing, publishing and packaging industries.

Visit Career Coach for career information.

Graphic Arts and Imaging Technology (A30180)

Degree Awarded

The Associate in Applied Science degree-Graphic Arts and Imaging Technology is awarded by the College upon completion of this program.

Admissions

- A high school diploma or equivalent is required.
- Submit high school transcripts and any college transcripts.
- Placement testing in English, mathematics and reading is required to qualify for ENG 111 and college-level math. Scores on placement tests may require students to take specified Developmental Studies courses. If required, completion of these courses is necessary prior to program admission. Students may, with approval of program chair, take no more than two preadmission courses during their first semester of program admission.
- Students must demonstrate proficiency in computer operation equivalent to or higher than CIS 110 before admission.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Notes

Students must furnish required hand tools for program. A list of these items can be obtained from the program chair or instructors.

Contact Information

The Graphic Arts and Imaging Technology program is in the Technical Careers Division. For more information, call 704.330.4425 or 704.330.4427. See Graphic Arts and Imaging Technology Program instructors or program counselors for suggested sequence.

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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<td>Writing and Research in the Disciplines</td>
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<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<td>MAT 110</td>
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<td>Myth in Human Culture</td>
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<td>Introduction to Film</td>
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<td>Opera and Musical Theatre</td>
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<td>REL 211</td>
<td>Introduction to Old Testament</td>
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</table>
REL 212  Introduction to New Testament
REL 221  Religion in America

Select 3 credits of the following: 3.0

ANT 210  General Anthropology
ANT 220  Cultural Anthropology
ANT 221  Comparative Cultures
ECO 151  Survey of Economics
ECO 251  Principles of Microeconomics
ECO 252  Principles of Macroeconomics
GEO 111  World Regional Geography
HIS 111  World Civilizations I
HIS 112  World Civilizations II
HIS 131  American History I
HIS 132  American History II
POL 120  American Government
POL 210  Comparative Government
POL 220  International Relations
PSY 150  General Psychology
SOC 210  Introduction to Sociology
SOC 213  Sociology of the Family
SOC 225  Social Diversity
PSY 241  Developmental Psychology
PSY 281  Abnormal Psychology
POL 110  Introduction to Political Science
PSY 237  Social Psychology
SOC 220  Social Problems

Major Requirements
GRA 121  Graphic Arts I 4.0
GRA 151  Computer Graphics I 2.0
GRA 152  Computer Graphics II 2.0
GRA 221  Graphic Arts II 4.0
GRA 255  Image Manipulation I 2.0
GRA 256  Image Manipulation II 2.0
GRD 141  Graphic Design I 4.0
PRN 155  Screen Printing I 2.0
PRN 131  Flexography I 4.0

Technical Electives
Select 23 credits of the following: 23.0
GRA 245  Printing Sales/Service
GRA 222  Graphic Arts III
GRA 153  Computer Graphics III
GRA 154  Computer Graphics IV
GRA 140  Graphic Arts Imaging
GRA 110  Graphic Arts Orientation
GRA 230  Substrates & Ink
PRN 156  Screen Printing II
WBL 112  Work-Based Learning I
WBL 132  Work-Based Learning III
PRN 221  Offset Press Operations
BUS 110  Introduction to Business
BUS 139  Entrepreneurship I
MKT 120  Principles of Marketing

CIS 110  Introduction to Computers

Total Credits 67

Graphic Arts and Imaging Technology
Flexography Concentration (A3018A)

Flexography is a concentration under the Graphic Arts and Imaging Technology curriculum. This curriculum is designed to allow students to gain further study into the flexographic printing production process.

Students will produce jobs for labels, tags, boards, packaging and corrugated jobs found in segments of the flexographic industry. Students will concentrate on color reproduction and produce products while understanding the limitations within the production process.

Graduates should qualify for career opportunities within the printing, publishing and packaging industries.

Degree Awarded
The Associate in Applied Science in Graphic and Imaging Technology/Flexography degree is awarded by the College upon completion of this program.

Admissions
- A high school diploma or equivalent is required.
- Submit high school transcripts and any college transcripts.
- Placement testing in English, mathematics and reading is required to qualify for ENG 111 and college-level math. Scores on placement tests may require students to take specified Developmental Studies courses. If required, completion of these courses is necessary prior to program admission. Students may, with approval of the program chair, take no more than two preadmission courses during their first semester of program admission.
- Students must demonstrate proficiency in computer operations equivalent to or higher than CIS 110 before admission.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Notes
Students must furnish required hand tools for program. A list of these items can be obtained from the program chair or instructors.

Contact Information
Graphic and Imaging Technology Flexography is in the Technical Careers Division. For more information, call 704.330.4425 or 704.330.4427. See Graphic Arts and Imaging Technology Program instructors or program counselors for suggested sequence of courses.

General Education Requirements
ENG 111  Writing and Inquiry 3.0
Select one of the following: 3.0
ENG 112  Writing and Research in the Disciplines
ENG 113  Literature-Based Research
ENG 114  Professional Research & Reporting

Select one of the following: 3.0
MAT 110  Mathematical Measurement and Literacy
MAT 143  Quantitative Literacy
Select one of the following: 3.0
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<th>Course Code</th>
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<tr>
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**Technical Electives**

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**Major Requirements**

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CIS 110  Introduction to Computers

Total Credits 76

No diplomas offered.

- Graphic Arts & Imaging Technology Certificate with a Specialization in Offset Press Technician (C30180-C7) (p. 171)
- Graphic Arts & Imaging Technology Certificate with a Specialization in Print Shop Assistant (C30180-C8) (p. 171)
- Graphic Arts & Imaging Technology Certificate with a Specialization in Entry Level Prepress Technician (C30180-C9) (p. 171)
- Graphic Arts & Imaging Technology Certificate with a Specialization in Advanced Prepress Technician (C30180-10) (p. 171)
- Graphic Arts & Imaging Technology Certificate with a Specialization in Screen Printing Technician (C30180-11) (p. 171)
- Graphic Arts & Imaging Technology Certificate with a Specialization in Flexography Technician (C3018A-C1) (p. 171)

Graphic Arts and Imaging Technology Certificates (C30180)

Graphic Arts & Imaging Technology Certificate with a Specialization in Offset Press Technician (C30180-C7)

Major Requirements

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Total Credits 13

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Graphic Arts & Imaging Technology Certificate with a Specialization in Print Shop Assistant (C30180-C8)

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Graphic Arts & Imaging Technology Certificate with a Specialization in Entry Level Prepress Technician (C30180-C9)

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Total Credits 14

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Graphic Arts & Imaging Technology Certificate with a Specialization in Advanced Prepress Technician (C30180-10)

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Total Credits 12

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Graphic Arts & Imaging Technology Certificate with a Specialization in Screen Printing Technician (C30180-11)

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Total Credits 14

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Graphic Arts & Imaging Technology Flexography Certificates (C3018A)

Graphic Arts & Imaging Technology Certificate with a Specialization in Flexography Technician (C3018A-C1)

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Total Credits 14

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Health Information Technology

The Health Information Technology curriculum prepares individuals with the knowledge and skills to process, analyze, abstract, compile, maintain, manage and report health information.
Graduates will

• supervise department functions,
• classify, code and index diagnoses and procedures
• coordinate information for cost control, quality management, statistics, marketing and planning,
• monitor governmental and non-governmental standards,
• facilitate research,
• design system controls to monitor patient information security, and
• work with electronic health records and other technology as it becomes available.

Graduates of this program may be eligible to write the national certification examination to become a Registered Health Information Technician (RHIT). Employment opportunities include: hospitals, rehabilitation facilities, nursing homes, health insurance organizations, out-patient clinics, physicians' offices, hospice, mental health facilities, IT departments working with electronic health records, and electronic health record vendors.

Visit Career Coach for career information.

Health Information Technology (A45360)

Program Accreditation

The Health Information Technology program at CPCC is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

Admissions

• A high school diploma or equivalent is required for program admission.
• Complete a CPCC Admission Application
• Submit official high school transcripts and any official college transcripts (if applicable) to the CPCC Student Records Office.
• In order for college transcripts to be evaluated, submit a Transcript Evaluation Request Form located at www.cpcc.edu/admissions/student-records to the CPCC Student Records Office.
• Complete required placement testing.
• Meet with an academic advisor or counselor for preliminary counseling and interpretation of placement test scores.
• Take the Test of Essential Academic Skills (TEAS)
• This curriculum may be completed on a part-time or full-time basis. Please visit the program website at http://www.cpcc.edu/health_sciences/health-information-technology for more information.
• Attend a HIT Program Information Session prior to admission to the program. Visit the program website listed above for dates and times.
• Complete the HIT Program Admission Packet located at the program website link above.
• Upon admission to the program, students must take all courses as scheduled and sequenced.
• Progression in this program is dependent on satisfying course prerequisites, co-requisites and maintaining a grade of “C” or better for all courses in the curriculum.
• Select 3 credits of the following:

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<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
<td>3.0</td>
</tr>
</tbody>
</table>

• Students re-entering the HIT program must successfully re-take any HIT courses taken five or more years prior to the re-entry point.
• Many courses have prerequisites or co-requisites; check the Courses section for details.
• In order to participate in Professional Practice Experiences at health care facilities, students are required to submit results of a North Carolina state or national criminal background check at their own expense. Students must complete a medical exam, drug test, provide record of immunizations, show proof of medical insurance, and carry CPCC’s accident insurance. The student is responsible for the cost of medical exams, drug tests, immunizations, insurance and criminal background checks.

Notes

• The Health Information Technology Program is offered entirely online with the exception of Professional Practice Experience courses. Professional Practice Experience sites must be geographically accessible to our faculty to insure adequate supervision.
• In addition to tuition and textbooks, there are program-related costs. Professional Practice Experience courses requires a physical examination (including drug testing), updated immunizations and criminal background checks. Professional Practice Experience courses require travel to health care facilities that may be at a distance from the student’s home.

Contact Information

The Health Information Technology Program is in the Health Sciences Division. For more information, first go to the website at http://www.cpcc.edu/health_sciences/health-information-technology. If further assistance is needed, contact the Health Sciences Admissions Clerk at 704.330.6958.

Visit Career Coach for career information.
DRA 122  Oral Interpretation
ENG 231  American Literature I
ENG 232  American Literature II
ENG 241  British Literature I
ENG 242  British Literature II
ENG 251  Western World Literature I
ENG 252  Western World Literature II
MUS 210  History of Rock Music
HUM 130  Myth in Human Culture
HUM 160  Introduction to Film
HUM 211  Humanities I
HUM 212  Humanities II
MUS 110  Music Appreciation
MUS 112  Introduction to Jazz
MUS 210  History of Rock Music
MUS 213  Opera and Musical Theatre
PHI 215  Philosophical Issues
PHI 220  Western Philosophy I
PHI 221  Western Philosophy II
PHI 230  Introduction to Logic
REL 110  World Religions
REL 111  Eastern Religions
REL 112  Western Religions
REL 211  Introduction to Old Testament
REL 212  Introduction to New Testament
REL 221  Religion in America

HIT 110  Fundamentals of Health Information Management  3.0
HIT 112  Health Law and Ethics  3.0
HIT 114  Health Data Systems and Standards  3.0
HIT 210  Healthcare Statistics  3.0
HIT 214  CPT/Other Coding Systems  2.0
HIT 211  ICD Coding  4.0
HIT 216  Quality Management  2.0
HIT 280  Professional Issues  2.0
MED 121  Medical Terminology I  3.0
MED 122  Medical Terminology II  3.0
HIT 226  Principles of Disease  3.0
HIT 218  Management Principles in HIT  3.0
BIO 168  Anatomy and Physiology I  4.0
BIO 169  Anatomy and Physiology II  4.0
HIT 122  Professional Practice Experience I  1.0
HIT 124  Professional Practice Experience II  1.0
HIT 222  Prof Practice Exp III  2.0
CIS 110  Introduction to Computers  3.0
DBA 112  Database Utilization  3.0
HIT 215  Reimbursement Methodology  2.0

Total Credits  74

No diplomas offered.

Health Information Technology Certificates (C45360-C5)

Specialization in Electronic Health Record Implementation Support
This certificate is designed to prepare professionals for Health IT EHR Technical Support. Course work includes fundamentals of healthcare, EHR’s and healthcare informatics.

Workers in this role provide on-site user support for the period of time before and during implementation of health IT systems in clinical and public health settings. These individuals will provide support services, above and beyond what is provided by the vendor, to be sure the technology functions properly and is configured to meet the needs of the redesigned practice workflow.

Major Requirements

HIT 110  Fundamentals of Health Information Management  3.0
HIT 114  Health Data Systems and Standards  3.0
CIS 110  Introduction to Computers  3.0
HIT 220  Health Informatics & EHRs  2.0
HIT 221  Lifecycle of Electronic Health Record  3.0
HIT 225  Healthcare Informatics  4.0

Total Credits  18

Health Information Technology Certificates (C45360-C6)

Specialization in Practice Workflow & Information Management Redesign Specialist
This certificate is designed to prepare professionals for Health IT EHR workflow and design. Coursework includes fundamentals of healthcare, EHR’s, health care informatics and project management.

Workers in this role assist in reorganizing the work of a healthcare provider to take full advantage of the features of health IT in pursuit of meaningful use of health IT to improve health and care.

Major Requirements

HIT 110  Fundamentals of Health Information Management  3.0
HIT 114  Health Data Systems and Standards  3.0
HIT 216  Quality Management  2.0
HIT 221  Lifecycle of Electronic Health Record  3.0
HIT 225  Healthcare Informatics  4.0
HIT 227  Informatics Project Management  3.0

Total Credits  18
Health Science

Health Science Career and College Promise Programs

Four Health Science certificate programs offer a great start to careers in allied health. The first four courses provide an overview of the wide array of allied health professions and the basic skills required to begin a health career. Certificates are available for Medical Assisting, Pharmacy Technology, Nurse Aide and Emergency Medical Services.

The certificates in this program are available to students enrolled in the Career and College Promise program. For more information on Career and College Promise, please visit http://www.cpcc.edu/hsprograms.

There are no degrees offered in this program.

There are no diplomas offered in this program.

Health Science Career and College Promise Certificates

Health Sciences Certificate Specialization in Fundamentals in Medical Assisting (C45920-C1)

Begin your journey toward a new healthcare career. CPCC’s Medical Assisting program can prepare you with the skills and knowledge needed to be a highly successful professional in the medical field. Typical duties of a medical assistant include assisting the physician in administrative tasks, clinical functions or laboratory procedures. Medical Assistants work primarily in doctor’s offices and urgent care facilities.

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSC 110 Orientation to Health Careers</td>
<td>1.0</td>
</tr>
<tr>
<td>HSC 140 Transcultural Healthcare</td>
<td>2.0</td>
</tr>
<tr>
<td>HEA 112 First Aid &amp; CPR</td>
<td>2.0</td>
</tr>
<tr>
<td>MED 121 Medical Terminology I</td>
<td>3.0</td>
</tr>
<tr>
<td>MED 110 Orientation to Medical Assisting</td>
<td>1.0</td>
</tr>
<tr>
<td>MED 118 Medical Law and Ethics</td>
<td>2.0</td>
</tr>
<tr>
<td>MED 130 Administrative Office Procedures I</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

Health Sciences Certificate Specialization in Fundamentals in Pharmacy Technology (C45940-C1)

Pharmacy technicians work closely with pharmacists to help ensure that patients have the medications they need. Employment opportunities include working with pharmacists in hospitals, drug and grocery stores, and other medical settings to help prepare and distribute medicines to patients.

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSC 110 Orientation to Health Careers</td>
<td>1.0</td>
</tr>
<tr>
<td>HSC 140 Transcultural Healthcare</td>
<td>2.0</td>
</tr>
<tr>
<td>HEA 112 First Aid &amp; CPR</td>
<td>2.0</td>
</tr>
<tr>
<td>MED 121 Medical Terminology I</td>
<td>3.0</td>
</tr>
<tr>
<td>PHM 110 Introduction to Pharmacy</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

Health Sciences Certificate Specialization in Nurse Aide (C45970-C1)

A certified nurse aide, or CNA, is a medical professional who provides personal care and performs basic nursing skills for adults. Emphasis is placed on the aging process (including mental, social, and physical needs of the elderly), patient’s rights, nutrition management, elimination procedures, safe environment, restorative services, personal and special care procedures and activities, human body structure/function and related common diseases/disorders, communication and documentation, death and dying, and roles of the nursing assistant and health team members.

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSC 110 Orientation to Health Careers</td>
<td>1.0</td>
</tr>
<tr>
<td>HSC 140 Transcultural Healthcare</td>
<td>2.0</td>
</tr>
<tr>
<td>HEA 112 First Aid &amp; CPR</td>
<td>2.0</td>
</tr>
<tr>
<td>MED 121 Medical Terminology I</td>
<td>3.0</td>
</tr>
<tr>
<td>NAS 101 Nursing Assistant I, Nurse Aide I</td>
<td>6.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

Health Sciences Certificate Specialization in Emergency Medical Science (C45910-C1)

The Emergency Medical Technician program prepares individuals, through classroom instruction and clinical experience, to obtain employment as EMTs with “911” or “emergency” ambulance services. EMTs are also employed with Hospital Emergency Departments, non-emergency (convalescent) services, and private industry.

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSC 110 Orientation to Health Careers</td>
<td>1.0</td>
</tr>
<tr>
<td>HSC 140 Transcultural Healthcare</td>
<td>2.0</td>
</tr>
<tr>
<td>HEA 112 First Aid &amp; CPR</td>
<td>2.0</td>
</tr>
<tr>
<td>MED 121 Medical Terminology I</td>
<td>3.0</td>
</tr>
<tr>
<td>EMS 110 EMT</td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

Horticulture Technology

The Horticulture Technology curriculum is designed to prepare individuals for various careers in horticulture. Classroom instruction and practical laboratory applications of horticultural principles and practices are included in the program of study.

Coursework includes plant science, plant materials, propagation, soils, fertilizers and pest management. Horticulture Technology is a program that focuses on

- the general production and management of cultivated plants, shrubs, flowers, foliage, trees, ground covers and related plant materials,
- the management of technical and business operations connected with horticultural services, and
- the basic science principles needed to understand plants and their management and care.

Also included are courses in plant production, landscaping and the management and operation of horticulture businesses.
Graduates should qualify for employment opportunities in nurseries, garden centers, greenhouses, landscape operations, gardens and governmental agencies. Graduates also should be prepared to take the certified plant professional and licensed pesticide applicators examinations, the North Carolina Certified Plant Professional Exam, as well as the ISA certified arborist exam.

Visit Career Coach for career information.

Horticulture Technology (A15240)

Degree Awarded

The Associate in Applied Science - Horticulture Technology is awarded by the College upon completion of this program.

Admissions

- A high school diploma or equivalent (available through CPCC) is required.
- CPCC placement tests are required in English and mathematics. Developmental Studies mathematics and English courses are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Contact Information

The Horticulture Technology program is in the Professional Careers Division. For more information call 704.330.4827.

Visit Career Coach for career information.

General Education Requirements

ENG 111 Writing and Inquiry 3.0

Select 3 credits of the following: 3.0

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
</tr>
<tr>
<td>ENG 113</td>
<td>Literature-Based Research</td>
</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
</tr>
</tbody>
</table>

Select 3 credits of the following: 3.0

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
</tr>
<tr>
<td>COM 120</td>
<td>Intro to Interpersonal Communication</td>
</tr>
<tr>
<td>COM 231</td>
<td>Public Speaking</td>
</tr>
</tbody>
</table>

Select 3 credits of the following: 3.0

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
</tr>
<tr>
<td>MAT 115</td>
<td></td>
</tr>
<tr>
<td>MAT 140</td>
<td></td>
</tr>
<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
</tr>
<tr>
<td>MAT 152</td>
<td>Statistical Methods I</td>
</tr>
<tr>
<td>MAT 155</td>
<td></td>
</tr>
<tr>
<td>MAT 161</td>
<td></td>
</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
</tr>
</tbody>
</table>

Select 3 credits of the following: 3.0

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
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<tbody>
<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
</tr>
<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
</tr>
<tr>
<td>ART 116</td>
<td>Survey of American Art</td>
</tr>
<tr>
<td>ART 117</td>
<td>Non-Western Art History</td>
</tr>
</tbody>
</table>

Major Requirements

HOR 112 Landscape Design I 3.0
HOR 116 Landscape Management I 3.0
HOR 124 Nursery Operations 3.0
HOR 134 Greenhouse Operations 3.0
HOR 160 Plant Materials I 3.0
HOR 161 Plant Materials II 3.0
HOR 162 Applied Plant Science 3.0
HOR 164 Horticultural Pest Management 3.0
HOR 166 Soils and Fertilizers 3.0
HOR 168 Plant Propagation 3.0
HOR 253 Horticulture Turfgrass 3.0
HOR 257 Arboriculture Practices 2.0
HOR 273 Horticultural Management & Marketing 3.0
CIS 111  Basic PC Literacy  2.0
WBL 111  Work-Based Learning I  1.0
SPA 120  Spanish for the Workplace  3.0

**Technical Electives**

Select 12 credits of the following:  12.0

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AGR 121</td>
<td>Biological Pest Management</td>
</tr>
<tr>
<td>AGR 140</td>
<td>Agricultural Chemicals</td>
</tr>
<tr>
<td>HOR 114</td>
<td>Landscape Construction</td>
</tr>
<tr>
<td>HOR 118</td>
<td>Equipment Operation and Maintenance</td>
</tr>
<tr>
<td>HOR 142</td>
<td>Fruit &amp; Vegetable Production</td>
</tr>
<tr>
<td>HOR 154</td>
<td>Introduction to Horticulture Therapy</td>
</tr>
<tr>
<td>HOR 170</td>
<td>Horticultural Computer Applications</td>
</tr>
<tr>
<td>HOR 213</td>
<td>Landscape Design II</td>
</tr>
<tr>
<td>HOR 215</td>
<td>Landscape Irrigation</td>
</tr>
<tr>
<td>HOR 217</td>
<td>Landscape Management II</td>
</tr>
<tr>
<td>HOR 225</td>
<td>Nursery Production</td>
</tr>
<tr>
<td>HOR 235</td>
<td>Greenhouse Production</td>
</tr>
<tr>
<td>HOR 245</td>
<td>Horticultural Specialty Crops</td>
</tr>
<tr>
<td>HOR 251</td>
<td>Insects &amp; Diseases</td>
</tr>
<tr>
<td>HOR 255</td>
<td>Interiorscapes</td>
</tr>
<tr>
<td>HOR 257</td>
<td>Arboriculture Practices</td>
</tr>
<tr>
<td>HOR 265</td>
<td>Advanced Plant Materials</td>
</tr>
<tr>
<td>HOR 268</td>
<td>Advanced Propagation</td>
</tr>
<tr>
<td>HOR 293</td>
<td>Selected Topics in Horticulture</td>
</tr>
<tr>
<td>TRF 110</td>
<td>Introduction Turfgrass Cultivation &amp; Id And Identification</td>
</tr>
<tr>
<td>TRF 130</td>
<td>Native Flora ID</td>
</tr>
<tr>
<td>TRF 152</td>
<td>Landscape Maintenance</td>
</tr>
</tbody>
</table>

**Total Credits**  74

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**Horticulture Technology Diploma (D15240)**

This diploma is designed to prepare individuals for entry-level positions in the area of horticulture. Course work includes plant science, plant materials, soils and fertilizers, pest management, propagations, plant production and landscaping.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 115</td>
<td></td>
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**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOR 160</td>
<td>Plant Materials I</td>
<td>3.0</td>
</tr>
<tr>
<td>HOR 162</td>
<td>Applied Plant Science</td>
<td>3.0</td>
</tr>
<tr>
<td>HOR 164</td>
<td>Horticultural Pest Management</td>
<td>3.0</td>
</tr>
<tr>
<td>HOR 166</td>
<td>Soils and Fertilizers</td>
<td>3.0</td>
</tr>
<tr>
<td>HOR 168</td>
<td>Plant Propagation</td>
<td>3.0</td>
</tr>
<tr>
<td>HOR 124</td>
<td>Nursery Operations</td>
<td>3.0</td>
</tr>
<tr>
<td>HOR 134</td>
<td>Greenhouse Operations</td>
<td>3.0</td>
</tr>
<tr>
<td>HOR 112</td>
<td>Landscape Design I</td>
<td>3.0</td>
</tr>
<tr>
<td>HOR 150</td>
<td>Introduction to Horticulture</td>
<td>2.0</td>
</tr>
<tr>
<td>HOR 253</td>
<td>Horticulture Turfgrass</td>
<td>3.0</td>
</tr>
<tr>
<td>SPA 120</td>
<td>Spanish for the Workplace</td>
<td>3.0</td>
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</table>

**Major Electives**

Select 6 credits of the following:  6.0

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>HOR 213</td>
<td>Landscape Design II</td>
</tr>
<tr>
<td>HOR 114</td>
<td>Landscape Construction</td>
</tr>
<tr>
<td>HOR 215</td>
<td>Landscape Irrigation</td>
</tr>
<tr>
<td>HOR 170</td>
<td>Horticultural Computer Applications</td>
</tr>
<tr>
<td>HOR 118</td>
<td>Equipment Operation and Maintenance</td>
</tr>
<tr>
<td>HOR 265</td>
<td>Advanced Plant Materials</td>
</tr>
<tr>
<td>FLO 189</td>
<td></td>
</tr>
<tr>
<td>HOR 154</td>
<td>Introduction to Horticulture Therapy</td>
</tr>
<tr>
<td>HOR 293</td>
<td>Selected Topics in Horticulture</td>
</tr>
<tr>
<td>TRF 110</td>
<td>Introduction Turfgrass Cultivation &amp; Id And Identification</td>
</tr>
<tr>
<td>TRF 152</td>
<td>Landscape Maintenance</td>
</tr>
<tr>
<td>HOR 251</td>
<td>Insects &amp; Diseases</td>
</tr>
<tr>
<td>HOR 255</td>
<td>Interiorscapes</td>
</tr>
<tr>
<td>HOR 273</td>
<td>Horticultural Management &amp; Marketing</td>
</tr>
<tr>
<td>HOR 257</td>
<td>Arboriculture Practices</td>
</tr>
<tr>
<td>HOR 161</td>
<td>Plant Materials II</td>
</tr>
<tr>
<td>WBL 111</td>
<td>Work-Based Learning I</td>
</tr>
</tbody>
</table>

**Total Credits**  44

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• Horticulture Technology Certificate with a Specialization in Landscape Design (C15240-C1) (p. 176)
• Horticulture Technology Certificate with a Specialization in Horticulture Maintenance (C15240-C5) (p. 176)
• Horticulture Technology Certificate with a Specialization in Plant Production (C15240-C6) (p. 177)

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**Horticulture Technology Certificates (C15240)**

**Horticulture Technology Certificate with a Specialization in Landscape Design (C15240-C1)**

This certificate is designed to prepare individuals for horticultural careers in the specialized area of landscape design. Coursework includes plant materials, design, graphics and landscape computer applications.

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOR 160</td>
<td>Plant Materials I</td>
<td>3.0</td>
</tr>
<tr>
<td>HOR 213</td>
<td>Landscape Design II</td>
<td>3.0</td>
</tr>
<tr>
<td>HOR 112</td>
<td>Landscape Design I</td>
<td>3.0</td>
</tr>
<tr>
<td>HOR 161</td>
<td>Plant Materials II</td>
<td>3.0</td>
</tr>
<tr>
<td>HOR 170</td>
<td>Horticultural Computer Applications</td>
<td></td>
</tr>
<tr>
<td>HOR 265</td>
<td>Advanced Plant Materials</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Total Credits**  16

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Back to Top (p. )
Horticulture Technology Certificate with a Specialization in Horticulture Maintenance (C15240-C5)

This certificate is designed to prepare individuals for horticultural careers in maintaining landscape and turf areas. Coursework includes plant materials, pest management and landscape and turfgrass management.

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOR 116</td>
<td>Landscape Management I</td>
<td>3.0</td>
</tr>
<tr>
<td>HOR 164</td>
<td>Horticultural Pest Management</td>
<td>3.0</td>
</tr>
<tr>
<td>HOR 118</td>
<td>Equipment Operation and Maintenance</td>
<td>2.0</td>
</tr>
<tr>
<td>or HOR 257</td>
<td>Arboriculture Practices</td>
<td></td>
</tr>
<tr>
<td>HOR 160</td>
<td>Plant Materials I</td>
<td>3.0</td>
</tr>
<tr>
<td>or HOR 161</td>
<td>Plant Materials II</td>
<td></td>
</tr>
<tr>
<td>HOR 253</td>
<td>Horticulture Turfgrass</td>
<td>3.0</td>
</tr>
<tr>
<td>or TRF 110</td>
<td>Introduction Turfgrass Cultivation &amp; Id And Identification</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 14

Visit Career Coach for career information.

Horticulture Technology Certificate with a Specialization in Plant Production (C15240-C6)

This certificate is designed to prepare individuals for horticultural careers as growers of nursery and greenhouse crops. Coursework includes plant materials, pest management, propagation and the operation of nurseries and greenhouses.

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<td>HOR 124</td>
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<td>HOR 134</td>
<td>Greenhouse Operations</td>
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<tr>
<td>HOR 164</td>
<td>Horticultural Pest Management</td>
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<td>HOR 168</td>
<td>Plant Propagation</td>
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<tr>
<td>HOR 160</td>
<td>Plant Materials I</td>
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<tr>
<td>or HOR 161</td>
<td>Plant Materials II</td>
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</table>

Total Credits: 15

Contact Information

The Hospitality Management program is in the Hospitality Education Division. For more information, call 704.330.6669.

Visit Career Coach for career information.

Hospitality Management

The Hospitality Management curriculum prepares individuals to understand and apply the administrative and practical skills needed for supervisory and managerial positions in hotels, motels, resorts, inns, restaurants, institutions and clubs.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MAT 143</td>
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<td>MAT 152</td>
<td>Statistical Methods I</td>
<td></td>
</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
<td></td>
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<td>MAT 172</td>
<td>Precalculus Trigonometry</td>
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<td>MAT 271</td>
<td>Calculus I</td>
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<tr>
<td>ART 111</td>
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<td>ART 114</td>
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<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
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<td>ART 116</td>
<td>Survey of American Art</td>
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<tr>
<td>ART 117</td>
<td>Non-Western Art History</td>
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<td>Dance Appreciation</td>
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<tr>
<td>DAN 211</td>
<td>Dance History I</td>
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<td>DRA 112</td>
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<td>Oral Interpretation</td>
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<td>ENG 251</td>
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<td>ENG 252</td>
<td>Western World Literature II</td>
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<td>HUM 211</td>
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<td>MUS 110</td>
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<td>MUS 112</td>
<td>Introduction to Jazz</td>
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<td>MUS 210</td>
<td>History of Rock Music</td>
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<td>MUS 213</td>
<td>Opera and Musical Theatre</td>
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<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
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<td>PHI 220</td>
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<td>PHI 230</td>
<td>Introduction to Logic</td>
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<tr>
<td>REL 110</td>
<td>World Religions</td>
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<tr>
<td>REL 111</td>
<td>Eastern Religions</td>
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<tr>
<td>REL 112</td>
<td>Western Religions</td>
<td></td>
</tr>
<tr>
<td>REL 211</td>
<td>Introduction to Old Testament</td>
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<td>REL 212</td>
<td>Introduction to New Testament</td>
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<td>REL 221</td>
<td>Religion in America</td>
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Select 3 credits of the following: **3.0**

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<td>ANT 220</td>
<td>Cultural Anthropology</td>
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<tr>
<td>ANT 221</td>
<td>Comparative Cultures</td>
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<td>ECO 151</td>
<td>Survey of Economics</td>
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</tr>
<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</td>
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<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
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<td>GEO 111</td>
<td>World Regional Geography</td>
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<td>HIS 111</td>
<td>World Civilizations I</td>
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<td>HIS 112</td>
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<td>American History I</td>
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<td>HIS 132</td>
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<tr>
<td>POL 110</td>
<td>Introduction to Political Science</td>
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<td>POL 120</td>
<td>American Government</td>
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<td>POL 210</td>
<td>Comparative Government</td>
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<td>POL 220</td>
<td>International Relations</td>
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<td>PSY 150</td>
<td>General Psychology</td>
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<td>PSY 241</td>
<td>Developmental Psychology</td>
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<td>PSY 281</td>
<td>Abnormal Psychology</td>
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<td>SOC 210</td>
<td>Introduction to Sociology</td>
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<td>SOC 213</td>
<td>Sociology of the Family</td>
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<td>SOC 220</td>
<td>Social Problems</td>
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<tr>
<td>SOC 225</td>
<td>Social Diversity</td>
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</tr>
</tbody>
</table>

Major Requirements

- HRM 110 Introduction to Hospitality and Tourism **3.0**
- HRM 120 Front Office Procedures **3.0**
- HRM 125 Etiquette for Hospitality **1.0**
- HRM 140 Legal Issues-Hospitality **3.0**
- HRM 150 Training for Hospitality **3.0**
- HRM 210 Meetings and Event Planning **3.0**
- HRM 220 Cost Control-Food and Beverage **3.0**
- HRM 225 Beverage Management **3.0**
- HRM 230 Club & Resort Management **3.0**
- HRM 240 Marketing for Hospitality **3.0**
- HRM 245 Human Resource Management-Hospitality **3.0**
- HRM 280 Management Problems-Hospitality **3.0**
- CUL 110 Sanitation and Safety **2.0**
- CUL 111 Success in Hospitality Studies **1.0**
- CUL 130 Menu Design **2.0**
- CUL 135 Food and Beverage Service **2.0**
- CUL 135A Food and Beverage Service Lab **1.0**
- CUL 142 Fundamentals of Food **5.0**
- CUL 273 Career Development **1.0**
- ACC 120 Principles of Financial Accounting **4.0**
- CIS 111 Basic PC Literacy **2.0**
- WBL 112 Work-Based Learning I **2.0**

Total Credits **74**

Hospitality Management Diplomas (D25110)

Diplomas earned in the Hospitality Management Program (A25110) are awarded by the College upon successful completion of the program and can be applied toward the Hospitality Management Degree Program.

Admissions

- Complete a CPCC Admissions Form
- Submit an official high school diploma as well as college transcripts to the Admission/Records Center.
- Take placement tests in English, reading and arithmetic.
- All needed developmental studies courses must be completed prior to beginning CUL, HRM and BPA prefix courses.
- Make an appointment to see an academic advisor.
- Make an appointment to see the Hospitality Management Program Chair, Richard Spellman, 704.330.6669.
• Many courses have prerequisites or co-requisites. Check the Courses section for details.
• Students must have a CUL, HRM, or BPA program code.

Notes
• Progression in this program is dependent upon a score of “C” or better in all courses with CUL, HRM and BPA prefixes.
• All CUL and BPA lab classes require student accident medical insurance.

Contact Information
The Hospitality Management program is in the Hospitality Education Division. For more information, call 704.330.6669.

Hotel Management Diploma (D25110-D1)
This curriculum prepares students to understand and apply the administrative and practical skills needed for supervisory and managerial positions in the hotel industry.

Course work includes front office management, guest services, sanitation, menu writing, quality management, law, marketing and other areas critical to the success of hospitality professionals.

Upon completion graduates should qualify for supervisory or entry-level management positions in lodging including front office, reservations and marketing.

Diploma Awarded
A diploma in Hotel Management is awarded by the College upon completion of this program.

General Education Requirements
ENG 111 Writing and Inquiry 3.0
Select 3 credits of the following: 3.0
MAT 110 Mathematical Measurement and Literacy
MAT 115
MAT 121 Algebra/Trigonometry I
MAT 122 Algebra/Trigonometry II
MAT 140
MAT 155
MAT 161
MAT 171 Precalculus Algebra
MAT 172 Precalculus Trigonometry
MAT 175
MAT 271 Calculus I
MAT 272 Calculus II
MAT 273 Calculus III
COM 110 Introduction to Communication
COM 120 Intro to Interpersonal Communication
COM 231 Public Speaking

HRM 280 Management Problems-Hospitality 3.0
HRM 120 Front Office Procedures 3.0
WBL 112 Work-Based Learning I 2.0
HRM 210 Meetings and Event Planning 3.0
CIS 111 Basic PC Literacy 2.0
HRM 125 Etiquette for Hospitality 1.0
HRM 150 Training for Hospitality 3.0
HRM 230 Club & Resort Management 3.0
CUL 111 Success in Hospitality Studies 1.0
CUL 273 Career Development 1.0

Total Credits 42

Restaurant Management Diploma (D25110-D2)
This curriculum prepares students to understand and apply the administrative and practical skills needed for supervisory and managerial positions in the restaurant industry.

Course work includes law, food & beverage service, food preparation, guest services, sanitation, quality management and other areas critical to the success of hospitality professionals.

Upon completion graduates should qualify for supervisory or entry-level dining room management positions.

Diploma Awarded
A diploma in Restaurant Management is awarded by the College upon completion of this program.

General Education Requirements
ENG 111 Writing and Inquiry 3.0
Select 3 credits of the following: 3.0
MAT 110 Mathematical Measurement and Literacy
MAT 115
MAT 121 Algebra/Trigonometry I
MAT 122 Algebra/Trigonometry II
MAT 140
MAT 155
MAT 161
MAT 171 Precalculus Algebra
MAT 172 Precalculus Trigonometry
MAT 175
MAT 271 Calculus I
MAT 272 Calculus II
MAT 273 Calculus III
Select 3 credits of the following: 3.0
COM 110 Introduction to Communication
COM 120 Intro to Interpersonal Communication
COM 231 Public Speaking

Major Requirements
CUL 110 Sanitation and Safety 2.0
HRM 110 Introduction to Hospitality and Tourism 3.0
HRM 140 Legal Issues-Hospitality 3.0
HRM 240 Marketing for Hospitality 3.0
HRM 245 Human Resource Management-Hospitality 3.0
HRM 280 Management Problems-Hospitality 3.0
HRM 225  Beverage Management  3.0
WBL 112  Work-Based Learning I  2.0
CIS 111  Basic PC Literacy  2.0
CUL 135  Food and Beverage Service  2.0
CUL 135A  Food and Beverage Service Lab  1.0
HRM 125  Etiquette for Hospitality  1.0
HRM 150  Training for Hospitality  3.0
CUL 111  Success in Hospitality Studies  1.0
CUL 142  Fundamentals of Food  5.0

Total Credits  46

- Restaurant Management Certificate I (C25110-C1) (p. 180)
- Hotel Management Certificate I (C25110-C2) (p. 180)
- Management Skills Certificate (C25110-C3) (p. 180)
- Sales and Events Certificate (C25110-C4) (p. 180)
- Service Certificate (C25110-C5) (p. 181)

**Hospitality Management Certificates (C25110)**

Certificates earned in the Hospitality Management Program are awarded by the college upon successful completion of the program and can be applied toward the Hospitality Management Degree Program.

**Admissions**

- Complete a CPCC Admissions Form.
- Submit an official high school diploma as well as college transcripts to the Admission/Records Center.
- Take placement tests in English, reading, and arithmetic.
- All needed developmental studies courses must be completed prior to beginning CUL, HRM, and BPA prefix courses.
- Make an appointment to see an academic advisor.
- Make an appointment to see the Hospitality Management Program Chair, Richard Spellman, 704.330.6669.
- Many courses have prerequisites or co-requisites. Check the Courses section for details.
- Students must have a CUL, HRM, or BPA program code.

**Notes**

- Progression in this program is dependent upon a score of “C” or better in all courses with CUL, HRM, and BPA prefixes.
- All CUL and BPA lab classes require student accident medical insurance.

**Contact Information**

The Hospitality Management program is in the Hospitality Education Division. For more information, call 704.330.6669.

**Restaurant Management Certificate I (C25110-C1)**

This curriculum prepares students who would like to be employed in entry-level supervisory positions in the restaurant industry.

**Major Requirements**

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<tr>
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<th>Credits</th>
</tr>
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<td>HRM 245</td>
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</tbody>
</table>

**Total Credits**  16

Back to Top (p. )

**Hotel Management Certificate I (C25110-C2)**

This curriculum trains students to acquire the skills needed for entry-level hotel supervisory positions.

**Major Requirements**

<table>
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<tr>
<th>Course Code</th>
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<th>Credits</th>
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<td>Introduction to Hospitality and Tourism</td>
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<td>HRM 245</td>
<td>Human Resource Management-Hospitality</td>
<td>3.0</td>
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<tr>
<td>HRM 120</td>
<td>Front Office Procedures</td>
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<td>HRM 125</td>
<td>Etiquette for Hospitality</td>
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<td>HRM 150</td>
<td>Training for Hospitality</td>
<td>3.0</td>
</tr>
<tr>
<td>HRM 230</td>
<td>Club &amp; Resort Management</td>
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<tr>
<td>CUL 111</td>
<td>Success in Hospitality Studies</td>
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</table>

**Total Credits**  17

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**Management Skills Certificate (C25110-C3)**

This curriculum is intended for students who have a thorough knowledge of service within the hospitality industry and desire training in management skills. This certificate will help prepare students for entry-level supervisory or management positions in the hospitality industry.

**Major Requirements**

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<td>HRM 225</td>
<td>Beverage Management</td>
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<td>HRM 125</td>
<td>Etiquette for Hospitality</td>
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<td>Success in Hospitality Studies</td>
<td>1.0</td>
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</table>

**Total Credits**  17

Back to Top (p. )

**Sales and Events Certificate (C25110-C4)**

This curriculum presents an introduction to sales and service of conventions and events in various hospitality industry segments. This certificate helps students to explore and train for careers available in the planning and execution of events and conventions.

**Major Requirements**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<td>HRM 240</td>
<td>Marketing for Hospitality</td>
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<td>HRM 210</td>
<td>Meetings and Event Planning</td>
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<td>CUL 135</td>
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<td>CUL 135A</td>
<td>Food and Beverage Service Lab</td>
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Admissions

- Complete required CPCC application.
- Submit high school transcripts as well as any college transcripts.
- Take required placement tests.
- Complete required Developmental Studies reading and writing classes with a “C” or better.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Program Accreditation

Human Services Technology Substance Abuse courses may be used in applying for certification by the North Carolina Substance Abuse Professional Practice Board. Course materials help students become eligible to take the Human Services Board Certified Credential exam (HS-BCP), a national Human Services Credential.

All Human Services Programs articulate with the Queens University of Charlotte degree in Human and Community Services and Pheiffer University. Many courses are also accepted at Gardner Webb and Wingate Universities.

Notes

Students must receive a final grade of “C” or higher in all DDT, HSE, SAB and GRO courses in order to receive credit toward a Human Services Technology degree or certificate.

Internships in a variety of community agencies enable students to gain specialized experience to parallel their classroom work.

A suggested course sequence list is available from the program chair.

Contact Information

The Human Services Technology program is in the Health and Human Services Division. For more information, call 704.330.6496, 704.330.6153, or visit our website at www.cpcc.edu/health-human-services.

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tr>
<td>ENG 111</td>
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<td>ENG 113</td>
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<td>COM 231</td>
<td>Public Speaking</td>
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<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
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<td>MAT 152</td>
<td>Statistical Methods I</td>
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<td>MAT 171</td>
<td>Precalculus Algebra</td>
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<td>Take 1 course from the following:</td>
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<td>SOC 210</td>
<td>Introduction to Sociology</td>
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<td>SOC 225</td>
<td>Social Diversity</td>
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<tr>
<td>Select 3 credits of the following:</td>
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<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
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</table>
Developmental Disabilities Concentration (A4538A)

The Human Services Technology/Developmental Disabilities program is designed to train students to work with children and adults with physical, mental and emotional disabilities. Students will specialize in the areas of developmental disabilities and mental retardation.

Students will gain an understanding of the handicapping effects of developmental disabilities in medical, psychological, social, educational, vocational and economic terms. Fieldwork and clinical experience in community agencies providing comprehensive services to persons with disabilities and their families will be provided.

Graduates should qualify for employment in group homes, foster care homes, respite services, vocational rehabilitation agencies, sheltered workshops, supported employment programs, adult vocational programs, early childhood intervention programs and other programs for individuals with developmental disabilities and mental retardation.

Degree Awarded

The Associate in Applied Science Degree - Human Services Technology with a concentration in Developmental Disabilities is awarded by the College upon completion of this program.

Admissions

- Complete required CPCC application.
- Submit high school transcripts and any college transcripts.
- Take required placement tests.
- Complete required Developmental Studies reading and writing classes with a “C” or better.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Program Accreditation

Some Human Services Technology courses have been approved by the National Board for Certified Counselors (NBCC) for Professional Counselor (NCC) renewal credit. Please check with Human Services program chairs for specific course information. Human Services Technology/Substance Abuse courses may be used in applying for certification by the North Carolina Substance Abuse Professional Practice Board.
All Human Services Programs articulate with the Queens University of Charlotte degree in Human and Community Services. Many courses are also accepted at Gardner Webb and Wingate Universities.

Notes
Students must receive a final grade of “C” or higher in all DDT, HSE, SAB and GRO courses in order to receive credit toward a Human Services Technology degree or certificate.

Internships in a variety of community agencies enable students to gain specialized experience to parallel their classroom work. The duration of the internship is fall through spring semester, second year.

A suggested course sequence list is available from the program chair.

Contact Information
The Developmental Disabilities Program is in the Nursing, Human Services and Early Childhood Division. For more information call 704.330.6144, 704.330.6496, or visit our website at www.cpcc.edu/health-human-services.

Visit Career Coach for career information.

General Education Requirements

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Concentration Requirements

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Other Major Requirements

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<td>DDT 240</td>
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Total Credits: 76
Human Services Technology Substance Abuse Concentration (A4538E)

The Human Services Technology/Substance Abuse program is designed to prepare students for a career in the field of substance abuse and assist them in the process of State Certification/Licensure. The program also enables students to transfer their credits earned and pursue a four-year degree.

Course work includes classroom and experiential activities oriented toward an overview of substance use disorders; the physiological, psychological and sociological aspects of addiction; the 12 core functions of a substance abuse professional; the assessment, diagnosing and treatment of substance use disorders; group techniques; family dynamics of addiction; the ethical and legal aspects involved; a basic overview of co-occurring disorders; and a two-semester internship working in the field.

Graduates who continue to complete their certification/licensure through the North Carolina Substance Abuse Professional Practice Board qualify for positions as substance abuse counselors, prevention and education specialist, DWI educators and counselors, residential and halfway house counselors, case managers, community-based program managers and criminal justice addiction professionals.

Degree Awarded

The Associate in Applied Science degree - Human Services Technology with a concentration in Substance Abuse is awarded by the College upon completion of this program.

Program Accreditation

Human Services Technology Substance Abuse courses are approved by the North Carolina Substance Abuse Professional Practice Board (NCSAPPB) and accepted toward fulfillment of education credits for both the CSAC, LCAS, CSAPS and CCJP credentials. The two semesters of internship (WBL 111/WBL 115 & WBL 121/WBL 125) which are part of the program also meet NCSAPPB requirements for the 300-hour practicum toward certification/licensure. Human Services Technology Substance Abuse courses are also accepted by NAADAC: the Association for Addiction Professionals for certification/licensure. All Human Services Programs, including the Substance Abuse Program, articulate with Queens University, Gardner Webb University, and Pfeiffer University Human Services/Human Relations Programs.

Admissions

- Complete required CPCC application.
- Submit high school transcripts and any college transcripts.
- Request college transcripts to be evaluated for transfer credit.
- Take any required placement tests.
- See Program Chair for advising of course sequence and registration advisement.

Notes

Students must receive a final grade of “C” or higher in all SAB, HSE, DDT and GRO courses in order to receive credit toward a Human Services Technology degree or certificate. A GPA of 2.5 or higher is required for a student to begin their internship. Internships in a variety of community agencies enable students to gain specialized experience to parallel their classroom work. The duration of the internship is two semesters with a minimum of 320 hours. A suggested course sequence is available from the Program Chair.

Contact Information

The Substance Abuse Program is in the Health and Human Services Division. For more information, visit our website at www.cpcc.edu/health-human-services/substance-abuse/.

Visit Career Coach for career information.

General Education Requirements

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<tr>
<td>COM 231</td>
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<tr>
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<td>Theatre Appreciation</td>
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Major Requirements

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<tr>
<td>SOC 213</td>
<td>Sociology of the Family</td>
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Take 3 credits from the following:

- PSY 241 Developmental Psychology
- or PSY 281 Abnormal Psychology
- PSY 281 Abnormal Psychology

**Concentration Requirements:**

- WBL 111 Work-Based Learning I 1.0
- WBL 115 Work-Based Learning Seminar I 1.0
- SAB 110 Substance Abuse Overview 3.0
- SAB 120 Intake and Assessment 3.0
- SAB 125 SA Case Management 3.0
- SAB 135 Addictive Process 3.0
- SAB 240 Sab Issues in Client Serv 3.0

**Other Major Requirements**

- SAB 210 Sub Abuse Counseling 3.0
- SAB 220 Group Techniques/Therapy 3.0
- SAB 230 Family Therapy 3.0
- WBL 121 Work-Based Learning II 1.0
- WBL 125 Work-Based Learning Seminar II 1.0

Take 1 course from the following:

- CIS 110 Introduction to Computers
- CIS 111 Basic PC Literacy

Select 3 credits of the following:

- HSE 120 Interpersonal Relations
- DDT 110 Developmental Disabilities
- GRO 120 Gerontology
- SAB 250 Prevention & Education
- SAB 140 Pharmacology

**Total Credits**: 74

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**Human Services Technology Certificate (C45380)**

Students must receive a final grade of “C” or higher in all DDT, HSE, SAB and GRO courses in order to receive credit toward a Human Services Technology degree or certificate.

**Human Services Technology Certificate with a Specialization in Human Services Technology (C45380-C1)**

**Major Requirements**

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**Total Credits**: 15

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**Human Services Technology Certificate with a Specialization in Case Management (C45380-C2)**

**Major Requirements**

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**Total Credits**: 16

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**Human Services Technology Certificate with a Specialization in Working with At-Risk Youth (C45380-C3)**

**Major Requirements**

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<td>HSE 225</td>
<td>Crisis Intervention</td>
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<td>HSE 227</td>
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<td>SAB 110</td>
<td>Substance Abuse Overview</td>
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No diplomas offered.

- Human Services Technology Certificate with a Specialization in Human Services Technology (C45380-C1) (p. 181)
- Human Services Technology Certificate with a Specialization in Case Management (C45380-C2) (p. 185)
- Human Services Technology Certificate with a Specialization in Working with At-Risk Youth (C45380-C3) (p. 185)
- Human Services Technology Certificate with a Specialization in Developmental Disabilities (C4538A-C1) (p. 182)
- Human Services Technology with a Specialization in Supported Employment (C4538A-C2) (p. 186)
- Human Services Technology Certificate Specialization in Developmental Disabilities & Deaf Studies (C4538A-C3) (p. 186)
- Human Services Technology Certificate with a Specialization in Substance Abuse (C4538E-C2) (p. 183)
Take 1 of the following courses:

<table>
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<td>PSY 150</td>
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Total Credits 18

Developmental Disabilities Certificates (C4538A)

Students must receive a final grade of "C" or higher in all DDT, HSE, SAB and GRO courses in order to receive credit toward a Human Services Technology degree or certificate.

Human Services Technology with a Specialization in Developmental Disabilities (C4538A-C1)

This certificate is designed to provide the student with a concentrated course of study in the field of developmental disabilities. Upon completion of the six courses, a certificate will be awarded by the college. This certificate may be applied toward the Associate Degree in Human Services Technology with a concentration in Developmental Disabilities.

For more information, call 704.330.6144. Check our website at www.cpcc.edu/health-human-services.

Major Requirements

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<th>Course</th>
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<tr>
<td>DDT 110</td>
<td>Developmental Disabilities</td>
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<td>DDT 120</td>
<td>Teaching Developmental Disabled</td>
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<td>DDT Health Issues</td>
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<td>DDT 220</td>
<td>Program Planning Process</td>
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<tr>
<td>DDT 240</td>
<td>Aging Lifelong Disability</td>
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</table>

Total Credits 18

Substance Abuse Certificates (C4538E)

Students must receive a final grade of "C" or higher in all DDT, HSE, SAB and GRO courses in order to receive credit toward a Human Services Technology degree or certificate. A GPA of 2.5 or higher is required for a student to begin their internship.

The certificates are designed to provide the student with a concentrated course of study in the field of Substance Abuse. Selection of certificate choice depends on the students specific career goals. Upon completion of these courses a certificate will be awarded by the college. This certificate may be applied towards the initial or renewal of Certification/Licensure through the North Carolina Substance Abuse Professional Practice Board or NAADAC, the Association for Addiction Professionals.

Notes

It is strongly recommend that certificate students who are interested in a career as a substance abuse counselor take ALL of the substance abuse (SAB) courses, not just the ones required in a particular certificate, to fully prepare for clinical practice, meet Board training requirements and prepare for the Board credentialing exam.

Contact Information

For more information, visit our website at www.cpcc.edu/health-human-services/substance-abuse/.
Human Services Technology Certificate with a Specialization in Substance Abuse Counseling (C4538E-C3)

This certificate is designed to provide the student with a concentrated course of study in the field of Substance Abuse with a strong emphasis on clinical applications. Upon completion of the courses, a certificate of study will be awarded by the college. Note that this certificate includes two semesters of internship (WBL).

**Major Requirements**

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<td>HSE 112</td>
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<td>Substance Abuse Overview</td>
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<td>SAB 120</td>
<td>Intake and Assessment</td>
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<td>SAB 240</td>
<td>Sab Issues in Client Serv</td>
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<td>SAB 220</td>
<td>Group Techniques/Therapy</td>
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<td>Work-Based Learning Seminar II</td>
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</table>

**Total Credits** 18

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Human Services Technology Certificate with a Specialization in Substance Abuse & Behavioral Health Prevention (C4538E-C5)

The certificate is designed to provide the student with a concentrated course of study in the field of Prevention with a focus on community education, community organizing, and policy advocacy. Upon completion of the courses, a certificate of study will be awarded by the college. Note that this certificate may be accomplished completely online and does not include an internship.

**Major Requirements**

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<td>HSE 110</td>
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<td>SAB 110</td>
<td>Substance Abuse Overview</td>
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<td>Sab Issues in Client Serv</td>
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<td>SAB 250</td>
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<td>SAB 255</td>
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**Total Credits** 14

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Human Services Technology Certificate with a Specialization in Substance Abuse & Criminal Justice (C4538E-C6)

**Major Requirements**

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<td>SAB 110</td>
<td>Substance Abuse Overview</td>
<td>3.0</td>
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<td>SAB 120</td>
<td>Intake and Assessment</td>
<td>3.0</td>
</tr>
<tr>
<td>SAB 240</td>
<td>Sab Issues in Client Serv</td>
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<tr>
<td>CJC 111</td>
<td>Introduction to Criminal Justice</td>
<td>3.0</td>
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<td>CJC 112</td>
<td>Criminology</td>
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<td>CJC 241</td>
<td>Community-Based Corrections</td>
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</tr>
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</table>

**Total Credits** 18

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Interior Design

The Interior Design curriculum is designed to prepare students for a variety of job opportunities in the field of both residential and non-residential interior design. The focus of the studies is technical knowledge, professional practices and aesthetic principles.

Curriculum content includes residential and non-residential interior design, architectural drafting, computer-aided design and universal design. Also included are basic design, history of interiors and furnishings, color theory, products, business practices, graphic presentations and general education courses.

Graduates should qualify for a variety of jobs including residential and commercial interior design, set design, showroom design and sales positions for furniture, textiles and accessories and all businesses dealing with interiors.

**General Information**

Increasingly, our interior living and working spaces are being developed for a more sophisticated society. The Interior Design program at CPCC prepares students to design the interior spaces of today and tomorrow using the best of today’s technology.

Visit Career Coach for career information.

**Interior Design (A30220)**

**Degree Awarded**

The Associate in Applied Science Degree - Interior Design is awarded by the College upon completion of this program.

**Admissions**

- A high school diploma or equivalent is required. GED High School Equivalent and high school diploma classes are available from CPCC.
- CPCC placement tests are required in English and mathematics. Developmental Studies in mathematics and English courses are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- Contact the Program chair before entering program.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
Contact Information

For more information, call 704.330.6437 or 704.330.6548, or visit our website at http://arts.cpcc.edu/academics/interior-design/.

Visit Career Coach for career information.

General Education Requirements

ENG 111 Writing and Inquiry 3.0
COM 110 Introduction to Communication 3.0
PSY 150 General Psychology 3.0
MAT 110 Mathematical Measurement and Literacy 3.0
Take one of the following: 3.0
ENG 112 Writing and Research in the Disciplines
ENG 113 Literature-Based Research
ENG 114 Professional Research & Reporting

Take 1 course: 3.0
ART 113 Art Methods and Materials
ART 114 Art History Survey I
ART 115 Art History Survey II

Major Requirements

DES 125 Graphic Presentation I, Visual Presentation I 2.0
DES 135 Principles and Elements of Design I 4.0
DES 230 Residential Design I 3.0
DES 235 Products 3.0
DES 220 Principles of Interior Design, Interior Design Fundamentals 3.0
DES 240 Commercial/Contract Design I, Commercial and Contract Design I 3.0
DES 255 History of Interiors and Furnishings I 3.0
ARC 114 Architectural CAD 2.0
or DES 120 CAD for Interior Design
ARC 111 Introduction to Architectural Technology 2.0-3.0
or DES 110 Architectural Graphics
ARC 120 Interior Design-Residential 3.0
or DES 112 Building and Construction Systems
DES 231 Residential Design II 3.0
DES 241 Commercial/Contract Design II 3.0
DES 275 Furniture Design & Construction 3.0
ARC 133 Construction Document Analysis 2.0
DES 225 Textiles/Fabrics, Textiles for Interiors 3.0
DES 280 Codes & Standards/Interior Design, Codes and Standards/Interior Design 3.0
or ARC 131 Building Codes
CIS 111 Basic PC Literacy 2.0
or CIS 110 Introduction to Computers

Technical Electives

Select 4 credits of the following: 4.0
DES 115 Color Theory
DES 257 History of American Homes
ARC 160 Residential Design
ARC 112 Construction Materials & Methods
ARC 220 Advanced Architectural CAD
ARC 221 Architectural 3-D CAD
ARC 262 Architectural Animation & Video
DES 265 Lighting/Interior Design
ARC 210 Intro to Sustain Design
DES 242 Kitchen and Bath Design
ARC 264 Digital Architecture
DES 121 CAD for Interior Design/Advanced
SST 140 Green Building and Design Concepts
WBL 111 Work-Based Learning I
WBL 112 Work-Based Learning I

Total Credits 71-72

Residential Interior Decoration Diploma (D30220-D1)

The curriculum is designed to prepare students for a variety of job opportunities in the field of residential interior decorating. The focus of the studies is technical knowledge, professional practices and aesthetic principles.

Curriculum content includes residential interior design, architectural drafting and computer-aided drafting/design. Also included are basic elements of design, history of interiors and furnishings, color theory, graphic presentation, business practices and general education courses.

Graduates should qualify for a variety of jobs including residential interior design, set design, showroom design and sales positions for furniture, textiles and accessories.

Careful planning should allow the student to complete the diploma in three full-time semesters or six to seven part-time semesters.

For more information, please visit our website at http://arts.cpcc.edu/academics/interior-design/.

Major Requirements

DES 125 Graphic Presentation I, Visual Presentation I 2.0
DES 135 Principles and Elements of Design I 4.0
DES 220 Principles of Interior Design, Interior Design Fundamentals 3.0
DES 230 Residential Design I 3.0
DES 231 Residential Design II 3.0
DES 241 Commercial/Contract Design II 3.0
DES 275 Furniture Design & Construction 3.0
ARC 133 Construction Document Analysis 2.0
DES 225 Textiles/Fabrics, Textiles for Interiors 3.0
DES 280 Codes & Standards/Interior Design, Codes and Standards/Interior Design 3.0
or ARC 131 Building Codes
CIS 111 Basic PC Literacy 2.0
or CIS 110 Introduction to Computers

Technical Electives

Select 3 credits of the following: 3.0
DES 257 History of American Homes
DES 115 Color Theory
DES 225 Textiles/Fabrics, Textiles for Interiors
DES 275 Furniture Design & Construction

General Education Requirements

ENG 111 Writing and Inquiry 3.0
MAT 115 3.0
Interpreter Education

All students with a desire to become a professional sign language interpreter must develop fluency in at least two languages. The Interpreter Education curriculum prepares individuals to work as entry-level American Sign Language and English interpreters who will provide communication access for people who are Deaf and hard of hearing within a variety of interactive settings. In addition, this curriculum provides opportunities for working interpreters who want to enhance their knowledge and interpretation skills within an academic setting.

Students entering the program with little or no experience in communicating in American Sign Language (ASL) must complete ASL foundational courses prior to enrolling in courses for the Interpreter Education Program. Any student who has never taken a college-level American Sign Language course will be required to take Beginning ASL 111 and ASL 115 (lab). Students who have taken one or more college-level ASL courses and possess some fluency in American Sign Language, as demonstrated by both the ASL placement test and a level of 50 (Intermediate or higher) on the Sign Language Proficiency Interview SLPI-ASL, are able to complete the Interpreter Education program in four semesters of full-time study. After one year, ASL placement tests and SLPI-ASL scores expire and cannot be considered for placement into the program. Students for whom ASL placement or SLPI-ASL tests have expired must repeat and pass the placement test and/or achieve a SLPI-ASL level 50 (Intermediate or higher) to enter or return to the Interpreter Education program.

Coursework includes:

- acquisition of American Sign Language (ASL): grammar, structure and socio-linguistic properties, cognitive processes associated with interpretation between ASL and English,
- structure and culture of the Deaf community,
- ethical decision-making, and
- acquisition of consecutive and simultaneous interpreting skills.

Entry-level jobs for professional interpreters are available in educational systems or a variety of community settings. Individuals may choose from part-time, full-time, or self-employment/private practice positions, or apply American Sign Language skills to other human service related areas.

Visit Career Coach for career information.

Interpreter Education (A55300)

Degree Awarded

The Associate in Applied Science degree - Interpreter Education is awarded by the College upon completion of this program.

Admissions

- A high school diploma or equivalent is required.
- CPCC placement tests are required in English, reading and mathematics.
- Students must take and pass ENG 111 with a grade of “C” or better, successfully pass a credit by exam, or transfer an ENG 111 equivalent course.
- Students must have a SLPI (Sign Language Proficiency Interview): ASL rating of 50 (Intermediate) or higher in order to major in the Interpreter Education program and take advanced ASL, IPP or WBL prefix courses: ASL 250, IPP 112, IPP 130, IPP 152, IPP 153, IPP
161, and IPP 245. SLPI:ASL ratings older than one year will not be accepted for admission into the program.

- Many courses have prerequisites or co-requisites; check the Courses section for details.

Students who have had a two or more semester lapse since taking an ASL course must have a placement test prior to registering for ASL courses. This requirement includes students transferring ASL credit from another college or university and/or students who have two or more consecutive semesters lapse since taking ASL to ensure proper class placement prior to registering for ASL courses. See http://www.cpcc.edu/interpreter_education for more information.

A student must receive a final grade of "C" or higher in all ASL, IPP, or COE courses in order to receive credit for that course toward an Interpreter Education A.A.S. (A55300) degree.

There are articulation agreements in place between the CPCC Interpreter Education program and two (2) universities, Regis University’s bachelor’s degree in interpreting and Gallaudet Universities’ Bachelor in Interpretation (BAI) degree. At Regis, students may take up to 90 credit hours of courses from CPCC and take at least 30 credit hours of courses, online or on-site, at Regis University in Colorado. At Gallaudet University, students must apply for acceptance into the program and pass an ASL placement test. Once accepted, Gallaudet guarantees the transfer of CPCC college-level credits with a grade of "C" or equivalent and requires a grade of "B" or higher be maintained in all interpreting courses.

**Contact Information**

The Interpreter Education program is in the Professional Careers Division at the Cato Campus. For more information about the Interpreting degree or Interpreting courses, ASL courses, ASL placement testing or the SLPI: ASL, contact program chair Ms. Kellie Stewart, M.Ed.,CI/CT at kellie.stewart@cpcc.edu.

Visit Career Coach for career information.

**General Education Requirements**

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<td>ENG 112</td>
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<td>MAT 143</td>
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<td>Art History Survey I</td>
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<td>Philosophical Issues</td>
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Major Requirements

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<td>IPP 151</td>
<td>ASL/English Translation</td>
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<tr>
<td>WBL 125</td>
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</tr>
<tr>
<td>ASL 181</td>
<td>ASL Lab 1</td>
<td>1.0</td>
</tr>
<tr>
<td>ASL 182</td>
<td>ASL Lab 2</td>
<td>1.0</td>
</tr>
<tr>
<td>ASL 211</td>
<td>Intermediate ASL I</td>
<td>3.0</td>
</tr>
<tr>
<td>ASL 212</td>
<td>Intermediate ASL II</td>
<td>3.0</td>
</tr>
<tr>
<td>ASL 281</td>
<td>ASL Lab 3</td>
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<tr>
<td>ASL 282</td>
<td>ASL Lab 4</td>
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<tr>
<td>CIS 111</td>
<td>Basic PC Literacy</td>
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</tbody>
</table>

**Total Credits**: 16

Technical Electives

Select 3 credits from the following:

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ASL 221</td>
<td>Advanced American Sign Language I</td>
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</tr>
<tr>
<td>ASL 222</td>
<td>Advanced American Sign Language II</td>
<td>3.0</td>
</tr>
<tr>
<td>IPP 130</td>
<td>Analytical Skills for Interpreting</td>
<td></td>
</tr>
<tr>
<td>ASL 151</td>
<td>Numbers and Fingerspelling</td>
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<tr>
<td>IPP 245</td>
<td>Educational Interpreting Issues</td>
<td></td>
</tr>
<tr>
<td>ASL 225</td>
<td>Global Deaf Community</td>
<td></td>
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<tr>
<td>ASL 252</td>
<td>American Sign Language Classifiers</td>
<td></td>
</tr>
<tr>
<td>ASL 253</td>
<td>American Sign Language Non-Manual Signals</td>
<td></td>
</tr>
<tr>
<td>ASL 255</td>
<td>American Sign Language Literature and Folklore</td>
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</tr>
<tr>
<td>ASL 260</td>
<td>American Sign Language Semantics</td>
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</tr>
</tbody>
</table>

**Total Credits**: 76

No diplomas offered.

Interpreter Education Certificate Specialization in Basic ASL Communication Skills (C55300-C6)

This certificate is available through the Career and College Promise program.

**Major Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASL 111</td>
<td>Elementary ASL I</td>
<td>3.0</td>
</tr>
<tr>
<td>ASL 181</td>
<td>ASL Lab 1</td>
<td>1.0</td>
</tr>
<tr>
<td>ASL 112</td>
<td>Elementary ASL II</td>
<td>3.0</td>
</tr>
<tr>
<td>ASL 182</td>
<td>ASL Lab 2</td>
<td>1.0</td>
</tr>
<tr>
<td>ASL 211</td>
<td>Intermediate ASL I</td>
<td>3.0</td>
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</tbody>
</table>

Lateral Entry Teacher Certificate (C55430)

Admissions

The program requires that you submit a copy of your transcript and your plan of study from the RALC to the program coordinator.

**Contact Information**

For more information call 704.330.4762 or visit www.cpcc.edu/teachersed.

Visit Career Coach (https://cpcc.emsicareercoach.com/
#Search=teacher&action=loadCourseInfo&Clusters=&CourseID=454853) for career information.

No degrees offered.

**Major Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 131</td>
<td>Child, Family, and Community</td>
<td>3.0</td>
</tr>
<tr>
<td>EDU 163</td>
<td>Classroom Management and Instruction</td>
<td>3.0</td>
</tr>
<tr>
<td>EDU 243</td>
<td>Learning Theory</td>
<td>3.0</td>
</tr>
<tr>
<td>EDU 245</td>
<td>Policies and Procedures</td>
<td>3.0</td>
</tr>
<tr>
<td>EDU 271</td>
<td>Educational Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>EDU 244</td>
<td>Human Growth and Development</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Total Credits**: 18

Mechanical Engineering Technology

The Mechanical Engineering Technology curriculum prepares graduates for employment as technicians in the diversified fields of mechanical engineering and manufacturing engineering. Mechanical Engineering
Mechanical Engineering Technology

Mechanical Engineering Technology course work includes engineering graphics, engineering fundamentals, materials and manufacturing processes, mathematics and physics. In addition, students will study computer applications, critical thinking, planning and problem solving, and oral and written communications.

Graduates of the curriculum will find employment opportunities in the manufacturing or service sectors of engineering technology. Engineering technicians may obtain professional certification by application to organizations such as ASQC - the American Society for Quality Control, SME - the Society for Mining, Metallurgy and Exploration and NICET - the National Institute for Certification in Engineering Technology.

Visit Career Coach for career information.

Mechanical Engineering Technology (A40320)

Degree Awarded
The Associate in Applied Science Degree - Mechanical Engineering Technology is awarded by the College upon completion of this program. This degree is accepted at some colleges and universities as the first two years of a 2 + 2 bachelor's-level engineering technology program.

Admissions
- A high school diploma or equivalent is required. High school students preparing for an engineering technology program should complete courses in algebra, geometry and advanced mathematics. Skills and proficiencies should be developed in writing, computer literacy, and science.
- Placement tests in English and mathematics determine the entry-level courses that match individual needs. Developmental Studies English and mathematics courses are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Program Accreditation
The Mechanical Engineering Technology Program at CPCC is accredited by the Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC of ABET), http://www.abet.org.

Notes
The Mechanical Engineering Technology curriculum at Central Piedmont Community College features extensive use of CAD/CAM systems in the practical applications of both fundamental and highly specialized mechanical engineering technology principles. Students advance from basic courses to specialized mechanical engineering technology courses. These courses furnish concentrated study in the practical application of state-of-the-art technological knowledge, and skills needed in today’s high technology industry.

Completion of the program requires that students use college-level algebra, trigonometry and physics in the application of scientific principles to technical problems.

Contact Information
The Mechanical Engineering Technology Program is in the Engineering Technologies Division. For additional information, visit www.cpcc.edu/et or call 704.330.6614.

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
</tr>
<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
<td>3.0</td>
</tr>
<tr>
<td>Take 1 course from the following:</td>
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</tr>
<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
<td>3.0</td>
</tr>
<tr>
<td>Select 3 credits of the following:</td>
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</tr>
<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
<td></td>
</tr>
<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
<td></td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
</tr>
<tr>
<td>ART 116</td>
<td>Survey of American Art</td>
<td></td>
</tr>
<tr>
<td>ART 117</td>
<td>Non-Western Art History</td>
<td></td>
</tr>
<tr>
<td>DAN 110</td>
<td>Dance Appreciation</td>
<td></td>
</tr>
<tr>
<td>DAN 211</td>
<td>Dance History I</td>
<td></td>
</tr>
<tr>
<td>DAN 212</td>
<td>Dance History II</td>
<td></td>
</tr>
<tr>
<td>DRA 111</td>
<td>Theatre Appreciation</td>
<td></td>
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<tr>
<td>DRA 112</td>
<td>Literature of the Theatre</td>
<td></td>
</tr>
<tr>
<td>DRA 122</td>
<td>Oral Interpretation</td>
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<tr>
<td>ENG 231</td>
<td>American Literature I</td>
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</tr>
<tr>
<td>ENG 232</td>
<td>American Literature II</td>
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</tr>
<tr>
<td>ENG 241</td>
<td>British Literature I</td>
<td></td>
</tr>
<tr>
<td>ENG 242</td>
<td>British Literature II</td>
<td></td>
</tr>
<tr>
<td>ENG 251</td>
<td>Western World Literature I</td>
<td></td>
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<tr>
<td>ENG 252</td>
<td>Western World Literature II</td>
<td></td>
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<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</td>
<td></td>
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<tr>
<td>HUM 160</td>
<td>Introduction to Film</td>
<td></td>
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<tr>
<td>HUM 211</td>
<td>Humanities I</td>
<td></td>
</tr>
<tr>
<td>HUM 212</td>
<td>Humanities II</td>
<td></td>
</tr>
<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
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<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
<td></td>
</tr>
<tr>
<td>MUS 210</td>
<td>History of Rock Music</td>
<td></td>
</tr>
<tr>
<td>MUS 213</td>
<td>Opera and Musical Theatre</td>
<td></td>
</tr>
<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
<td></td>
</tr>
<tr>
<td>PHI 230</td>
<td>Introduction to Logic</td>
<td></td>
</tr>
<tr>
<td>PHI 240</td>
<td>Introduction to Ethics</td>
<td></td>
</tr>
<tr>
<td>REL 110</td>
<td>World Religions</td>
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<tr>
<td>REL 111</td>
<td>Eastern Religions</td>
<td></td>
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<tr>
<td>REL 112</td>
<td>Western Religions</td>
<td></td>
</tr>
<tr>
<td>REL 211</td>
<td>Introduction to Old Testament</td>
<td></td>
</tr>
<tr>
<td>REL 212</td>
<td>Introduction to New Testament</td>
<td></td>
</tr>
<tr>
<td>REL 221</td>
<td>Religion in America</td>
<td></td>
</tr>
<tr>
<td>Select 3 credits of the following:</td>
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</table>
ANT 210 General Anthropology
ANT 220 Cultural Anthropology
ANT 221 Comparative Cultures
ECO 151 Survey of Economics
ECO 251 Principles of Microeconomics
ECO 252 Principles of Macroeconomics
GEO 111 World Regional Geography
HIS 111 World Civilizations I
HIS 112 World Civilizations II
HIS 131 American History I
HIS 132 American History II
POL 120 American Government
POL 210 Comparative Government
POL 220 International Relations
PSY 150 General Psychology
PSY 241 Developmental Psychology
PSY 281 Abnormal Psychology
SOC 210 Introduction to Sociology
SOC 213 Sociology of the Family
SOC 225 Social Diversity
POL 110 Introduction to Political Science
PSY 237 Social Psychology
SOC 220 Social Problems

Major Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 250</td>
<td>Statics/Strength of Mater</td>
<td>5.0</td>
</tr>
<tr>
<td>MEC 265</td>
<td>Fluid Mechanics</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 161</td>
<td>Manufacturing Processes I</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 180</td>
<td>Engineering Materials</td>
<td>3.0</td>
</tr>
<tr>
<td>DFT 154</td>
<td>Intro to Solid Modeling</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Take 1 course from the following: 3.0

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EGR 120</td>
<td>Engineering and Design Graphics</td>
</tr>
<tr>
<td>DFT 151</td>
<td>CAD I</td>
</tr>
<tr>
<td>DFT 170</td>
<td>Engineering Graphics</td>
</tr>
</tbody>
</table>

Take 1 course from the following: 4.0

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PHY 131</td>
<td>Physics-Mechanics</td>
</tr>
<tr>
<td>PHY 151</td>
<td>College Physics I</td>
</tr>
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</table>

Other Major Requirements:

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<th>Credits</th>
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<tr>
<td>MEC 275</td>
<td>Engineering Mechanisms</td>
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<tr>
<td>ELC 131</td>
<td>Circuit Analysis I</td>
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<tr>
<td>CSC 134</td>
<td>C++ Programming</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 111</td>
<td>Machine Processes I</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 270</td>
<td>Machine Design</td>
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<tr>
<td>ISC 212</td>
<td>Metrology</td>
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<tr>
<td>MEC 267</td>
<td>Thermal Systems</td>
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Take 1 course from the following: 3.0-4.0

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>MAT 122</td>
<td>Algebra/Trigonometry II</td>
</tr>
<tr>
<td>MAT 172</td>
<td>Precalculus Trigonometry</td>
</tr>
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</table>

Take 1 course from the following: 4.0

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>PHY 132</td>
<td>Physics-Electricity &amp; Magnetism</td>
</tr>
<tr>
<td>PHY 152</td>
<td>College Physics II</td>
</tr>
</tbody>
</table>

Take 1 course from the following: 3.0

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 223</td>
<td>Applied Calculus</td>
</tr>
</tbody>
</table>

MAT 271 Calculus I

Total Credits 74-75

No diplomas offered.

**Mechanical Engineering Certificates (C40320)**

**Mechanical Engineering Certificate Specialization in Mechanical CAD Operations (C40320-C2)**

Major Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 120</td>
<td>Engineering and Design Graphics</td>
<td>3.0</td>
</tr>
<tr>
<td>DFT 151</td>
<td>CAD I</td>
<td>3.0</td>
</tr>
<tr>
<td>DFT 154</td>
<td>Intro to Solid Modeling</td>
<td>3.0</td>
</tr>
<tr>
<td>DFT 170</td>
<td>Engineering Graphics</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits 12

**Mechatronics Engineering Technology**

The Mechatronics Engineering Technology curriculum prepares individuals for employment as technicians in engineering fields requiring electrical, mechanical and computer skills. Mechatronics Engineering technicians assist in designing, developing, testing, process design and improvement, troubleshooting and repair of complex engineering and manufacturing systems. Emphasis is placed on the integration of theory and hands-on application of engineering principles. Currently, two specialized tracks are available: Mechanical emphasis and Electrical emphasis.

In addition to coursework in engineering fundamentals, basic manufacturing, electricity, computers, mathematics and physics, students develop their critical thinking, planning, problem solving, oral and written communications.

Graduates of the curriculum will find employment opportunities in industrial maintenance and manufacturing including assembly, testing, start-up, troubleshooting, repair and upgrades of machinery and the associated control system. Graduates will be eligible to take the exam for the Siemens Mechatronics Level 1, Siemens Mechatronics Level 2, PMMI Mechatronics Certifications and others as added.

Visit Career Coach for career information.

**Mechatronics Engineering Technology (A40350)**

**Degree Awarded**

The Associate in Applied Science Degree-Mechatronics Engineering Technology is awarded by the College upon completion of this program.

**Admissions**

- A high school diploma or equivalent is required. High schools students preparing for an engineering technology program should complete courses in algebra, geometry and advanced mathematics. Skills and proficiencies should be developed in writing, computer literacy and science.
• Placement tests in English and mathematics determine the entry-level
courses that match individual needs. Developmental Studies English
and mathematics courses are available for students to build basic
skills and knowledge.
• A counseling/orientation appointment follows placement testing.
• Many courses have prerequisites or co-requisites; check the Courses
section for details.

Notes
The Mechatronics Engineering Technology curriculum at Central Piedmont
Community College provides a basic background in mechanical, electrical
and computer skills and – depending on the track – specialized instruction
in each of these areas. Topics include CAD, basic computer skills, safety,
automation, programmable logic controllers, instrumentation, hydraulics
and pneumatics, mechanical drives, motors and controls, and basic
electricity. The latest equipment is used to provide skills in these areas.

Two curriculum tracks are available: the Mechanical track and the
Electrical track. The Mechanical Track is structured to enable the graduate
to focus on the mechanical aspects of a manufacturing or designed
system while still having a good understanding of its electrical function.
The Electrical Track provides the opposite – a focus on the electrical and
control aspects with a good understanding of the mechanical components.
Completion of the program requires that students use college-level
algebra, trigonometry and physics in the application of scientific principles
to technical problems.

Contact Information
The Mechatronics Engineering Technology Program is in the Engineering
Technologies Division. For additional information, visit www.cpcc.edu/et or
call 704.330.6557.

Visit Career Coach for career information.

General Education Requirements
ENG 111 Writing and Inquiry 3.0
COM 110 Introduction to Communication 3.0
ECO 251 Principles of Microeconomics 3.0
Take 3 credits from the following:
ENG 112 Writing and Research in the Disciplines 3.0
ENG 113 Literature-Based Research
ENG 114 Professional Research & Reporting
Take 1 course from the following:
MAT 121 Algebra/Trigonometry I
MAT 171 Precalculus Algebra
Take 3 credits from the following: 3.0
ART 111 Art Appreciation
ART 114 Art History Survey I
ART 115 Art History Survey II
ART 116 Survey of American Art
ART 117 Non-Western Art History
DAN 110 Dance Appreciation
DAN 211 Dance History I
DAN 212 Dance History II
DRA 111 Theatre Appreciation
DRA 112 Literature of the Theatre
DRA 122 Oral Interpretation

ENG 231 American Literature I
ENG 232 American Literature II
ENG 241 British Literature I
ENG 242 British Literature II
ENG 251 Western World Literature I
ENG 252 Western World Literature II
HUM 130 Myth in Human Culture
HUM 160 Introduction to Film
HUM 211 Humanities I
HUM 212 Humanities II
MUS 110 Music Appreciation
MUS 112 Introduction to Jazz
MUS 210 History of Rock Music
MUS 213 Opera and Musical Theatre
PHI 215 Philosophical Issues
PHI 220 Western Philosophy I
PHI 221 Western Philosophy II
PHI 230 Introduction to Logic
PHI 240 Introduction to Ethics
REL 110 World Religions
REL 111 Eastern Religions
REL 112 Western Religions
REL 211 Introduction to Old Testament
REL 212 Introduction to New Testament
REL 221 Religion in America

Major Requirements
ISC 112 Industrial Safety 2.0
EGR 125 Appl Software for Tech 2.0
MEC 130 Mechanisms 3.0
MEC 265 Fluid Mechanics 3.0
ELC 131 Circuit Analysis I 4.0
ATR 112 Introduction to Automation 3.0
ELC 213 Instrumentation 4.0
ELN 260 Prog Logic Controllers 4.0
Take 1 of 2 Groups: 3.0-7.0
Mechanical Track Electronics
ELC 130 Advanced Motors and Controls
Electrical Track Electronics
ELC 135 Electrical Machines
ELC 136 Electrical Machines II
Take 1 course:
EGR 120 Engineering and Design Graphics 3.0
or DFT 154 Intro to Solid Modeling
Take 1 course:
PHY 131 Physics-Mechanics 4.0
or PHY 151 College Physics I
Take 1 of the following: 3.0-4.0
MAT 122 Algebra/Trigonometry II
MAT 172 Precalculus Trigonometry

Major Track
Complete one of two major tracks (See below)  

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 250</td>
<td>5.0</td>
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<tr>
<td>MEC 180</td>
<td>3.0</td>
</tr>
<tr>
<td>MAC 234</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 270</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Total Credits 18

Medical Assisting

The Medical Assisting curriculum prepares multi-skilled health care professionals to be qualified to perform administrative, clinical and laboratory procedures.

Course work includes instruction in scheduling appointments, coding and processing insurance accounts, billing, collections, medical transcription, computer operations, assisting with examinations/treatments, performing routine laboratory procedures, electrocardiography, supervised medication administration, and ethical/legal issues associated with patient care.

Advanced credits can be awarded toward completion of requirements for an Associate of Applied Science Degree in Medical Assisting. Individuals desiring a career in Medical Assisting should, if possible, take biology, mathematics, keyboarding and computer courses prior to entering the program. Students are admitted to the Medical Assisting program for fall and spring semesters.

Visit Career Coach for career information.

Medical Assisting (A45400)

Degree Awarded

A Degree in Medical Assisting is awarded by the College upon completion of the degree requirements.

Admissions

- Complete a CPCC application.
- Submit high school transcripts as well as any college transcripts (if applicable).
- Take required placement tests.
- Complete any required Developmental classes with a “C” or better.
- Students must be selected to enter the program. Upon acceptance and enrollment in the program, students must take all courses in the scheduled sequence.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- A physical examination (including a drug screen) documenting the applicant’s ability to complete all program requirements is required.
- Students must demonstrate word processing proficiency including keying (typing) at an acceptable speed with accurate level and document formatting. Typing speed required is at least 30 wpm with 80 percent accuracy. If a student cannot demonstrate word processing proficiency, OST 131 is required.
- Students must demonstrate basic computer competencies through course work or testing. The division director of Computer Office and Information Systems will determine equivalence and competencies. CIS 110 is required if course work is needed to demonstrate competencies.
Notes

• ACA 118 College Study Skills is highly recommended before or with entrance in the Medical Assisting program.
• Progression in this program is dependent on satisfying course prerequisites, co-requisites and maintaining a grade of “C” or better for all courses in the curriculum.
• Students must have current CPR Certification prior to the Practicum (MED 260).
• In addition to tuition, lab fees and textbooks, this program has additional costs that include uniforms, lab coats, personal protective equipment, physical examination including immunizations and drug screening and a CPCC Medical Assisting pin.
• In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a NC state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

Contact Information

The Medical Assisting program is in the Medical Careers and Cosmetology Division. For more information, first go to the website at http://www.cpcc.edu/medicalcareers/medical-assisting. If further information is needed contact the Program Chair at 704.330.6493.

Visit Career Coach for career information.

General Education Requirements

ENG 111 Writing and Inquiry 3.0

Select one of the following: 3.0

MAT 143 Quantitative Literacy
MAT 152 Statistical Methods I

Select 3 credits of the following: 3.0

ENG 112 Writing and Research in the Disciplines
ENG 113 Literature-Based Research
ENG 114 Professional Research & Reporting

Select 3 credits of the following: 3.0

ANT 210 General Anthropology
ANT 220 Cultural Anthropology
ECO 151 Survey of Economics
ECO 251 Principles of Microeconomics
ECO 252 Principles of Macroeconomics
GEO 111 World Regional Geography
HIS 111 World Civilizations I
HIS 112 World Civilizations II
HIS 131 American History I
HIS 132 American History II
POL 120 American Government
POL 210 Comparative Government
POL 220 International Relations
PSY 150 General Psychology
PSY 241 Developmental Psychology
PSY 281 Abnormal Psychology
SOC 210 Introduction to Sociology
SOC 213 Sociology of the Family
SOC 225 Social Diversity

Select one of the following: 3.0

ANT 221 Comparative Cultures
POL 110 Introduction to Political Science
PSY 237 Social Psychology
SOC 225 Social Diversity

Select 3 credits of the following: 3.0

ART 111 Art Appreciation
ART 114 Art History Survey I
ART 115 Art History Survey II
ART 116 Survey of American Art
ART 117 Non-Western Art History
DAN 110 Dance Appreciation
DAN 211 Dance History I
DAN 212 Dance History II
DRA 111 Theatre Appreciation
DRA 112 Literature of the Theatre
DRA 122 Oral Interpretation
ENG 231 American Literature I
ENG 232 American Literature II
ENG 241 British Literature I
ENG 242 British Literature II
ENG 251 Western Literature I
ENG 252 Western Literature II
HUM 130 Myths in Human Culture
HUM 160 Introduction to Film
HUM 211 Humanities I
HUM 212 Humanities II
MUS 110 Music Appreciation
MUS 112 Introduction to Jazz
MUS 210 History of Rock Music
MUS 213 Opera and Musical Theatre
PHI 220 Western Philosophy I
PHI 221 Western Philosophy II
PHI 230 Introduction to Logic
REL 110 World Religions
REL 111 Eastern Religions
REL 112 Western Religions
REL 211 Introduction to Old Testament
REL 212 Introduction to New Testament
REL 221 Religion in America

Major Requirements

MED 110 Orientation to Medical Assisting 1.0
MED 118 Medical Law and Ethics 2.0
MED 121 Medical Terminology I 3.0
MED 122 Medical Terminology II 3.0
MED 130 Administrative Office Procedures I 2.0
MED 131 Administrative Office Procedures II 2.0
MED 140 Examining Room Procedures I 5.0
### Medical Assisting Diploma (D45400)

The Medical Assisting curriculum prepares multi-skilled health care professionals qualified to perform administrative, clinical and laboratory procedures.

Course work includes instruction in scheduling appointments, coding and processing insurance accounts, billing, collections, medical transcription, computer operations; assisting with examinations/treatments, performing routine laboratory procedures, electrocardiography, supervised medication administration; and ethical/legal issues associated with patient care.

Graduates of CAAHEP accredited medical assisting programs may be eligible to sit for the American Association of Medical Assistants’ Certification Examination to become Certified Medical Assistants. Employment opportunities include physicians’ offices, health maintenance organizations, health departments and hospitals.

Advanced credits can be awarded toward completion of requirements for an Associate of Applied Science Degree in Medical Assisting. Individuals desiring a career in Medical Assisting should, if possible, take biology, mathematics, keyboarding and computer courses prior to entering the program. Students are admitted to the Medical Assisting program fall and spring semesters.

### Diploma Awarded

A Diploma in Medical Assisting is awarded by the College upon completion of the diploma requirements. Graduates of this CAAHEP Accredited program may apply to take the certification examination administered by the American Association of Medical Assistants. Credits from this program can be applied toward requirements for the Associate of Applied Science Degree in Medical Assisting.

### Admissions

- Complete a CPCC application.
- Submit high school transcripts as well as any college transcripts (if applicable).
- Take required placement tests.
- Complete any required Developmental classes with a “C” or better.
- Students must be selected to enter the program. Upon acceptance and enrollment in the program, students must take all courses in the scheduled sequence.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- A physical examination (including a drug screen) documenting the applicant’s ability to complete all program requirements is required.

- Students must demonstrate word processing proficiency including keying (typing) at an acceptable speed with accurate level and document formatting. Typing speed required is at least 30 wpm with 80 percent accuracy. If a student cannot demonstrate word processing proficiency, OST 131 is required.
- Students must demonstrate basic computer competencies through course work or testing. The division director of Computer Office and Information Systems will determine equivalence and competencies. CIS 110 is required if course work is needed to demonstrate competencies.
- Students entering or re-entering the MED program must successfully re-take any MED courses taken five or more years prior to the entry or re-entry point.

### Program Accreditation

The Medical Assisting Diploma Program at Central Piedmont Community College Central Campus is accredited by the Commission on Accreditation of Allied Health Education Programs www.caahep.org (http://www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB). Commission on Accreditation of Allied Health Education Programs, 1361 Park Street, Clearwater, FL 33756 727.210.2350;www.caahep.org (http://www.caahep.org)

### Notes

- ACA 118 College Study Skills is highly recommended before or with entrance in the Medical Assisting program.
- Progression in this program is dependent on satisfying course prerequisites, co-requisites and maintaining a grade of “C” or better for all courses in the curriculum.
- Students must have current CPR Certification prior to the Practicum (MED 260).
- In addition to tuition, lab fees and textbooks, this program has additional costs that include uniforms, lab coats, personal protective equipment, physical examination including immunizations and drug screening, application fees for sitting for the Certification Exam and a CPCC Medical Assisting pin.
- In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a NC state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

### Contact Information

The Medical Assisting Program is in the Medical Careers and Cosmetology Division. For more information, first go the website at http://www.cpcc.edu/medicalcareers/medical-assisting. If further assistance is needed contact the Program Chair at 704.330.6493.

<table>
<thead>
<tr>
<th>General Education Requirements</th>
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<tbody>
<tr>
<td>ENG 111 Writing and Inquiry</td>
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Select 3 credits of the following:

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
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<tr>
<td>COM 120</td>
<td>Intro to Interpersonal Communication</td>
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<tr>
<th>Major Requirements</th>
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<tbody>
<tr>
<td>MED 110 Orientation to Medical Assisting</td>
</tr>
<tr>
<td>MED 118 Medical Law and Ethics</td>
</tr>
</tbody>
</table>
Admissions
- Complete a CPCC application.
- Submit high school transcripts as well as any college transcripts.
- Take required placement tests.
- Complete any required Developmental classes with a “C” or better.
- Complete at least high school level chemistry course with a “C” or better within the last 10 years.
- Students must be selected to enter the program. Upon acceptance and enrollment in the program, students must take all courses as scheduled and sequenced.
- Complete and submit an MLT admissions packet.
- Complete the TEAS test and submit scores with admissions packet.
- A physical examination documenting the applicant’s ability to complete all program requirements is also required.
- Students must be selected to enter the program. Upon acceptance and enrollment in the program, students must take all courses as scheduled and sequenced.
- Continued progression in the program requires a grade of “C” or better in each MLT prefix course each semester.
- Applicants must also present evidence of good physical and mental health.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Program Accreditation

Notes
In addition to tuition and textbooks, costs of this program include the following: uniforms, and professional white shoes, fluid-resistant lab coat, safety glasses/goggles, a physical examination including immunizations and drug screening.

The student must provide documentation of both health and accident insurance.

In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a N.C. state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

Contact Information
The Medical Laboratory Technology program is in the Medical Careers and Cosmetology Division. For more information, first go to the website at http://www.cpcc.edu/medicalcareers/medical-laboratory-technology. If further assistance is needed contact the Program Chair at 704.330.6470.

Visit Career Coach for career information.

General Education Requirements
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<tr>
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<td>ENG 111</td>
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<td>COM 110</td>
<td>Introduction to Communication</td>
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<tr>
<td>PSY 150</td>
<td>General Psychology</td>
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</table>

Medical Laboratory Technology
The Medical Laboratory Technology curriculum prepares individuals to perform clinical laboratory procedures in chemistry, hematology, microbiology and transfusion medicine that may be used in the maintenance of health and in diagnosis/treatment of disease.

Course work emphasizes mathematical and scientific concepts related to specimen collection, laboratory testing and procedures, quality assurance and reporting/recording and interpreting findings involving tissues, blood or body fluids.

Graduates are eligible to take examinations given by the American Society of Clinical Pathology (ASCP) Board of Certification. Employment opportunities include laboratories in hospitals, physician office laboratories, blood donation centers, industry and research facilities.

Visit Career Coach for career information.

Medical Laboratory Technology (A45420)

Degree Awarded
The Associate in Applied Science Degree - Medical Laboratory Technology is awarded by the College upon completion of this program.
Select 3 credits of the following: 3.0
- ENG 112 Writing and Research in the Disciplines
- ENG 113 Literature-Based Research
- ENG 114 Professional Research & Reporting

Select 3 credits of the following: 3.0
- ART 111 Art Appreciation
- ART 114 Art History Survey I
- ART 115 Art History Survey II
- ART 116 Survey of American Art
- ART 117 Non-Western Art History
- DAN 110 Dance Appreciation
- DAN 211 Dance History I
- DAN 212 Dance History II
- DRA 111 Theatre Appreciation
- DRA 112 Literature of the Theatre
- DRA 122 Oral Interpretation
- HUM 130 Myth in Human Culture
- HUM 160 Introduction to Film
- HUM 211 Humanities I
- HUM 212 Humanities II
- ENG 231 American Literature I
- ENG 232 American Literature II
- ENG 241 British Literature I
- ENG 242 British Literature II
- ENG 251 Western World Literature I
- ENG 252 Western World Literature II
- MUS 110 Music Appreciation
- MUS 112 Introduction to Jazz
- MUS 213 Opera and Musical Theatre
- PHI 215 Philosophical Issues
- PHI 220 Western Philosophy I
- PHI 221 Western Philosophy II
- PHI 230 Introduction to Logic
- REL 110 World Religions
- REL 112 Western Religions
- REL 211 Introduction to Old Testament
- REL 212 Introduction to New Testament
- REL 221 Religion in America
- REL 111 Eastern Religions
- MUS 210 History of Rock Music

Select 3 credits of the following: 3.0
- MAT 143 Quantitative Literacy
- MAT 152 Statistical Methods I

CHM 130A General, Organic, & Biochemistry Lab 1.0
MLT 251 MLT Practicum I 1.0
MLT 267 MLT Practicum II 8.0
MLT 277 MLT Practicum III 8.0
MLT 126 Immunology and Serology 2.0
MLT 127 Transfusion Medicine 3.0
MLT 220 Hematology/Hemostasis II 3.0
MLT 230 Clinical Chemistry II 3.0
MLT 216 Professional Issues 1.0

Total Credits 75

No diplomas offered.
No certificates offered.

Medical Office Administration

This curriculum prepares individuals for employment in medical and other health care-related offices.

Coursework will include medical terminology, information systems, office management, medical coding, billing and insurance, legal and ethical issues plus formatting and word processing. Students will learn administrative and support functions and develop skills applicable in medical environments.

Employment opportunities are available in medical and dental offices, hospitals, insurance companies, laboratories, medical supply companies and other health care-related organizations.

Visit Career Coach for career information.

Medical Office Administration (A25310)

Degree Awarded

The Associate in Applied Science degree - Medical Office Administration is awarded upon completion of this program.

Admissions

- Complete a CPCC application.
- Submit high school transcript and any college transcripts.
- Take required placement tests to determine placement in English (ENG) and mathematics (MAT) courses.
- Meet with counselor.
- Check the Course Descriptions section to determine course prerequisites or co-requisites.
- MED 122 requires permission from the Program Chair of the Medical Assisting program.

Contact Information

The Medical Office Administration Program is in the Professional Careers Division. For more information, call 704.330.6851. For more information, check our website at www.cpcc.edu/office_systems.

Visit Career Coach for career information.

General Education Requirements

ENG 111 Writing and Inquiry 3.0
Select 3 credits of the following: 3.0
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<td>Writing and Research in the Disciplines</td>
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<td>ENG 113</td>
<td>Literature-Based Research</td>
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</tr>
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<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
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<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
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<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
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<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
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<tr>
<td>MAT 152</td>
<td>Statistical Methods I</td>
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<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
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<td>MAT 172</td>
<td>Precalculus Trigonometry</td>
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<td>MAT 271</td>
<td>Calculus I</td>
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<tr>
<td>ANT 210</td>
<td>General Anthropology</td>
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<td>ANT 220</td>
<td>Cultural Anthropology</td>
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<tr>
<td>ANT 221</td>
<td>Comparative Cultures</td>
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<tr>
<td>ECO 151</td>
<td>Survey of Economics</td>
<td>3.0</td>
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<td>ECO 251</td>
<td>Principles of Microeconomics</td>
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<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
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<td>GEO 111</td>
<td>World Regional Geography</td>
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<td>HIS 111</td>
<td>World Civilizations I</td>
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<tr>
<td>HIS 131</td>
<td>American History I</td>
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<td>POL 110</td>
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<td>POL 120</td>
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<td>POL 210</td>
<td>Comparative Government</td>
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<td>International Relations</td>
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<td>PSY 150</td>
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<td>PSY 237</td>
<td>Social Psychology</td>
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<td>PSY 241</td>
<td>Developmental Psychology</td>
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<td>PSY 281</td>
<td>Abnormal Psychology</td>
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<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
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<td>SOC 213</td>
<td>Sociology of the Family</td>
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<td>SOC 220</td>
<td>Social Problems</td>
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<td>SOC 225</td>
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<td>Art History Survey I</td>
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<td>ART 115</td>
<td>Art History Survey II</td>
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<td>ART 116</td>
<td>Survey of American Art</td>
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<td>ART 117</td>
<td>Non-Western Art History</td>
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<td>Dance History I</td>
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<td>DAN 212</td>
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<td>DRA 111</td>
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<td>DRA 112</td>
<td>Literature of the Theatre</td>
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<td>DRA 122</td>
<td>Oral Interpretation</td>
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<td>ENG 231</td>
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<td>ENG 241</td>
<td>British Literature I</td>
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<td>ENG 251</td>
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<td>Introduction to Jazz</td>
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<td>MUS 210</td>
<td>History of Rock Music</td>
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<td>Opera and Musical Theatre</td>
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<td>PHI 215</td>
<td>Philosophical Issues</td>
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<td>PHI 220</td>
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<td>REL 211</td>
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<td>Religion in America</td>
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**Major Requirements**

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<td>OST 148</td>
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<td>Text Entry &amp; Formatting</td>
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<td>OST 289</td>
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<td>OST 131</td>
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<td>&amp; MED 122</td>
<td>and Medical Terminology II</td>
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**OR**

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<td>&amp; OST 142</td>
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<td>OST 243</td>
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<td>OST 136</td>
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<tr>
<td>CIS 111</td>
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<td>or CIS 110</td>
<td>Introduction to Computers</td>
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<tr>
<td>OST 241</td>
<td>Med Ofc Transcription I</td>
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<td>ACC 110</td>
<td>Ten-Key Skills</td>
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<td>OST 236</td>
<td>Advanced Word or Information Processing</td>
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<tr>
<td>BIO 161</td>
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<tr>
<td>OST 184</td>
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<tr>
<td>ACC 115</td>
<td>College Accounting</td>
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<tr>
<td>or ACC 120</td>
<td>Principles of Financial Accounting</td>
<td>5.0</td>
</tr>
</tbody>
</table>

**Technical Electives**

Select 5 credits of the following: 5.0
Non-Destructive Examination Technology

The Non-Destructive Examination (NDE) Technology curriculum prepares students for careers in non-destructive testing of materials, equipment and/or components. NDE test methods assess an object's integrity without affecting its function. NDE is used in many industries, including construction, petrochemical, pulp and paper, power generation and aerospace.

Coursework includes ultrasonics, radiography, liquid penetrant, visual, magnetic particle and eddy current examination. Applied math and physics are an integral part of NDE and the curriculum. Students gain knowledge of these methods through applied theory and hands-on applications.

The NDE curriculum meets classroom and laboratory training requirements of Recommended Practice No. SNT-TC-1A of the American Society for Nondestructive Testing (ASNT), permitting graduates the opportunity to obtain method-specific NDE certification after a few months of on-the-job experience with their employers. Career opportunities exist in applied NDE, material sciences, technical sales and quality control in many industries.

Many of the courses are offered through a Fast Track program (any semester course offered in less than a 16 week semester). When creating a class schedule, pay particular attention to the start/end dates and times of the courses.

Visit Career Coach for career information.

Non-Destructive Examination Technology (A50350)

Degree Awarded

An Associate in Applied Science degree in Non-destructive Examination Technology is awarded by the College upon completion of this program.

Admissions

- Completion of a high school diploma or equivalent is required.
- Many courses have prerequisites; check the Courses section for details.

Contact Information

Non-Destructive Examination is in the Applied Technologies Division. For more information, call 704.330.4434 or 704.330.4413. See Non-Destructive Examination Technology program instructors or program counselors for suggested sequence of courses.

Visit Career Coach for career information.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
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<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
<td>3.0</td>
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<tr>
<td>ENG 113</td>
<td>Literature-Based Research</td>
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<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
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<td>MAT 121</td>
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<td>COM 120</td>
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<td>COM 231</td>
<td>Public Speaking</td>
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<tr>
<td>ART 111</td>
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<td>Art History Survey II</td>
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<td>ART 116</td>
<td>Survey of American Art</td>
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<td>ART 117</td>
<td>Non-Western Art History</td>
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<td>Dance Appreciation</td>
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<td>DAN 211</td>
<td>Dance History I</td>
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</tr>
<tr>
<td>DAN 212</td>
<td>Dance History II</td>
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<td>Theatre Appreciation</td>
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<td>ENG 241</td>
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<td>ENG 252</td>
<td>Western World Literature II</td>
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<td>HUM 160</td>
<td>Introduction to Film</td>
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<td>HUM 211</td>
<td>Humanities I</td>
<td></td>
</tr>
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<td>HUM 212</td>
<td>Humanities II</td>
<td></td>
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<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
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<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
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<tr>
<td>MUS 210</td>
<td>History of Rock Music</td>
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<tr>
<td>MUS 213</td>
<td>Opera and Musical Theatre</td>
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<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
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<td>PHI 220</td>
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<td>PHI 230</td>
<td>Introduction to Logic</td>
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<tr>
<td>REL 110</td>
<td>World Religions</td>
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<tr>
<td>REL 111</td>
<td>Eastern Religions</td>
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<tr>
<td>REL 112</td>
<td>Western Religions</td>
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<tr>
<td>REL 211</td>
<td>Introduction to Old Testament</td>
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<td>REL 212</td>
<td>Introduction to New Testament</td>
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<td>REL 221</td>
<td>Religion in America</td>
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<td>Intro to Nondestructive Examination</td>
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<td>NDE 112</td>
<td>Materials and Processes</td>
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<tr>
<td>NDE 121</td>
<td>Principles of Ultrasonic Exam UT</td>
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<tr>
<td>NDE 122</td>
<td>Angle Beam Examination</td>
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<tr>
<td>NDE 131</td>
<td>Radiation Safety &amp; Principles of Rt</td>
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<tr>
<td>NDE 132</td>
<td>RT Industrial Applications</td>
<td>3.0</td>
</tr>
<tr>
<td>NDE 142</td>
<td>Visual Testing-1,2</td>
<td>2.0</td>
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<td>Liquid Penetran Testing-1,2</td>
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<tr>
<td>NDE 152</td>
<td>Magnetic Particle Testing-1,2</td>
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<td>NDE 153</td>
<td>Eddy Current Testing-1</td>
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<td>NDE 210</td>
<td>NDE Procedure Development</td>
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<td>CIS 110</td>
<td>Introduction to Computers</td>
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<td>Symbols and Specifications</td>
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<tr>
<td>PHY 131</td>
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<td>or PHY 151</td>
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**Technical Elective**

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<td>Work-Based Learning I</td>
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<td>WBL 114</td>
<td>Work-Based Learning I</td>
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<td>NDE 231</td>
<td>Advance Radiographic Testing Techniques</td>
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<tr>
<td>MEC 172</td>
<td>Introduction to Metallurgy</td>
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<tr>
<td>MEC 180</td>
<td>Engineering Materials</td>
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</table>
Central Piedmont Community College

Additional requirement or security clearances are not included in this program. Some of these requirements are located in the United States Code of Federal Regulations (CFR) Title 10, Energy:

- 10 CFR Part 26, Fitness for Duty Programs
- 10 CFR 73.56, Personnel Access Authorization Requirements for Nuclear Power Plants

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
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<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
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Major Requirements

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<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>NDE 110</td>
<td>Intro to Nondestructive Examination</td>
<td>3.0</td>
</tr>
<tr>
<td>NDE 112</td>
<td>Materials and Processes</td>
<td>3.0</td>
</tr>
<tr>
<td>NDE 121</td>
<td>Principles of Ultrasonic Exam UT</td>
<td>4.0</td>
</tr>
<tr>
<td>NDE 122</td>
<td>Angle Beam Examination</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY 131</td>
<td>Physics-Mechanics</td>
<td>4.0</td>
</tr>
<tr>
<td>NDE 221</td>
<td>UT Industrial Applications</td>
<td>4.0</td>
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<tr>
<td>NDE 261</td>
<td>Performance Demonstration Initiative -1, Ultrasonic Testing, Carbon Steel Pipe Welds</td>
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<td>NDE 262</td>
<td>Performance Demonstration Initiative -2, Ultrasonic Testing, Stainless Steel Pipe Welds</td>
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<tr>
<td>NDE 263</td>
<td>Perf Demonstration Initiative -3, Ultrasonic Testing, Thru Wall Sizing, Carbon Steel/Stainless Steel</td>
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Total Credits: 48

- Non-Destructive Examination Technology Certificate with a Specialization in Ultrasonic Examination (C50350-C1) (p. 203)
- Non-Destructive Examination Technology Certificate with a Specialization in Visual and Penetrant Examination (C50350-C2) (p. 203)
- Non-Destructive Examination Technology Certificate with a Specialization in Radiographic Examination (C50350-C4) (p. 203)
- Non-Destructive Examination Technology Certificate with a Specialization in Advanced Nuclear Plant Inspection of Ferritic and Stainless Steel Piping Welds (C50350-C5) (p. 203)
- With a Specialization in Advanced Nuclear Plant Inspection - UT Inspection and Sizing of Piping and Dissimilar Welds (C50350-C6) (p. 204)
- Non-Destructive Examination Technology Certificate with a Specialization in Level 1 and Level 2 Surface Examination (C50350-C8) (p. 204)
- Non-Destructive Examination Technology Certificate with a Specialization in Magnetic Particle & Eddy Current Examinations (C50350-C9) (p. 204)
- Non-Destructive Examination Technology Certificate with a Specialization in Advanced Visual Testing (C50350-10) (p. 204)

Non-Destructive Examination Technology Certificates (C50350)

These are special short-term certificates that are offered in the NDE program. The courses listed are taken from the NDE diploma and degree programs. These certificates are issued in accordance with CPCC policy and certify that the student has successfully completed the courses (GPA of 2.0 or higher within the certificate program). These are not certificates to perform NDE. These certificates along with the process of NDE qualification and testing are performed by the employer, not CPCC.

A student may earn certificates that build to earning a diploma or degree. A student may earn a certificate(s) in the same semester that he or she earns a degree or diploma.

Non-Destructive Examination Technology Certificate with a Specialization in Ultrasonic Examination (C50350-C1)

Major Requirements

<table>
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<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
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<tr>
<td>NDE 110</td>
<td>Intro to Nondestructive Examination</td>
<td>3.0</td>
</tr>
<tr>
<td>NDE 112</td>
<td>Materials and Processes</td>
<td>3.0</td>
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<tr>
<td>NDE 121</td>
<td>Principles of Ultrasonic Exam UT</td>
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<td>NDE 122</td>
<td>Angle Beam Examination</td>
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Total Credits: 17

Non-Destructive Examination Technology Certificate with a Specialization in Visual and Penetrant Examination (C50350-C2)

Major Requirements

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>NDE 110</td>
<td>Intro to Nondestructive Examination</td>
<td>3.0</td>
</tr>
<tr>
<td>NDE 112</td>
<td>Materials and Processes</td>
<td>3.0</td>
</tr>
<tr>
<td>WLD 141</td>
<td>Symbols and Specifications</td>
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<tr>
<td>NDE 142</td>
<td>Visual Testing-1.2</td>
<td>2.0</td>
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<tr>
<td>NDE 143</td>
<td>Liquid Penetrant Testing-1.2</td>
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Total Credits: 13

Non-Destructive Examination Technology Certificate with a Specialization in Radiographic Examination (C50350-C4)

Major Requirements

<table>
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<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
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<td>Intro to Nondestructive Examination</td>
<td>3.0</td>
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<tr>
<td>NDE 112</td>
<td>Materials and Processes</td>
<td>3.0</td>
</tr>
<tr>
<td>NDE 131</td>
<td>Radiation Safety &amp; Principles of Rt</td>
<td>4.0</td>
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<tr>
<td>NDE 132</td>
<td>RT Industrial Applications</td>
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<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
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Total Credits: 16

Non-Destructive Examination Technology Certificate with a Specialization in Advanced Nuclear Plant Inspection of Ferritic and Stainless Steel Piping Welds (C50350-C5)

Major Requirements

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
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<td>Intro to Nondestructive Examination</td>
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<td>NDE 112</td>
<td>Materials and Processes</td>
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</tr>
<tr>
<td>NDE 131</td>
<td>Radiation Safety &amp; Principles of Rt</td>
<td>4.0</td>
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<td>NDE 132</td>
<td>RT Industrial Applications</td>
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<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
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</tbody>
</table>

Total Credits: 16
Non-Destructive Examination Technology Certificate With a Specialization in Advanced Nuclear Plant Inspection of Ferritic and Stainless Steel Piping Welds (C50350-C5)

The Non-Destructive Examination Technology Certificate Specialization in Ultrasonic Examination (C50350-C1) is a prerequisite for this certificate.

**Major Requirements**

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>NDE 221</td>
<td>UT Industrial Applications</td>
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<tr>
<td>NDE 261</td>
<td>Performance Demonstration Initiative -1, Ultrasonic Testing, Carbon Steel Pipe Welds</td>
<td>7.0</td>
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<tr>
<td>NDE 262</td>
<td>Performance Demonstration Initiative -2, Ultrasonic Testing, Stainless Steel Pipe Welds</td>
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</table>

**Total Credits** 18

Back to Top (p. )

**With a Specialization in Advanced Nuclear Plant Inspection - UT Inspection and Sizing of Piping and Dissimilar Welds (C50350-C6)**

**Major Requirements**

<table>
<thead>
<tr>
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<tbody>
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<td>Perf Demonstration Initiative -3, Ultrasonic Testing, Thru Wall Sizing, Carbon Steel/Stainless Steel</td>
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<td>NDE 265</td>
<td>Performance Demonstration Initiative -10 Ultrasonic 3.0 Testing, Dissimilar Metal Detection and Length Sizing</td>
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<td>UT Industrial Applications</td>
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**Total Credits** 13

Back to Top (p. )

**Non-Destructive Examination Technology Certificate with Specialization in Level 1 and Level 2 Surface Examination (C50350-C8)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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<td>NDE 110</td>
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<tr>
<td>NDE 112</td>
<td>Materials and Processes</td>
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<tr>
<td>NDE 142</td>
<td>Visual Testing-1,2</td>
<td>2.0</td>
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<td>NDE 143</td>
<td>Liquid Penetrant Testing-1,2</td>
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<td>NDE 152</td>
<td>Magnetic Particle Testing-1,2</td>
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**Total Credits** 12

**Non-Destructive Examination Certificate Specialization in Magnetic Particle & Eddy Current Examinations (C50350-C9)**

**Required Courses**

<table>
<thead>
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<th>Course Name</th>
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<tbody>
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<td>Intro to Nondestructive Examination</td>
<td>3.0</td>
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<tr>
<td>NDE 112</td>
<td>Materials and Processes</td>
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<tr>
<td>NDE 153</td>
<td>Eddy Current Testing-1</td>
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<td>NDE 252</td>
<td>Eddy Current Testing (ET)</td>
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**Non-Destructive Examination Certificate in Advanced Visual Testing**

**Major Requirements**

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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
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<td>NDE 112</td>
<td>Materials and Processes</td>
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<tr>
<td>NDE 142</td>
<td>Visual Testing-1,2</td>
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<tr>
<td>NDE 242</td>
<td>Advanced Visual Testing (VT)</td>
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<td>WLD 141</td>
<td>Symbols and Specifications</td>
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<tr>
<td>NUC 110</td>
<td>Nuclear Reactor Systems</td>
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**Total Credits** 17

Nursing Assistant

The Nursing Aide curriculum prepares individuals to work under the supervision of licensed healthcare professionals in performing nursing care and services for persons of all ages.

Coursework emphasizes growth and development throughout the life span, personal care, vital signs, communication, nutrition, medical asepsis, therapeutic activities, accident and fire safety, household environment and equipment management as well as employment skills and family resources and services.

Graduates of this curriculum may be eligible to be listed on the registry as a Nursing Aide I and Nursing Aide II. They may be employed in home health agencies, hospitals, clinics, nursing homes, extended care facilities and doctor’s offices.

Visit Career Coach for career information.

No degrees offered.

No diplomas offered.

Nursing Aide Certificate (C45840)

**Certificate Awarded**

A Nursing Aide Certificate is awarded by the College upon completion of certificate requirements.

**Admission Steps**

1. Complete an application to CPCC here. (https://www1.cfnc.org/Applications/NC_Community_College/apply.html?application_id=1489)

2. Take the required placement tests and earn the following scores:
   - MATH - at least a 7 on Developmental Math exams DMA 010, DMA 020, and DMA 030
   - READING / ENGLISH - a composite Developmental Reading (DRE) exam score of 151+
   - Students also may qualify by passing these courses: DMA 010, DMA 020, and DMA 030, plus DRE 098. To schedule a test, take practice tests, and access review materials, visit the Testing and Assessment website here. (http://www.cpcc.edu/testing_assessment/placement-testing)
3. Attend one of the Mandatory Information Sessions. See the schedule here. (http://www.cpcc.edu/health-human-services/nurse-aid-certificate-pending/mandatory-information-sessions)

Admission Credentials

- In order to participate in clinical education experiences at health care facilities, students are required to submit results of a NC state and/or national criminal background check at their own expense. As a condition of admission, students are required to verify they are United States citizens or otherwise legally authorized residents of the United States.

- The following required forms are not part of the registration process, but must be submitted in the first class meeting of the Nurse Aide Program:
  a. Authorizations
  b. Criminal Background Check Request
  c. Immunizations
  d. Medical physical
  e. Urine Drug Screening Results

- Previous students, who have had a name change due to marriage or divorce, must take their social security card and current driver’s license to Records & Registration on the second floor of the Central High Building on Central Campus to have their student records updated.

Credentials for Nursing Assistant Courses

- In addition to tuition, lab fees and textbooks, courses have additional costs that include uniforms, personal protective equipment, physical examinations, immunizations, and drug screening.
- To take the Nursing Assistant II course (NAS102), students must have completed the NC state-approved Nurse Aide I Program (NAI) and be on the current active listing of the NC Nurse Aide I Registry.
- Students in NAS 102 must have current CPR certification by an American Heart Association Healthcare provider prior to beginning clinical experience.
- Students must be at least 18 years of age by the time of clinicals.

Contact Information

The Nursing Assistant Certificate is in the Health & Human Services Division. For information, please visit the website at Nurse Aide (http://www.cpcc.edu/health-human-services/nurse-aid-certificate).

Visit Career Coach for career information.

Major Requirements

<table>
<thead>
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<th>Title</th>
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<tr>
<td>NAS 102</td>
<td>Nursing Assistant II,Nurse Aide II</td>
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</table>

Total Credits 12

Nursing, Associate Degree

Christa A. Overcash Associate Degree Nursing curriculum provides individuals with the knowledge and skills necessary to provide nursing care to clients and groups of clients throughout the lifespan in a variety of settings. Courses will include content related to the nurse’s role as provider of nursing care, as manager of care, as a member of the discipline of nursing and as a member of the interdisciplinary team.

Graduates of this program are eligible to apply to take the National Council Licensure Examination (NCLEX-RN) which is required for practice as a Registered Nurse. Employment opportunities include hospitals, long-term care facilities, clinics, physicians’ offices, industry and community agencies.

Visit Career Coach for career information.

Nursing, Associate Degree (A45110)

Degree Awarded

An Associate in Applied Science Degree in Nursing is awarded by the College upon completion of this program.

Program Admission Steps

- Complete a CPCC application.
- Submit high school transcripts and any college transcripts.
- Meet with college counselors in Central High 212. Call for an appointment at 704.330.6433.
- Obtain an application to the nursing program.
- Show proof of having taken a N.C. state approved nurse aide
- Provide a copy of current nurse aide listing from N.C. nurse aide registry.

Additional Costs and Requirements

In addition to tuition and textbooks, costs of this program include the following:

- uniforms, lab coat
- stethoscope
- a physical examination including drug screening test
- immunizations such as tetanus toxoid, hepatitis B vaccinations, TB test, blood test (i.e., VDRL, rubella titer, etc.),
- current CPR certification
- criminal background check, FBI fingerprinting
- application fees for N.C. State Board of Nursing National Council Licensure Examination.
- Participation in clinical education experiences at area health care facilities require students to submit results of a criminal background check and FBI fingerprinting at their own expense.

Students must provide a certificate of health and accident insurance.

All course work must be completed with a grade of “C” or better.

Students are required to verify that they are a citizen of the United States citizens, or an otherwise legally authorized resident.

The Christa A. Overcash Associate Degree Nursing program has full approval by the North Carolina Board of Nursing.

North Carolina Board of Nursing
4516 Lake Boone Trail
Raleigh, NC 27607
Phone: (919) 782-3211
Fax: (919) 781-9461

This Associate Degree Nursing education program is nationally accredited. It is accredited by the Accreditation Commission for Education in Nursing (ACEN).

ACEN
Contact Information

The Christa A. Overcash Associate Degree Nursing program is in the Nursing Division. For more information, contact the Nursing Division at 704.330.6284. Application information may be found on the Nursing website at http://www.cpcc.edu/nursing.

Visit Career Coach for career information.

General Education Requirements

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<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>PSY 150</td>
<td>General Psychology</td>
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<td>BIO 168</td>
<td>Anatomy and Physiology I</td>
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<td>Art History Survey I</td>
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<td>MUS 112</td>
<td>Introduction to Jazz</td>
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<td>PHI 215</td>
<td>Philosophical Issues</td>
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Major Requirements

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<td>Health-Illness Concepts</td>
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<td>Family Health Concepts</td>
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<td>NUR 114</td>
<td>Holistic Health Concepts</td>
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<td>Health Care Concepts</td>
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<td>NUR 212</td>
<td>Health System Concepts</td>
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<td>NUR 213</td>
<td>Complex Health Concepts</td>
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<td>PSY 241</td>
<td>Developmental Psychology</td>
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</table>

Total Credits: 69

No diplomas offered.

No certificates offered.

Occupational Therapy Assistant

The Occupational Therapy Assistant curriculum prepares individuals to work under the supervision of a registered/licensed occupational therapist in screening, assessing, planning, and implementing treatment and documenting progress for clients receiving occupational therapy services.

Course work includes human growth and development, conditions which interfere with activities of daily living, theory and process of occupational therapy, individual/group treatment activities, therapeutic use of self, activity analysis, and grading/adapting activities and environments.

Graduates may be eligible to take the national certification examination for practice as a certified occupational therapy assistant. Employment opportunities include hospitals, rehabilitation facilities, long-term/extended care facilities, sheltered workshops, schools, home health programs and community programs.

Program Accreditation

The Occupational Therapy Assistant program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-3449. The council may be contacted by phone in care of AOTA at: 301-652-AOTA (2682) or online at: www.acoteonline.org (http://www.acoteonline.org).

Graduates of the program will be eligible to sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA).

In addition, most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination.

Note that a felony conviction may affect a graduate’s ability to sit for the NBCOT certification examination or attain state licensure.

Visit Career Coach for career information.

Occupational Therapy Assistant (A45500)

Degree Awarded

CPCC offers a two-year Associate in Applied Science degree program.

Admissions

- A high school diploma or equivalent is required.
- Complete a CPCC admission application.
- Take required placement tests.
- Meet with an academic advisor or counselor for preliminary counseling.
- Take the Test of Essential Academic Skills (TEAS) Version V.
- Submit all official high school and college transcripts.
- Complete any required Preparatory courses with grade of “C” or better.
- Students must be selected to enter the program. Upon acceptance and enrollment in the program, students must take all courses as scheduled and sequenced.
- Continued progression in the program requires a grade of “C” or better in every course.
- Complete a physical examination (including drug screen) documenting ability to complete all program requirements.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- Fieldwork II placements must be completed within 12 months of completion of didactic course work.

Notes

Students will spend more than 600 hours of supervised clinical training in hospitals, skilled nursing facilities, pediatric clinics, and other settings to
gain invaluable hands-on experience that supplements and complements traditional classroom learning.

**Contact Information**

The Occupational Therapy Assistant program is in the Health Sciences Division. For more information, first go to the website at http://www.cpcc.edu/health_sciences/ota. If further assistance is needed contact the Program Chair at 704.330.6424.

Visit Career Coach for career information.

**General Education Requirements**

<table>
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<tr>
<td>PSY 150</td>
<td>General Psychology</td>
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<td>Select one of the following:</td>
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<td>ENG 113</td>
<td>Literature-Based Research</td>
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<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<td>Introduction to Communication</td>
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<td>Public Speaking</td>
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<td>MAT 110</td>
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<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
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<tr>
<td>ART 116</td>
<td>Survey of American Art</td>
<td></td>
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<td>ART 117</td>
<td>Non-Western Art History</td>
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<td>DAN 110</td>
<td>Dance Appreciation</td>
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<td>DAN 211</td>
<td>Dance History I</td>
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<td>DAN 212</td>
<td>Dance History II</td>
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<td>DRA 111</td>
<td>Theatre Appreciation</td>
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<td>DRA 112</td>
<td>Literature of the Theatre</td>
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<td>DRA 122</td>
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<td>ENG 251</td>
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<td>HUM 130</td>
<td>Myth in Human Culture</td>
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<td>HUM 160</td>
<td>Introduction to Film</td>
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<td>HUM 211</td>
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<td>MUS 112</td>
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<td>History of Rock Music</td>
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<td>MUS 213</td>
<td>Opera and Musical Theatre</td>
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<td>PHI 220</td>
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<td>PHI 230</td>
<td>Introduction to Logic</td>
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**Major Requirements**

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<td>OTA 130</td>
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<td>Life Span Skills I</td>
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<td>OTA 162</td>
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<td>OTA 170</td>
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Other Major Requirements:

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</table>

**Total Credits** 76

No diplomas offered.
No certificates offered.

**Office Administration**

The Office Administration curriculum prepares individuals for positions in administrative support careers. It equips office professionals to respond to the demands of a dynamic computerized workplace.

Students will complete courses designed to develop proficiency in the use of integrated software, oral and written communication, analysis and coordination of office duties and systems and other support topics. Emphasis is placed on non-technical as well as technical skills.

Graduates should qualify for employment in a variety of positions in business, government and industry. Job classifications range from entry-level to supervisor to middle management. With appropriate work experience, graduates may apply for certification as a Certified Professional Secretary® (CPS®)/Certified Administrative Professional® (CAP®) through the International Association of Administrative Professionals (IAAP).

Visit Career Coach for career information.
Office Administration (A25370)

Degree Awarded

The Associate in Applied Science Degree - Office Administration is awarded by the College upon completion of this program.

Admissions

- Complete a CPCC application.
- Submit high school transcript and any college transcripts.
- Take required placement tests to determine placement in English (ENG) and mathematics (MAT) courses.
- Meet with counselor.
- Check the Courses section to determine course prerequisites or corequisites.

Contact Information

The Office Administration program is in the Professional Careers Division. For more information, call 704.330.6851 or visit our website at www.cpcc.edu/office_systems.

Visit Career Coach for career information.

General Education Requirements

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<tr>
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<th>Title</th>
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<td>ENG 111</td>
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<td>ENG 252</td>
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<td>Myth in Human Culture</td>
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<td>HUM 160</td>
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<td>MUS 112</td>
<td>Introduction to Jazz</td>
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<td>MUS 210</td>
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<td>Principles of Microeconomics</td>
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<td>HIS 132</td>
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<td>Sociology of the Family</td>
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<td>OST 289</td>
<td>Administrative Office Management</td>
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<tr>
<td>OST 131</td>
<td>Keyboarding</td>
<td>2.0</td>
</tr>
<tr>
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<td>Text Entry &amp; Formatting</td>
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<tr>
<td>OST 135</td>
<td>Advanced Text Entry &amp; Formatting</td>
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<tr>
<td>OST 236</td>
<td>Advanced Word or Information Processing</td>
<td>3.0</td>
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<tr>
<td>OST 137</td>
<td>Office Software Applications</td>
<td>3.0</td>
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</table>
OST 286 Professional Development 3.0
OST 138 Advanced Software Applications 3.0
OST 223 Administrative Office Transcription I 3.0
OST 233 Office Publications Design 3.0
ACC 110 Ten-Key Skills 1.0
ACC 115 College Accounting 4.0
or ACC 120 Principles of Financial Accounting
CIS 110 Introduction to Computers 3.0

Technical Electives
Select 9 credits of the following: 9.0
CTS 112 Windows (TM)
WBL 111 Work-Based Learning I
WBL 112 Work-Based Learning II
WBL 122 Work-Based Learning II
CTS 130 Spreadsheet
BUS 135 Principles of Supervision
BUS 110 Introduction to Business
SPA 120 Spanish for the Workplace

Total Credits 74

Office Administration Legal Concentration (A2537A)

Legal is a concentration under the curriculum title of Office Administration. This curriculum prepares individuals for entry-level positions in legal or government-related offices and provides professional development for the currently employed.

Course work includes terminology, operational procedures, preparation and transcription of documents, computer software and court-related functions as they relate to the legal office profession. Emphasis is placed on the development of accuracy, organizational skills, discretion and professionalism.

Graduates should qualify for employment in corporate legal departments; private practices, including real estate and estate planning; and city, state and federal government offices. With appropriate work experience, graduates may apply for certification as a Professional Legal Secretary (PLS).

Degree Awarded

The Associate in Applied Science Degree - Office Administration, Legal Concentration is awarded by the College upon completion of this program.

Admissions

• Complete a CPCC application.
• Submit high school transcript and any college transcripts.
• Take required placement tests to determine placement in English (ENG) and mathematics (MAT) courses.
• Meet with counselor.
• Check the Courses section to determine course prerequisites or corequisites.

Notes

Students interested in the Office Administration, Legal Concentration should consult with a faculty advisor regarding selection of elective courses.

Contact Information

The Office Administration, Legal Concentration program is in the Professional Careers Division. For more information, call 704.330.6851 or visit our website at www.cpcc.edu/office_systems.

General Education Requirements

ENG 111 Writing and Inquiry 3.0
COM 110 Introduction to Communication 3.0
Select 3 credits of the following: 3.0
ENG 112 Writing and Research in the Disciplines
ENG 113 Literature-Based Research
ENG 114 Professional Research & Reporting
Select 3 credits of the following: 3.0
MAT 110 Mathematical Measurement and Literacy
MAT 121 Algebra/Trigonometry I
MAT 143 Quantitative Literacy
MAT 152 Statistical Methods I
MAT 171 Precalculus Algebra
MAT 172 Precalculus Trigonometry
MAT 271 Calculus I
Select 3 credits of the following: 3.0
ART 111 Art Appreciation
ART 114 Art History Survey I
ART 115 Art History Survey II
ART 116 Survey of American Art
ART 117 Non-Western Art History
DAN 110 Dance Appreciation
DAN 211 Dance History I
DAN 212 Dance History II
DRA 111 Theatre Appreciation
DRA 112 Literature of the Theatre
DRA 122 Oral Interpretation
ENG 231 American Literature I
ENG 232 American Literature II
ENG 241 British Literature I
ENG 242 British Literature II
ENG 251 Western World Literature I
ENG 252 Western World Literature II
HUM 130 Myth in Human Culture
HUM 160 Introduction to Film
HUM 211 Humanities I
HUM 212 Humanities II
MUS 110 Music Appreciation
MUS 112 Introduction to Jazz
MUS 210 History of Rock Music
MUS 213 Opera and Musical Theatre
PHI 215 Philosophical Issues
PHI 220 Western Philosophy I
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<tr>
<td>PHI 240</td>
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</tr>
<tr>
<td>REL 110</td>
<td>World Religions</td>
</tr>
<tr>
<td>REL 111</td>
<td>Eastern Religions</td>
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<tr>
<td>REL 112</td>
<td>Western Religions</td>
</tr>
<tr>
<td>REL 211</td>
<td>Introduction to Old Testament</td>
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<td>Introduction to New Testament</td>
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<td>REL 221</td>
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Select 3 credits of the following: 3.0

- ANT 210 General Anthropology
- ANT 220 Cultural Anthropology
- ANT 221 Comparative Cultures
- ECO 151 Survey of Economics
- ECO 251 Principles of Microeconomics
- ECO 252 Principles of Macroeconomics
- GEO 111 World Regional Geography
- HIS 111 World Civilizations I
- HIS 112 World Civilizations II
- HIS 131 American History I
- HIS 132 American History II
- POL 120 American Government
- POL 210 Comparative Government
- POL 220 International Relations
- PSY 150 General Psychology
- PSY 241 Developmental Psychology
- PSY 281 Abnormal Psychology
- SOC 210 Introduction to Sociology
- SOC 213 Sociology of the Family
- SOC 225 Social Diversity
- POL 110 Introduction to Political Science
- PSY 237 Social Psychology
- SOC 220 Social Problems

**Major Requirements**

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<th>Course Code</th>
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<td>OST 164</td>
<td>Text Editing Applications</td>
<td>3.0</td>
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<td>OST 184</td>
<td>Records Management</td>
<td>3.0</td>
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<td>Word Processing</td>
<td>3.0</td>
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<td>OST 289</td>
<td>Administrative Office Management</td>
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<td>BUS 115</td>
<td>Business Law I</td>
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<td>OST 155</td>
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<td>3.0</td>
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<td>OST 156</td>
<td>Legal Office Procedures</td>
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<td>OST 252</td>
<td>Legal Transcription I</td>
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<tr>
<td>OST 131</td>
<td>Keyboarding</td>
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<td>OST 134</td>
<td>Text Entry &amp; Formatting</td>
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<td>Office Software Applications</td>
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<td>Advanced Software Applications</td>
<td>3.0</td>
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<td>ACC 110</td>
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<td>OST 286</td>
<td>Professional Development</td>
<td>3.0</td>
</tr>
<tr>
<td>OST 251</td>
<td>Legal Document Formatting</td>
<td>3.0</td>
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<tr>
<td>CIS 110</td>
<td>Introduction to Computers</td>
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**Technical Electives**

Select 6 credits of the following: 6.0

- CTS 130 Spreadsheet
- WBL 111 Work-Based Learning I
- WBL 112 Work-Based Learning I
- WBL 122 Work-Based Learning II
- LEX 120 Legal Research/Writing I
- LEX 140 Civil Litigation I
- LEX 160 Criminal Law & Procedure
- LEX 180 Case Analysis & Reasoning
- LEX 210 Real Property I
- LEX 240 Family Law
- OST 233 Office Publications Design
- SPA 120 Spanish for the Workplace
- OST 132 Keyboard Skill Building

**Total Credits** 72

**Office Administration Diplomas (D25370)**

**Office Administration Diploma in General Clerical Skills (D25370-D1)**

The purpose of the General Clerical Skills curriculum is to prepare the individual to enter clerical office occupations. This purpose will be fulfilled through skill development in the areas of word processing, records management and ten-key skills. Through these skills and through development of personal competencies and qualities, an individual will be able to function effectively in office-related activities at the entry-level. The courses in this diploma can be applied toward the A.A.S. degree in Office Administration.

Graduates should qualify for entry-level employment in general clerical positions in business, government and industry.

**Diploma Awarded**

The Diploma in General Clerical Skills – Office Administration is awarded by the College upon completion of this program.

**Admissions**

- A high school diploma or equivalent is required.
- Many courses have prerequisites or corequisites; check the Courses section for details.

**Contact Information**

The Office Administration Diploma is in the Professional Careers Division. For more information, call 704.330.6851 or visit our website at www.cpcc.edu/office_systems.

**General Education Requirements**

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<td>ENG 111</td>
<td>Writing and Inquiry</td>
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Select 3 credits of the following: 3.0

- ANT 210 General Anthropology
- ANT 220 Cultural Anthropology
- ANT 221 Comparative Cultures
- ECO 151 Survey of Economics
- ECO 251 Principles of Microeconomics
- ECO 252 Principles of Macroeconomics
- GEO 111 World Regional Geography
Office Administration Diploma in Word Processing Operator (D25370-D2)

The Word Processing curriculum prepares individuals to create, edit and proof a variety of documents accurately. Upon completion of this program, students will possess knowledge of word processing, database, spreadsheet and electronic mail software. The courses in this diploma can be applied toward the A.A.S. degree in Office Administration.

Graduates should qualify for entry-level employment in word processing positions in business, government and industry.

Diploma Awarded
The Diploma in Word Processing Operator – Office Administration is awarded by the College upon completion of this program.

Admissions
- A high school diploma or equivalent is required.
- Many courses have prerequisites or corequisites; check the Courses section for details.

Contact Information
The Word Processing Operator Diploma is in the Professional Careers Division. For more information, call 704.330.6851 or visit our website at www.cpcc.edu/office_systems.

General Education Requirements

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<td>ECO 151</td>
<td>Survey of Economics</td>
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<td>Principles of Microeconomics</td>
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<td>Principles of Macroeconomics</td>
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<td>HIS 111</td>
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<td>World Civilizations II</td>
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<td>HIS 132</td>
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Total Credits 36

Office Administration Certificates (C25370)

- Office Administration Certificate with a Specialization in Receptionist Skills (C25370-C1) (p. 211)
- Office Administration Certificate with a Specialization in Software Use (C25370-C2) (p. 212)
- Office Administration Certificate in Basic Office Assistant (C25370-C4) (p. 212)
- Office Administration Specialist Certificate (C25370-C5) (p. 213)
Office Administration Certificate with a Specialization in Receptionist Skills (C25370-C1)

The Receptionist curriculum prepares individuals to receive and route telephone calls, greet visitors and handle filing, mailing, copying and faxing. In addition, students would possess basic keyboarding and computer skills. The courses in this certificate can be applied toward the A.A.S. degree in Office Administration.

Graduates should qualify for entry-level employment in receptionist positions in business, government and industry.

Certificate Awarded

The Certificate in Receptionist Skills – Office Administration is awarded by the College upon completion of this program.

Admissions

• A high school diploma or equivalent is required.
• Many courses have prerequisites or co-requisites; check the Courses section for details.

Contact Information

The Receptionist Skills Certificate is in the Professional Careers Division. For more information, call 704.330.6851 or visit our website at www.cpcc.edu/office_systems.

Major Requirements

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<td>OST 137</td>
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Total Credits: 16

Office Administration Certificate in Basic Office Assistant (C25370-C4)

The Basic Office Assistant curriculum prepares individuals for entry-level positions in a professional office environment by developing the following skills:

• Email functions: scheduling appointments and meetings, creating, contracts, maintaining calendars
• Career strategies
• Introduction to Computers
• Records and information management
• Processing electronic documents
• Ten key skills

The courses in this certificate can be applied toward the A.A.S. degree in Office Administration.

Certificate Awarded

The Certificate in Basic Office Assistant - Office Administration is awarded by the College upon completion of this program.

Admissions

• A high school diploma or equivalent is required.

Contact Information

The Basic Office Assistant Certificate is in the Professional Careers Division. For more information, call 704.330.6851 or visit our website at www.cpcc.edu/office_systems.

Major Requirements

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<tr>
<td>or CIS 110</td>
<td>Introduction to Computers</td>
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<tr>
<td>OST 136</td>
<td>Word Processing</td>
<td>3.0</td>
</tr>
<tr>
<td>OST 184</td>
<td>Records Management</td>
<td>3.0</td>
</tr>
<tr>
<td>OST 131</td>
<td>Keyboarding</td>
<td>2.0</td>
</tr>
<tr>
<td>ACC 110</td>
<td>Ten-Key Skills</td>
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</table>
Office Administration Specialist Certificate (C25370-C5)

The Office Administration Specialist curriculum prepares individuals for entry level positions in a professional office environment by developing the following skills:

- Speed and accuracy in keyboarding
- Email functions: scheduling appointments and meetings, creating contacts, maintaining calendars
- Career strategies
- Introduction to Computers
- Processing electronic documents

The courses in this certificate can be applied toward the A.A.S. degree in Office Administration.

Certificate Awarded

The Office Administration Specialist Certificate is awarded by the College upon completion of this program.

Admissions

- A high school diploma or equivalent is required.

Contact Information

The Office Administration Specialist Certificate is in the Professional Careers Division. For more information, call 704.330.6851 or visit our website at www.cpcc.edu/office_systems.

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CIS 111</td>
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<tr>
<td>or CIS 110</td>
<td>Introduction to Computers</td>
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<td>OST 131</td>
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<td>OST 286</td>
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Ophthalmic Medical Assistant (D45510)

Diploma Awarded

A diploma in Ophthalmic Medical Assistant is awarded by the College upon completion of this program.

Admissions

- CPCC Application
- High School transcript
- College transcripts
- CPCC placement tests
- Schedule a meeting with an academic advisor

Notes

Progression in this program is dependent upon a grade of "C" or better in all general education courses, as well as major and related courses.

Students must be certified by the American Heart Association in “Health Care Provider Level” CPR or by the American Red Cross in “CPR for the Professional Rescuer” prior to registering for an OPH course.

In order to participate in clinical education experiences at health care facilities, student may be required to submit results of a NC state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are an otherwise legally authorized residents of the United States. Normal 0 false false false EN-US X-NONE X-NONE /& Style Definitions */table.MsoNormalTable {mso-style-name:"Table Normal"; mso-tstyle-rowband-size:0; mso-tstyle-colband-size:0; mso-style-noshow:yes; mso-style-priority:99; mso-style-parent:""; mso-padding-alt:0in 5.4pt 0in 5.4pt; mso-para-margin-top:0in; mso-para-margin-right:0in; mso-para-margin-bottom:10.0pt; mso-para-margin-left:0in; line-height:115%; mso-pagination:widow-orphan; font-size:11.0pt; font-family:"Calibri","sans-serif"; mso-ascii-font-family:Calibri; mso-ascii-theme-font:minor-latin; mso-hansi-font-family:Calibri; mso-hansi-theme-font:minor-latin;}

Contact Information

The Ophthalmic Medical Assistant program is in the Medical Careers and Cosmetology Division. For more information, first go to the website at http://www.cpcc.edu/medicalcareers/ophthalmic-medical-assisting. If further assistance is needed, contact the Program Chair at 704.330.2722, ext. 3444.

Visit Career Coach for career information.

General Education Requirements

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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<td>OPH 104</td>
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<td>Ophthalmic Clinical Procedures I</td>
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<td>OPH 106</td>
<td>Ophthalmic Medical Assistant Practicum I</td>
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OPH 107  Ophthalmic Clinical Procedures II  2.0
OPH 108  Ophthalmic Patient Care  2.0
OPH 109  Ophthalmic Optics & Basic Refractometry  2.0
OPH 110  Ophthalmic Medical Assistant Practicum II  7.0
OPH 150  Intro to Ophthalmic Medical Assisting  2.0
OPH 151  Ocular Anatomy & Physiology  2.0
Other Major Requirements:
MED 121  Medical Terminology I  3.0

Total Credits  42

No certificates offered.

Paralegal Technology

Approved by American Bar Association and North Carolina Bar Certified

Paralegals may not provide legal services directly to the public, except as permitted by law.

The Paralegal Technology curriculum prepares individuals to work under the supervision of attorneys by performing routine legal tasks and assisting with substantive legal work. A paralegal/legal assistant may not practice law, give legal advice, or represent clients in a court of law.

Course work includes substantive and procedural legal knowledge in such areas as civil litigation, legal research and writing, real estate, family law, wills, estates, trusts and commercial law. Required courses also include subjects such as English, mathematics and computer utilization.

Graduates are trained to assist attorneys in various areas of practice with drafting, filing legal documents, writing and research, and office management. Employment opportunities are available in private law firms, governmental agencies, banks, insurance agencies and other business organizations.

Visit Career Coach for career information.

Paralegal Technology (A25380)

Degree Awarded

An Associate in Applied Science in Paralegal Technology degree is awarded by the College upon completion of this program.

Contact Information

The Paralegal Technology Program is in the Professional Careers Division. For more information, visit the Paralegal program website at www.cpcc.edu/paralegal. The program chair can be reached at 704.330.4857. A college counselor can be reached by calling 704.330.2722 ext. 7801.

Visit Career Coach for career information.

Admissions

- A high school diploma or equivalent is required.
- Placement test scores will determine placement in English and mathematics courses.
- A counseling/orientation appointment follows placement testing.
- A student must complete ENG 111 with a minimum grade of “C” or better prior to registering for any LEX courses.
- LEX 110 is also a prerequisite to all other LEX courses except LEX 120 and LEX 140. In addition to taking LEX 110, students should take LEX 120 and LEX 140 prior to taking other LEX courses.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- A student must receive a final grade of “C” or higher in a LEX course in order to receive course credit towards a Paralegal Technology A.A.S. degree (A25380).

General Education Requirements

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<td>LEX 250</td>
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<td>LEX 260</td>
<td>Bankruptcy and Collections</td>
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<td>Investigation</td>
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<td>LEX 282</td>
<td>Immigration Law</td>
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**Paralegal Technology Diploma (D25380)**

ABA Approved and North Carolina Bar Certified

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Course work includes substantive and procedural legal knowledge in such areas as civil litigation, legal research and writing, real estate, family law, wills estates, trusts and commercial law.

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**Diploma Awarded**

A post-baccalaureate diploma in Paralegal Technology is awarded by the College upon completion of this program.

**Admissions**

- This program is open only to students who have a bachelor’s degree from an accredited college or university and have successfully completed an English course equivalent to or higher than ENG 111 with a minimum grade of “C” or better.
- An official undergraduate transcript must be on file with the College’s records department.
- ENG 111 with a “C” or better is a prerequisite to all LEX courses. LEX 110 is a prerequisite to all other LEX courses except LEX 120 and LEX 140. In addition to taking LEX 110, students should take LEX 120 and LEX 140 in their first semester and prior to taking other LEX courses.
- A student must receive a final grade of “C” or higher in an LEX course in order to receive course credit towards a Paralegal Technology Post-Baccalaureate diploma (D25380).

**Contact Information**

The Paralegal Technology Program is in the Professional Careers Division. For more information, visit the Paralegal program website.
Pharmacy Technology

at www.cpcc.edu/paralegal. The program chair can be reached at 704.330.4857. A college counselor can be reached by calling 704.330.2722 ext. 7801.

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<td>or COM 110</td>
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Technical Elective

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<tr>
<td>LEX 130</td>
<td>Civil Injuries</td>
</tr>
<tr>
<td>LEX 240</td>
<td>Family Law</td>
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<tr>
<td>LEX 250</td>
<td>Wills, Estates, &amp; Trusts</td>
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<tr>
<td>LEX 270</td>
<td>Law Office Management/Technology</td>
</tr>
<tr>
<td>LEX 283</td>
<td>Investigation</td>
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<td>LEX 289</td>
<td>U.S. Constitutional Law</td>
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<td>LEX 283</td>
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<td>LEX 281</td>
<td>Intellectual Property</td>
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<td>LEX 282</td>
<td>Immigration Law</td>
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</tbody>
</table>

Total Credits 40

No certificates offered.

Pharmacy Technology

The Pharmacy Technology curriculum prepares individuals to assist the pharmacist in duties that a pharmacy technician can legally perform and to function within the boundaries prescribed by the pharmacist and the employment agency.

Course work includes and builds upon the domains of health care and pharmaceutical principals. Content emphasizes the pharmacy technician as a member of the interdisciplinary team providing safe, individualized care while employing evidence-based practice, quality improvement and informatics. Students prepare prescription medications, mix intravenous solutions and other specialized medications, update patient profiles, maintain inventories, package medications and gather data used by pharmacists to monitor drug therapy.

Graduates of this program are eligible to apply to take the certification exam with the Pharmacy Technician Certification Board (PTCB). Employment opportunities are vast within the global health care system. Employment opportunities include retail, hospitals, nursing homes, research laboratories and pharmaceutical manufacturing facilities.

Visit Career Coach for career information.

Pharmacy Technology (A45580)

Degree Awarded

The Associate in Applied Science degree – Pharmacy Technology is awarded by the College upon completion of this program.

Admissions

- Complete a CPCC application.
- Submit high school transcripts, as well as any college transcripts, to Student Records.
- Take required placement tests.
- Meet with a counselor or advisor to review placement test scores, program information and select courses for registration.
- Complete any required Developmental Education courses with a C or better.
- Student must take the TEAS exam and have scores to submit with application.
- Complete and submit a Pharmacy Technology AAS degree application by the deadline date.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- Progression in this program is dependent upon a grade of “C” or better in all general education courses, as well as major and related courses.

Applicants to the Pharmacy Technology AAS degree program are selected on a “best prepared” basis. The point system was implemented as an objective means for evaluating Pharmacy Technology applicants. Applicants will be ranked based upon points earned, and the students with the highest number of points will be selected each year. Admission points will be assigned according to the applicant’s documented record. Criteria for selection include scores on standardized tests, past academic performance and experience in the field of interest.

Notes

Students must demonstrate basic computer competencies through course work or testing. The division director of Computer Office and Information Systems will determine equivalent competency.

Costs of this program, in addition to tuition and textbooks, include uniforms, physical examination, criminal background check and specific vaccinations. The student must provide proof of health and accident insurance.
The North Carolina State Board of Pharmacy may request information regarding having been charged with or convicted of violating any controlled substances laws or charged or disciplined by any licensing or permitting authority, federal or state on the application for registration. The Board of Pharmacy may decide not to register an individual based on the results of an investigation. A candidate may be disqualified for Pharmacy Technician Certification Board (PTCB) certification upon the disclosure or discovery of:

- criminal conduct involving the candidate.
- State Board of Pharmacy registration or licensure action involving the candidate.
- violation of a PTCB Certification policy, including but not limited to the Code of Conduct.

In order to participate in clinical education experiences at health care facilities, students are required to submit results of a criminal background check at their own expense. As a condition of program admission, students are required to verify that they are United States citizens or are otherwise legally authorized residents of the United States. Students are also required, at their own expense, to submit to a 13-panel drug screen.

**Contact Information**

The Pharmacy Technology program is in the Medical Careers and Cosmetology Division. For more information, first go to the website at http://www.cpcc.edu/medicalcareers/pharmacy-technology. If further assistance is needed, contact the Program Chair at 704.330.6432.

Visit Career Coach for career information.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tr>
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<td>PSY 150</td>
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<td>Introduction to Film</td>
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**Major Requirements**

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<td>PHM 265</td>
<td>Professional Issues</td>
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<td>CIS 110</td>
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<td>BIO 110</td>
<td>Principles of Biology</td>
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<tr>
<td>BIO 163</td>
<td>Basic Anatomy &amp; Physiology</td>
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</table>

**Total Credits** 75-77

No diplomas offered.
Health Sciences Certificate with a Specialization in Fundamentals in Pharmacy Technology (C45940-C1)

This certificate is available through the Career and College Promise program.

Major Requirements

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<td>HSC 140</td>
<td>Transcultural Healthcare</td>
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<td>MED 121</td>
<td>Medical Terminology I</td>
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<td>PHM 110</td>
<td>Introduction to Pharmacy</td>
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<tr>
<td>PHM 140</td>
<td>Trends in Pharmacy</td>
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</tr>
</tbody>
</table>

Total Credits 13

Physical Therapist Assistant

The Physical Therapist Assistant curriculum prepares graduates to work in direct patient care settings under the supervision of physical therapists. Assistants work to improve or restore function by alleviation or prevention of physical impairment and perform other essential activities in a physical therapy department.

Course work includes normal human anatomy and physiology, the consequences of disease or injury and physical therapy treatment of a variety of patient conditions affecting humans throughout the lifespan.

Graduates are eligible to take the PTA National Physical Therapy Exam (NPTE) for licensure in whichever state they plan to work. Employment is available in general hospitals, rehabilitation centers, outpatient orthopedic clinics, school systems, geriatric health care facilities and home health agencies.

Visit Career Coach for career information.

Physical Therapist Assistant (A45640)

Degree Awarded

The Associate in Applied Science Degree - Physical Therapist Assistant is awarded by the College upon completion of this program.

Admissions

- A high school diploma or equivalent is required.
- Complete a CPCC admission application.
- Take required placement tests.
- Meet with an academic advisor or counselor for preliminary counseling.
- Take the Test of Essential Academic Skills (see website for most up-to-date version: www.cpcc.edu/health_sciences/physical-therapist-assistant)
- Submit all official high school transcripts and any college transcripts.
- Complete any required Preparatory courses with a grade of “C” or better.
- Students must be selected to enter the program. Upon acceptance and enrollment in the program, students must take all courses as scheduled and sequenced.
- Continued progression in the program requires a grade of “C” or better in every course.

- A physical examination (including a drug screen) documenting the applicant’s ability to complete all program requirements is required.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Program Accreditation

The Physical Therapist Assistant program at CPCC is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association (APTA).

Notes

In addition to tuition and textbooks, costs of the program include uniforms, travel to clinical sites, liability and accident insurance, health insurance, a fee for CPR/First Aid certification and/or recertification, a fee for licensure application and the cost of a physical examination including immunizations and blood tests. Current CPR and First Aid certification is required prior to all clinical courses.

In order to participate in clinical education experiences at health care facilities, students are required to submit results of a N.C. state or national criminal background check at their own expense.

Contact Information

The Physical Therapist Assistant program is in the Health Sciences Division. For more information, first go to the website at http://www.cpcc.edu/health_sciences/physical-therapist-assistant. If further assistance is needed contact the Program Chair at 704.330.6746.

Visit Career Coach for career information.

General Education Requirements

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<td>ENG 241</td>
<td>British Literature I</td>
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Central Piedmont Community College

ENG 242  British Literature II
ENG 251  Western World Literature I
ENG 252  Western World Literature II
MUS 110  Music Appreciation
MUS 112  Introduction to Jazz
MUS 213  Opera and Musical Theatre
PHI 220  Western Philosophy I
PHI 221  Western Philosophy II
REL 110  World Religions
REL 111  Eastern Religions
REL 112  Western Religions
REL 211  Introduction to Old Testament
REL 212  Introduction to New Testament
REL 221  Religion in America
PHI 215  Philosophical Issues
MUS 210  History of Rock Music

Select 3 credits of the following: 3.0
MAT 110  Mathematical Measurement and Literacy
MAT 143  Quantitative Literacy

Select 3 credits of the following: 3.0
COM 110  Introduction to Communication
COM 120  Intro to Interpersonal Communication
COM 231  Public Speaking

Major Requirements
PTA 110  Intro to Physical Therapy 3.0
PTA 125  Gross & Functional Anatomy 5.0
PTA 135  Pathology 4.0
PTA 145  Therapeutic Procedures 4.0
PTA 212  Health Care/Resources 2.0
PTA 215  Therapeutic Exercise 3.0
PTA 222  Professional Interactions 2.0
PTA 225  Intro to Rehabilitation 4.0
PTA 235  Neurological Rehab 5.0
PTA 245  PTA Clinical III 4.0
PTA 255  PTA Clinical IV 4.0
PTA 165  PTA Clinical I 3.0
PTA 185  PTA Clinical II 3.0
BIO 168  Anatomy and Physiology I 4.0
BIO 169  Anatomy and Physiology II 4.0
MED 120  Survey of Medical Terminology 2.0
PTA 270  PTA Topics 1.0

Total Credits 75

No diplomas offered.

No certificates offered.

Respiratory Therapy

The Respiratory Therapy curriculum prepares individuals to function as respiratory therapists. In these roles, individuals perform diagnostic testing, treatments and management of patients with heart and lung diseases.

Students will master skills in patient assessment and treatment of cardiopulmonary diseases. These skills include life support, monitoring, drug administration and treatment of patients of all ages in a variety of settings. Graduates of accredited programs are eligible to take the Entry-Level and Advanced Practitioner examinations from the National Board for Respiratory Care. Graduates may be employed in hospitals, clinics, nursing homes, education, industry and home care.

Visit Career Coach for career information.

Respiratory Therapy (A45720)

Degree Awarded

The Associate in Applied Science degree - Respiratory Therapy is awarded by the College upon completion of this program.

Admissions

- Complete a CPCC admissions application.
- Admission to the Surgical Technology program is competitive. Please note that students must complete a separate application for the program when they are ready to apply.
- See the Respiratory Therapy (http://www.cpcc.edu/health-human-services/respiratory-therapy) website for the program application.
- Students must be selected to enter the program. Upon acceptance and enrollment in the program, students must take all courses as scheduled and sequenced.

Program Accreditation

The Respiratory Therapy Program at CPCC is accredited by the Commission on Accreditation for Respiratory Care (CoARC).

CoARC
1248 Harwood Road
Bedford, TX 76021-4244
817.283.2835

Additional Expenses and Requirements

Expenses

In addition to tuition and textbooks, costs of this program include the following:

- uniforms, lab coat
- stethoscope, scissors, hemostats, watch with a second hand
- a physical examination, including immunizations such as tetanus toxoid, hepatitis B, TB test, blood test e.g., rubella titer,
- fees for Health Care Provider Cardiac Life Support course
- fees for Self-Assessment Examinations.

Students also are required to submit to a 13 panel drug screen every fall they are in the program at their own expense.

Verifications

Students must provide a certificate of health or accident insurance.

To participate in clinical education experiences at healthcare facilities, students may be required to submit results of a N.C. state or national criminal background check at their own expense.

As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.
Attendance
Attendance at professional seminars and meetings is required.

Grade Requirement
In order to progress in this program, students must earn a “C” or better in all curriculum courses.

Contact Information
The Respiratory Therapy program is in the Health and Human Services Division. For more information, call 704.330.6081. Division offices are located on the 3rd floor of the Health Careers Building in the Belk Wing.

For an admission packet, frequently asked questions and other information, visit the Respiratory Therapy program website. If further assistance is needed, contact the Program Chair at 704.330.6795.

Visit Career Coach for career information.

General Education Requirements

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Major Requirements

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Simulation and Game Development

The Simulation and Game Development (SGD) curriculum provides a broad background in simulation and game development with practical applications in creative arts, visual arts, audio/video technology, creative writing, modeling, design, programming and management. Students receive hands-on training in design, 3D modeling, software engineering, database administration and programming for the purpose of creating simulations and games.

Graduates may qualify for employment as designers, artists, animators, programmers, database administrators, testers, quality assurance analysts, engineers and administrators in the entertainment industry, the healthcare industry, engineering, forensics, education, NASA and government agencies.

Among the tools used in the program are: 3ds Max Studio, Maya, Torque Game Engines, Game Maker, Flash, MS Silverlight, Adobe Premiere Pro, MS Visual Studio, Adobe Photoshop, ZBrush, Mudbox3D and Unreal Engine. Students use various programming languages and scripts to create their simulations and games, including: C#, XNA, C++, J2E, VB, Python, Java and Action Script.

All SGD courses meet rigorous national standards for online delivery and are offered for fully online delivery in local and international markets. The program maintains contact with local game development companies, including Red Storm, Epic Games and Virtual Heroes as well as one of the most active IGDA chapters in the nation, the Triangle Chapter. The program also offers four diplomas and one certificate.

Visit Career Coach for career information.

Simulation and Game Development (A25450)

Degree Awarded

The Associate in Applied Science degree in Simulation and Game Development is award by the College upon completion of this program.

Admissions

- A high school diploma or equivalent is required.
- Placement tests determine placement in English (ENG) and mathematics (MAT).
- Some courses have prerequisites or co-requisites; check the Courses section for details.

Contact Information

The Simulation and Game Development program is in the Digital Media, Journalism and Communication Division. For more information, call 704.330.6894 or 704.330.6549.

Visit Career Coach for career information.
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<td>Windows and Console Programming</td>
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<td>Massive Multiplayer Online Programming</td>
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<td>SGD 158</td>
<td>SGD Business Management</td>
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**Technical Electives**

Select 9 credits of the following:  
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<p>| SGD 115     | Physically-Based Modeling                      |
| SGD 117     | Art for Games                                  |
| SGD 123     | Windows and Console Programming                |
| SGD 124     | Massive Multiplayer Online Programming         |
| SGD 125     | Simulation and Game Artificial Intelligence    |
| SGD 126     | Simulation and Game Engine Design              |
| SGD 134     | SG Quality Assurance                           |
| SGD 135     | Serious Games                                  |
| SGD 158     | SGD Business Management                        |
| SGD 159     | SGD Production Management                      |
| SGD 161     | Simulation and Game Animation                  |
| SGD 162     | Simulation and Game 3-D Animation              |
| SGD 163     | Simulation and Game Documentation              |
| SGD 164     | Simulation and Game Audio and Video            |
| SGD 165     | Simulation and Game Character Development      |
| SGD 167     | Simulation and Game Ethics                     |
| SGD 168     | Mobile Simulation and Game Programming I       |
| SGD 169     | Linux Simulation and Game Programming          |
| SGD 170     | Handheld Simulation and Game Programming       |
| SGD 171     | Flash Simulation and Game Programming          |</p>
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<td>SGD 173</td>
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**Simulation and Game Development Diploma Specialization in Game Design (D25450-22)**

**General Education Requirements**

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**Total Credits**: 69

**Simulation and Game Development Diploma Specialization in Game Programming (D25450-23)**

**General Education Requirements**

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**Simulation and Game Development Diploma Specialization in 3D Modeling (D25450-24)**

**General Education Requirements**

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**Total Credits**: 36
Simulation and Game Development Diploma
Specialization in Animation (D25450-25)

General Education Requirements
ENG 111 Writing and Inquiry 3.0
COM 231 Public Speaking 3.0

Major Requirements
SGD 111 Introduction to Simulation and Game Development 3.0
SGD 114 3D Modeling 3.0
SGD 214 3D Modeling II 3.0
SGD 232 Survey of Game Engines 3.0
SGD 161 Simulation and Game Animation 3.0
SGD 162 Simulation and Game 3-D Animation 3.0
SGD 164 Simulation and Game Audio and Video 3.0
SGD 171 Flash Simulation and Game Programming 2.0
SGD 181 Machinima 3.0
SGD 210 3D Data Capture 3.0
SGD 237 Rigging 3D Models 3.0

Total Credits 38

- Simulation and Game Development Certificate Specialization in Simulation and Game Development Level I (C25450-21) (p. 224)
- Simulation and Game Development Certificate Specialization in Simulation and Game Development Level II (C25450-22) (p. 224)
- Simulation and Game Development Certificate Specialization in Mobile Game Development (C25450-23) (p. 224)

Simulation and Game Development Certificates (C25450)

Simulation and Game Development Certificate Specialization in Simulation and Game Development Level I (C25450-21)

This certificate is also available to students enrolled in Career & College Promise.

Major Requirements
SGD 111 Introduction to Simulation and Game Development 3.0
SGD 112 Simulation and Game Development Design 3.0
SGD 113 Simulation and Game Development Programming 3.0
SGD 114 3D Modeling 3.0

Total Credits 12

Speech Language Pathology Assistant

The Speech Language Pathology Assistant (SLPA) curriculum prepares individuals who assist a licensed Speech Language Pathologist in conducting therapy in receptive and expressive language including augmentative/alternative communication and oral motor skills.

Coursework includes instruction in following written protocols designed to remediate individual communication problems and assistive technology. Supervised field work experience includes working with persons of various ages with communication problems.

The Speech Language Pathology Assistant program at CPCC is offered in collaboration with Caldwell Community College and Technical Institute. Required general education courses can be completed as usual at any CPCC campus, and SLPA program-specific courses are offered on Central Campus via live participatory classes broadcast to CPCC. During fieldwork experience, students have the opportunity to utilize their knowledge and refine skills while working under the supervision of a licensed Speech Language Pathologist.

Graduates of this program may be eligible for registration with the North Carolina Board of Examiners for Speech Language Pathologists and Audiologists. Employment opportunities, under the supervision of a licensed Speech Language Pathologist, include a wide range of settings in schools, private practice and home health settings.

Degree Awarded
The Associate in Applied Science Degree-Speech Language Pathology Assistant is awarded by Caldwell Community College and Technical Institute.

Admissions
Students participating in the SLPA program need to enroll in both CPCC (http://www.cpcc.edu/getstarted/curriculum) and Caldwell Community College & Technical Institute (http://www.ccti.edu/StuServices/BecomingASStudent.asp?page=page-1). Both schools have online applications accessible through the links provided here:

- Complete application to Caldwell Community College & Technical Institute:
  - Caldwell Community College & Technical Institute application process (http://www.ccti.edu/StuServices/BecomingASStudent.asp?page=page-1)
- Complete application to CPCC:
  - Central Piedmont Community College application process (http://www.cpcc.edu/getstarted/curriculum)
- Complete application to SLPA Program at CPCC:
  - CPCC Speech-Language Pathology Assistant program application (http://www.cpcc.edu/health_sciences/slpa/docs/slpa-application)

Program Accreditation
The Speech Language Pathology Assistant program at Caldwell Community College and Technical Institute is accredited by the North Carolina Board of Board of Examiners for Speech Language Pathologists and Audiologists.

Contact Information
The Speech Language Pathology Assistant program is in the Health Sciences Division at CPCC. Additional information is available on the following websites:

- Central Piedmont Community College http://www.cpcc.edu/health_sciences/slpa
- Caldwell Community College and Technical Institute http://www.ccti.edu/slpa

For further assistance, contact the CPCC Heath Programs Admissions Specialist at healthsciences@cpcc.edu (healthsciences@cpcc.edu?subject=Question about SLPA Program) or at 704.330.6958.

The Speech Language Pathology Assistant program is offered in collaboration with Caldwell Community College and Technical Institute. Upon completion of the program, an Associate in Applied Science degree in Speech Language Pathology Assistant is awarded through Caldwell Community College and Technical Institute. For more information about course requirements, please visit the Speech-Language Pathology Assistant website at: http://www.cpcc.edu/health_sciences/slpa.

No diplomas offered.
No certificates offered.

Surgical Technology
The Surgical Technology curriculum prepares individuals to assist in the care of the surgical patient in the operating room and to function as a member of the surgical team. Students apply theoretical knowledge to the care of patients undergoing surgery and develop skills necessary to prepare supplies, equipment and instruments; maintain aseptic conditions; prepare patients for surgery; and assist surgeons during operations. Students of this program will take the National Board of Surgical Technology and Surgical Assisting (NBST/SA) Certification Examination for Surgical Technologists before graduation. Employment opportunities include labor/delivery/emergency departments, inpatient/ outpatient surgery centers, dialysis units/facilities, endoscopy suites/centers, physician's offices and central supply processing units.

Visit Career Coach for career information.

Surgical Technology (A45740)
Degree Awarded
The Associate in Applied Science in Surgical Technology is awarded by the College upon graduation from the program.

Admissions
- Complete a CPCC application.
- Admission to the Surgical Technology program is competitive. Please note that students must complete a separate application for the program when they are ready to apply.
- See the Surgical Technology (http://www.cpcc.edu/health-human-services/surgical-technology-a45740?searchterm=surgical+technology) website for the program application.
- Students must be selected to enter the program. Upon acceptance and enrollment in the program, students must take all courses as scheduled and sequenced.

Program Accreditation
The Surgical Technology program is accredited by the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting.

ARC/STSA
6 W. Dry Creek Circle, Suite #110
Littleton, CO 80120
Phone: 303.694.9262

Notes
In addition to tuition and textbooks, costs of this program include the following: uniform scrubs, student ID badge, eye protection, a physical examination including 13-panel drug screening test, immunizations such as tetanus toxoid, hepatitis B, influenza vaccinations, TB test, blood tests (VDRL, rubella titer, etc.) and a current CPR with AED certification and a criminal background check. The student must also provide a certificate of current health and accident insurance.

In order to progress in this program, students must earn a “C” or better in all curriculum courses and be successful in clinical skills assessments.

In order to participate in clinical education experiences at health care facilities, students are required to submit results of a North Carolina state and national criminal background check and drug screen at their own expense. As a condition of this program admission, students will be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

Contact Information
The Surgical Technology program is in the Health and Human Services Division. For information, call 704.330.3473 weekdays from 8 a.m.–5 p.m. Division offices are located in the Belk (BL) Building, 3rd floor.

For an admission packet, frequently asked questions and other information, visit our program website at Surgical Technology (http://www.cpcc.edu/health-human-services/surgical-technology-a45740).
Visit Career Coach for career information.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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<tr>
<td>PSY 150</td>
<td>General Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
<td>3.0</td>
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Take 3 credits from the following: 3.0

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<thead>
<tr>
<th>Course</th>
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<tr>
<td>ENG 112</td>
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<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<td>ENG 113</td>
<td>Literature-Based Research</td>
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Select 3 credits of the following: 3.0

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<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
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</tr>
<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
<td></td>
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<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
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<tr>
<td>ART 116</td>
<td>Survey of American Art</td>
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<tr>
<td>ART 117</td>
<td>Non-Western Art History</td>
<td></td>
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<td>DAN 110</td>
<td>Dance Appreciation</td>
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<tr>
<td>DAN 211</td>
<td>Dance History I</td>
<td></td>
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<tr>
<td>DAN 212</td>
<td>Dance History II</td>
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<td>DRA 111</td>
<td>Theatre Appreciation</td>
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<td>DRA 112</td>
<td>Literature of the Theatre</td>
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<td>DRA 122</td>
<td>Oral Interpretation</td>
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<tr>
<td>ENG 231</td>
<td>American Literature I</td>
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<td>ENG 232</td>
<td>American Literature II</td>
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<td>ENG 241</td>
<td>British Literature I</td>
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<td>ENG 242</td>
<td>British Literature II</td>
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<td>ENG 251</td>
<td>Western World Literature I</td>
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<tr>
<td>ENG 252</td>
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<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</td>
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<td>HUM 160</td>
<td>Introduction to Film</td>
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<td>Humanities I</td>
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<td>MUS 110</td>
<td>Music Appreciation</td>
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<td>MUS 112</td>
<td>Introduction to Jazz</td>
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<td>MUS 210</td>
<td>History of Rock Music</td>
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<td>MUS 213</td>
<td>Opera and Musical Theatre</td>
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<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
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<td>PHI 220</td>
<td>Western Philosophy I</td>
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<td>PHI 221</td>
<td>Western Philosophy II</td>
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<td>REL 110</td>
<td>World Religions</td>
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<td>REL 111</td>
<td>Eastern Religions</td>
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<td>REL 211</td>
<td>Introduction to Old Testament</td>
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<td>REL 212</td>
<td>Introduction to New Testament</td>
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<tr>
<td>REL 221</td>
<td>Religion in America</td>
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<td>PHI 230</td>
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Select 3 credits of the following: 3.0

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>COM 110</td>
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<td>COM 120</td>
<td>Intro to Interpersonal Communication</td>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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**Major Requirements**

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<thead>
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<th>Title</th>
<th>Credits</th>
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<tr>
<td>SUR 110</td>
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<td>SUR 111</td>
<td>Periop Patient Care</td>
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<td>SUR 122</td>
<td>Surgical Procedures I</td>
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<td>SUR 123</td>
<td>Sur Clinical Practice I</td>
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<td>SUR 134</td>
<td>Surgical Procedures II</td>
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<td>SUR 135</td>
<td>SUR Clinical Practice II</td>
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<td>SUR 137</td>
<td>Prof Success Prep</td>
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<tr>
<td>SUR 210</td>
<td>Advanced Sur Clinical Practice</td>
<td>2.0</td>
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<td>SUR 211</td>
<td>Advanced Theoretical Concepts</td>
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<tr>
<td>BIO 175</td>
<td>General Microbiology</td>
<td>3.0</td>
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<tr>
<td>BIO 163</td>
<td>Basic Anatomy &amp; Physiology</td>
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<td>MED 121</td>
<td>Medical Terminology I</td>
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<tr>
<td>SUR 212</td>
<td>Surgical Clinical Supplement</td>
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</table>

Total Credits 70

No diplomas offered.

No certificates offered.

**Sustainability Technologies**

The Sustainability Technologies curriculum is designed to prepare individuals for employment in environmental consulting, construction management, alternative energy, manufacturing and related industries. Major emphasis is placed on minimizing the impact on our environment.

Course work includes safety, estimating, productivity, problem solving, landscape analysis, alternative energy resource management and environmental considerations. Computer application will address the construction, modeling and analysis of specific scenarios relating to creating a sustainable environment.

Graduates should qualify for numerous positions within the construction management, mechanical engineering, civil engineering, environmental engineering and alternative energy industry. Employment opportunities include, but are not limited to, the following: environmental engineering technicians, precision instrument & equipment repairers, construction management and alternative energy specialists.

Visit Career Coach for career information.

**Sustainability Technologies (A40370)**

**Degree Awarded**

The Associate in Applied Science degree – Sustainability Technologies will be awarded by the College upon completion of this program.

**Admissions**

- A high school diploma or equivalent is required.
- CPCC placement tests are required in English and mathematics. Developmental classes in mathematics and English courses are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- Students should see a faculty advisor before registration.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

**Note**

Students who do not take program-related courses for a one-year period must re-enter the program under the Catalog in effect at the time of re-entry.
Contact Information

Sustainability Technologies is in the Science Division. For more information, contact Matt Miller at 704.330.6836 or visit our website at www.cpcc.edu/science.

Visit Career Coach for career information.

General Education Requirements

ENG 111 Writing and Inquiry 3.0

Select one of the following: 3.0
MAT 121 Algebra/Trigonometry I
MAT 171 Precalculus Algebra
MAT 172 Precalculus Trigonometry
MAT 271 Calculus I

GEO 111 World Regional Geography 3.0

Select 3 credits of the following: 3.0
ENG 112 Writing and Research in the Disciplines
ENG 113 Literature-Based Research
ENG 114 Professional Research & Reporting

COM 110 Introduction to Communication 3.0

or COM 231 Public Speaking

Select 3 credits of the following: 3.0
ART 111 Art Appreciation
ART 114 Art History Survey I
ART 115 Art History Survey II
ART 116 Survey of American Art
ART 117 Non-Western Art History
DAN 110 Dance Appreciation
DAN 211 Dance History I

DAN 212 Dance History II
DRA 111 Theatre Appreciation
DRA 112 Literature of the Theatre
DRA 122 Oral Interpretation
ENG 231 American Literature I
ENG 232 American Literature II
ENG 241 British Literature I
ENG 242 British Literature II
ENG 251 Western World Literature I
ENG 252 Western World Literature II
HUM 130 Myth in Human Culture
HUM 160 Introduction to Film
HUM 211 Humanities I
HUM 212 Humanities II
MUS 110 Music Appreciation
MUS 112 Introduction to Jazz
MUS 210 History of Rock Music
MUS 213 Opera and Musical Theatre
PHI 220 Western Philosophy I
PHI 221 Western Philosophy II
PHI 230 Introduction to Logic
REL 110 World Religions
REL 111 Eastern Religions
REL 112 Western Religions

REL 211 Introduction to Old Testament
REL 212 Introduction to New Testament
REL 221 Religion in America

Major Requirements

ENV 110 Environmental Science 3.0
SST 110 Introduction to Sustainability 3.0
SST 120 Energy Use Analysis 3.0
SST 210 Issues in Sustainability 3.0
ENV 110A Environmental Science Laboratory 1.0
DFT 151 CAD I 3.0
ENV 226 Environmental Law 3.0
SST 250 Sustainability Capstone Project 3.0
DFT 152 CAD II 3.0
PHY 110 Conceptual Physics 3.0
PHY 110A Conceptual Physics Lab 1.0
LID 111 Low Impact Development Design Principles 3.0
or ELC 111 Introduction to Electricity

Energy/Bldng Track

Complete one of two groups (See below) 12.0

Technical Electives

Select 5 credits of the following: 5.0

SST 140 Green Building and Design Concepts
BUS 139 Entrepreneurship I
BUS 230 Small Business Management
ENV 220 Applied Ecology
WBL 112 Work-Based Learning I
WBL 122 Work-Based Learning II
ENV 120 Earth Science
ENV 242 Land Quality
GEO 131 Physical Geography I
GEL 120 Physical Geology
GEL 230 Environmental Geology
ALT 110 Biofuels I
ARC 112 Construction Materials & Methods
CIV 230 Construction Estimating
LAR 120 Sustainable Development
LAR 111 Introduction to Landscape Architecture Technology
LAR 113 Residential Landscape Design
EGR 120 Engineering and Design Graphics
MEC 111 Machine Processes I
MEC 161 Manufacturing Processes I
MBC 180 Engineering Materials
MBC 265 Fluid Mechanics
ISC 212 Metrology
BIO 110 Principles of Biology
BIO 140 Environmental Biology
BIO 140A Environmental Biology Lab
CHM 131 Introduction to Chemistry
CHM 131A Introduction to Chemistry Lab
CHM 132 Organic and Biochemistry
SRV 111 Surveying II
AHM 111 HVACR Electricity
AHR 112 Heating Technology
AHR 113 Comfort Cooling
ELC 112 DC/AC Electricity
ELC 113 Residential Wiring
ELC 118 National Electrical Code
BPR 130 Print Reading-Construction
CMT 214 Planning and Scheduling
CMT 216 Costs and Productivity
ARC 111 Introduction to Architectural Technology
ARC 210 Intro to Sustain Design
ARC 230 Environmental Systems
CAR 110 Introduction to Carpentry
CAR 114 Residential Building Codes
CIV 111 Soils and Foundations
DBA 110 Database Concepts
ENV 218 Environmental Health
ENV 224 Land Resource Management
GIS 121 Georeferencing & Mapping
MEC 267 Thermal Systems
MEC 270 Machine Design
MEC 275 Engineering Mechanisms
PHY 131 Physics-Mechanics
PHY 132 Physics-Electricity & Magnetism
SRV 110 Surveying I
BIO 111 General Biology I
CMT 210 Construction Management Fundamentals
BPR 130 Print Reading-Construction
SRV 210 Surveying III
ELC 221 Advanced Photovoltaic System Designs
CEG 210 Construction Materials & Methods
CEG 230 Subdivision Planning & Design
CEG 212 Introduction to Environmental Technology
ELC 220 Photovoltaic System Technology
ELC 230 Wind and Hydro Power Systems
EGR 250 Statics/Strength of Mater
CEG 211 Hydrology & Erosion Control
MEC 275 Engineering Mechanisms
GIS 111 Introduction to GIS
GIS 240 Air Photo Interpretation
GIS 249 Remote Sensing
GIS 125 CAD for GIS

Total Credits 67

Energy/Bldng Tracks

Group 1

<table>
<thead>
<tr>
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<tr>
<td>ALT 120</td>
<td>Renewable Energy Technologies</td>
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<td>SST 130</td>
<td>Modeling Renewable Energy</td>
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<td>ALT 250</td>
<td>Thermal Systems</td>
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<td>ELC 220</td>
<td>Photovoltaic System Technology</td>
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Total Credits 12

Sustainability Technology Certificates (C40370)

Sustainability Technologies Certificate – Specialization in Renewable Energy (C40370-C1)

Major Requirements

<table>
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<th>Title</th>
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<td>SST 120</td>
<td>Energy Use Analysis</td>
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<td>ELC 220</td>
<td>Photovoltaic System Technology</td>
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</table>

Total Credits 15

Sustainability Technologies Certificate – Specialization in Geospatial Technology (C40370-C4)

Major Requirements

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<td>Introduction to GIS</td>
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<td>GIS 111</td>
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<td>GIS 240</td>
<td>Air Photo Interpretation</td>
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<td>GIS 225</td>
<td>Advanced Methods in GIS</td>
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<td>GIS 249</td>
<td>Remote Sensing</td>
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Total Credits 15

Sustainability Technologies Certificate – Specialization in Energy and the Environment (C40370-C5)

Major Requirements

<table>
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<tr>
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<tbody>
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<td>SST 110</td>
<td>Introduction to Sustainability</td>
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<tr>
<td>SST 120</td>
<td>Energy Use Analysis</td>
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</tr>
<tr>
<td>ALT 120</td>
<td>Renewable Energy Technologies</td>
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</table>

Total Credits 15
Turfgrass Management Technology

The Turfgrass Management Technology Curriculum is designed to prepare individuals for various careers in horticulture. Classroom instruction and practical laboratory applications of turfgrass management principles and practices are included in the program of study.

Course work includes plant science, plant materials, propagation, soils, fertilizers and pest management. Turfgrass Management Technology is a program that focuses on turfgrass and related groundcover plants and prepares individuals to develop ornamental or recreational grasses and related products; plant, transplant, and manage grassed areas; and to produce and store turf used for transplantation. Also included are courses in turfgrass management, irrigation, ornamental horticulture, soil science, entomology and plant pathology, as well as courses in communications, computers and the social sciences.

Graduates should qualify for employment opportunities in landscape operations, golf courses, local, state and national parks; sports complexes; highway vegetation and turf maintenance companies; and private and public gardens. Graduates should also be prepared to take the licensed pesticide applicators examinations.

Visit Career Coach for career information.

Turfgrass Management Technology (A15420)

Degree Awarded
The Associate in Applied Science in Turfgrass Management Technology is awarded by the College upon completion of this program.

Admissions
- A high school diploma or equivalent (available through CPCC) is required.
- CPCC placement tests are required in English and Mathematics. Developmental Studies Mathematics and English courses are available for students to build basic skills and knowledge.
- A counseling/orientation appointment follows placement testing.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Contact Information
The Turfgrass Management Technology program is in the Professional Careers Division. For more information call 704.330.4827.

Visit Career Coach for career information.

General Education Requirements

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<tr>
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Turfgrass Management Technology Program Requirements

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<td>Environmental Science</td>
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<td>ENV 110A</td>
<td>Environmental Science Laboratory</td>
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<td>ENV 226</td>
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<tr>
<td>COM 120</td>
<td>Intro to Interpersonal Communication</td>
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<td>Mathematical Measurement and Literacy</td>
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<td>Art History Survey II</td>
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<td>ART 116</td>
<td>Survey of American Art</td>
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<tr>
<td>ART 117</td>
<td>Non-Western Art History</td>
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<td>Dance Appreciation</td>
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<td>DRA 112</td>
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<td>ENG 241</td>
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<td>ENG 242</td>
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<td>ENG 251</td>
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<td>Myth in Human Culture</td>
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<tr>
<td>HUM 160</td>
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<td>HUM 211</td>
<td>Humanities I</td>
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<td>Opera and Musical Theatre</td>
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<td>PHI 220</td>
<td>Western Philosophy I</td>
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<td>PHI 221</td>
<td>Western Philosophy II</td>
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<tr>
<td>PHI 230</td>
<td>Introduction to Logic</td>
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<tr>
<td>REL 110</td>
<td>World Religions</td>
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<tr>
<td>REL 111</td>
<td>Eastern Religions</td>
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<td>REL 112</td>
<td>Western Religions</td>
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<tr>
<td>REL 211</td>
<td>Introduction to Old Testament</td>
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<td>REL 212</td>
<td>Introduction to New Testament</td>
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<td>REL 221</td>
<td>Religion in America</td>
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<tr>
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<td>Survey of Economics</td>
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<td>ECO 251</td>
<td>Principles of Microeconomics</td>
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<td>ECO 252</td>
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<td>GEO 111</td>
<td>World Regional Geography</td>
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<td>General Psychology</td>
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<td>PSY 281</td>
<td>Abnormal Psychology</td>
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<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
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Major Requirements

TRF 110  Introduction Turfgrass Cultivation & Id And Identification  4.0
TRF 120  Turfgrass Irrigation and Design  4.0
TRF 152  Landscape Maintenance  3.0
HOR 166  Soils and Fertilizers  3.0
TRF 210  Turfgrass Eqmt Mgmt  3.0
TRF 230  Turfgrass Mgmt Apps  2.0
TRF 240  Turfgrass Pest Control  3.0
TRF 260  Adv Turfgrass Mgmt  4.0
TRF 220  Turfgrass Calculations  2.0
HOR 160  Plant Materials I  3.0
HOR 162  Applied Plant Science  3.0
SPA 120  Spanish for the Workplace  3.0
TRF 250  Golf /Sport Field Const  4.0
WBL 111  Work-Based Learning I  1.0
CIS 111  Basic PC Literacy  2.0

Technical Electives

Select 9 credits of the following:  9.0
HOR 112  Landscape Design I
HOR 114  Landscape Construction
HOR 116  Landscape Management I
HOR 161  Plant Materials II
HOR 164  Horticultural Pest Management
HOR 215  Landscape Irrigation
HOR 257  Arboriculture Practices
HOR 265  Advanced Plant Materials
HOR 273  Horticultural Management & Marketing
TRF 125  Turfgrass Computer App
TRF 130  Native Flora ID
AGR 121  Biological Pest Management
AGR 140  Agricultural Chemicals
WBL 112  Work-Based Learning I

Total Credits  71

Turfgrass Management Technology Diploma (D15420)

This diploma is designed to prepare individuals for entry level positions in the area of Turfgrass Management Technology. Coursework includes turfgrass culture and identification, equipment, irrigation, pest management and soils and fertilizers, along with other turf-related courses and general education courses.

General Education Requirements
ENG 111  Writing and Inquiry  3.0
MAT 115  3.0

Major Requirements
TRF 110  Introduction Turfgrass Cultivation & Id And Identification  4.0
TRF 120  Turfgrass Irrigation and Design  4.0
TRF 210  Turfgrass Eqmt Mgmt  3.0
TRF 230  Turfgrass Mgmt Apps  2.0
TRF 240  Turfgrass Pest Control  3.0

Total Credits  19

Welding Technology

The Welding Technology curriculum provides students with a sound understanding of the science, technology and applications essential for successful employment in the welding and metal industry.

Instruction includes consumable and non-consumable electrode welding and cutting processes. Courses in math, blueprint reading, metallurgy, welding inspection and destructive and non-destructive testing provide the student with industry-standard skills developed through classroom training and practical applications.

Successful graduates of the Welding Technology curriculum may be employed as entry-level technicians in welding and metal working industries. Career opportunities also exist in construction, manufacturing,
fabrication, sales, quality control, supervision and welding-related self-employment.

Visit Career Coach for career information.

**Welding Technology (A50420)**

**Degree Awarded**
The Associate in Applied Science - Welding Technology is awarded by the College upon completion of this program.

**Admissions**
- Completion of a high school diploma or equivalent is required.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

**Contact Information**
The Welding Technology program is in the Applied Technologies Division. For more information, call 704.330.4429 or 704.330.4445.

Visit Career Coach for career information.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
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<tr>
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<td>Writing and Research in the Disciplines</td>
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<td>ENG 113</td>
<td>Literature-Based Research</td>
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<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<td>ANT 220</td>
<td>Cultural Anthropology</td>
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<td>ECO 151</td>
<td>Survey of Economics</td>
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<td>ECO 251</td>
<td>Principles of Microeconomics</td>
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<td>GEO 111</td>
<td>World Regional Geography</td>
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<td>HIS 111</td>
<td>World Civilizations I</td>
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<td>World Civilizations II</td>
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<td>HIS 131</td>
<td>American History I</td>
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<td>HIS 132</td>
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<td>POL 120</td>
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<td>POL 210</td>
<td>Comparative Government</td>
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<td>POL 220</td>
<td>International Relations</td>
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<td>SOC 210</td>
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<td>SOC 213</td>
<td>Sociology of the Family</td>
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<td>POL 110</td>
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<td>PSY 237</td>
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**Major Requirements**

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<td>WLD 115</td>
<td>SMAW (Stick) Plate</td>
<td>5.0</td>
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<tr>
<td>WLD 121</td>
<td>GMAW (MIG) FCAW/Plate</td>
<td>4.0</td>
</tr>
<tr>
<td>WLD 131</td>
<td>GTAW (TIG) Plate</td>
<td>4.0</td>
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<td>WLD 141</td>
<td>Symbols and Specifications</td>
<td>3.0</td>
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<tr>
<td>WLD 116</td>
<td>SMAW (stick) Plate/Pipe</td>
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<td>WLD 122</td>
<td>GMAW (MIG) Plate/Pipe</td>
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<td>WLD 132</td>
<td>GTAW (TIG) Plate/Pipe</td>
<td>3.0</td>
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<tr>
<td>WLD 231</td>
<td>GTAW (TIG) Pipe</td>
<td>3.0</td>
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<td>WLD 215</td>
<td>SMAW (stick) Pipe</td>
<td>4.0</td>
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<tr>
<td>WLD 151</td>
<td>Fabrication I</td>
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<td>WLD 251</td>
<td>Fabrication II</td>
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<tr>
<td>WLD 261</td>
<td>Certification Practices</td>
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Welding Technology Diploma (D50420)

The Welding Technology curriculum provides students with a sound understanding of the science, technology and applications essential for successful employment in the welding and metal industry.

Instruction includes consumable and non-consumable electrode welding and cutting processes. Courses in math, blueprint reading, metallurgy, welding inspection and destructive and non-destructive testing provide the student with industry-standard skills developed through classroom training and practical applications.

Successful graduates of the Welding Technology curriculum may be employed as entry-level technicians in welding and metalworking industries. Career opportunities also exist in construction, manufacturing, fabrication, sales, quality control, supervision and welding-related self-employment.

Diploma Awarded

A Diploma in Welding Technology is awarded by the College upon completion of this program.

Admissions

Completion of a high school diploma or equivalent is required as the foundation of a career in this area.

Contact Information

The Welding Technology program is in the Applied Technologies Division. For more information, call 704.330.4429 or 704.330.4445.

General Education Requirements

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Major Requirements

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<td>GMAW (MIG) FCAW/Plate 4.0</td>
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<td>WLD 131</td>
<td>GTAW (TIG) Plate 4.0</td>
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<td>Symbols and Specifications 3.0</td>
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<td>WLD 116</td>
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<td>or CIS 110</td>
<td>Introduction to Computers</td>
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Total Credits 73

Welding Technology Certificates (C50420)

The following certificates can be earned in the Welding Technology Program (A50420).

Admissions

Completion of a high school diploma or equivalent is encouraged as the foundation of a career in this area.

Contact Information

For more information, call 704.330.4429 or 704.330.4445.
### Welding Technology Certificate with a Specialization in S.M.A.W. of Pipe Welding (C50420-C1)

**Major Requirements**

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<td>Symbols and Specifications</td>
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<td>SMAW (stick) Plate/Pipe</td>
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**Total Credits** 18

### Welding Technology Certificate with a Specialization in S.M.A.W. of Pipe Welding (C50420-C2)

**Major Requirements**

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<td>WLD 115</td>
<td>SMAW (Stick) Plate</td>
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<td>WLD 121</td>
<td>GMAW (MIG) FCAW/Plate</td>
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<td>GTAW (TIG) Plate</td>
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<tr>
<td>WLD 141</td>
<td>Symbols and Specifications</td>
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**Total Credits** 18

### Welding Technology Certificate with a Specialization in S.M.A.W. of Pipe Welding (C50420-C3)

**Major Requirements**

<table>
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<td>Symbols and Specifications</td>
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**Total Credits** 13

### Welding Technology Certificate with a Specialization in Advanced Level Welding (C50420-C5)

**Major Requirements**

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<td>WLD 116</td>
<td>SMAW (stick) Plate/Pipe</td>
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<td>GMAW (MIG) Plate/Pipe</td>
<td>3.0</td>
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<td>WLD 132</td>
<td>GTAW (TIG) Plate/Pipe</td>
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<td>WLD 261</td>
<td>Certification Practices</td>
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**Total Credits** 12

### Welding Technology Certificate with a Specialization in Entry-Level Welding (C50420-C6)

**Major Requirements**

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<tr>
<td>WLD 231</td>
<td>GTAW (TIG) Pipe</td>
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**Total Credits** 13

### Welding Technology Certificate with a Specialization in Robotic Welding and Cutting (C50420-C7)

**Major Requirements**

<table>
<thead>
<tr>
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<td>ELC 111</td>
<td>Introduction to Electricity</td>
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<td>Automated Welding/Cutting</td>
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**Total Credits** 16

### Welding Technology Certificate with a Specialization in Orbital GTAW Welding (C50420-C8)

**Major Requirements**

<table>
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<th>Course</th>
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**Total Credits** 16

### Welding Technology Certificate Specialization in G.M.A.W. of Pipe Welding (C50420-10)

**Major Requirements**

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**Total Credits**
General Education Goals
See CPCC General Education Goals for College-Level Programs (http://catalog.cpcc.edu/collegelevelprograms/generaleducationgoals/)

Transfer Articulation Agreement
The Comprehensive Articulation Agreement (C.A.A.) is a statewide contract between the North Carolina Community College System and the Public North Carolina State University System. This agreement enables students to complete lower division general education requirements at the community college and meet the respective four-year college or university equivalents by doing so.
http://www.nccommunitycolleges.edu/academic-programs/college-transferarticulation-agreements/comprehensive-articulation-agreement-caa

Important Guidelines from the CAA:

• Admission is not assured to a specific campus or specific program or major.
• Students must meet all requirements of the C.A.A.
• Students must have an overall grade point average (GPA) of at least 2.0 on a 4.0 scale, as calculated by the college from which they graduated, and a grade of “C” or better in all C.A.A. courses.
• Students must be academically eligible for re-admission to the last institution attended.
• Students must meet judicial requirements of the institution to which they apply.
• Students must meet all application requirements at the receiving institution including the submission of all required documentation by stated deadlines.

College Transfer Programs
Central Piedmont Community College offers four degrees designed for college transfer:

1. An Associate in Arts (A.A.) Degree (A10100) which emphasizes the liberal arts,
2. An Associate in Engineering (A.E.) Degree (A10500) which emphasizes engineering technology,
3. An Associate in Fine Arts (A.F.A.) Degree (A10200) which emphasizes art, dance and music, and
4. An Associate in Science (A.S.) Degree (A10400) which emphasizes science and mathematics,

The degree programs offer courses comparable to the freshman and sophomore levels at four-year colleges and universities. More information is available on the Transfer Resource Center website at: www.cpcc.edu/ican/trc.

Admission to a Transfer Program
New students wishing to enter a transfer program can visit the “Get Started” page at http://www.cpcc.edu/getstarted/curriculum. Current students wishing to enter a transfer program should meet with a transfer advisor at the Transfer Resource Center.

General Requirements
Students must complete a minimum of 60 semester hours of transfer courses including the required general education courses. A minimum of 21 semester credit hours must be earned at CPCC.
two academic years of coursework to complete the baccalaureate degree, depending on requirements of the program.

Public North Carolina Universities
- Appalachian State University
- East Carolina University
- Elizabeth City State University
- Fayetteville State University
- North Carolina Agricultural and Technical State University
- North Carolina Central University
- North Carolina State University
- University of North Carolina at Asheville
- University of North Carolina at Chapel Hill
- University of North Carolina at Charlotte
- University of North Carolina at Greensboro
- University of North Carolina at Pembroke
- University of North Carolina at Wilmington
- Western Carolina University
- Winston-Salem State University

Independent Colleges and Universities
- Barton College
- Belmont Abbey College
- Bennett College
- Brevard College
- Campbell University
- Catawba College
- Chowan College
- Gardner-Webb University
- Johnson C. Smith University
- Lees-McRae College
- Livingstone College
- Mars Hill College
- Montreat College
- Mount Olive College
- North Carolina Wesleyan College
- Peace College
- Pfeiffer University
- Queens University of Charlotte
- St. Andrews Presbyterian College
- Saint Augustine’s College
- Shaw University
- Warren Wilson College
- Wingate University

College Transfer Associate in Arts (A.A.) Degree

The Associate in Arts (AA) degree is designed for students who plan to transfer to four-year colleges and universities with majors in the Humanities, Social Sciences, and Business. The degree will transfer as a block to North Carolina public universities and other institutions which participate in the Comprehensive Articulation Agreement (CAA). Electives should be selected based on the intended major. For specific requirements, consult a Transfer Advisor or the catalog of the four-year school to which transfer is intended. Electives must be chosen from transferrable coursework.

College Transfer Associate in Arts Degree
A.A. (A10100)

***Note: Prior to registering for ASL 112, ASL 211, or ASL 212, students who have taken an ASL course at another college or university and/or who have had two or more consecutive semesters lapse since taking ASL must take a departmental ASL placement test to ensure proper placement.

Program Requirements

English Composition
- ENG 111 Writing and Inquiry 3.0
- ENG 112 Writing and Research in the Disciplines 3.0

Humanities/Fine Arts Core
Take 3 groups:
Group 1: 3.0
- COM 231 Public Speaking

Group 2:
Take 1 course: 3.0
- ENG 231 American Literature I
- ENG 232 American Literature II

Group 3:
Take 3 credits: 3.0
- ART 111 Art Appreciation
- ART 114 Art History Survey I
- ART 115 Art History Survey II
- MUS 110 Music Appreciation
- MUS 112 Introduction to Jazz
- PHI 215 Philosophical Issues
- PHI 240 Introduction to Ethics

Humanities/Fine Arts Elective
Take 3 credits: 3.0
- ART 111 Art Appreciation
- ART 114 Art History Survey I
- ART 115 Art History Survey II
- ASL 111 Elementary ASL I
- COM 110 Introduction to Communication
- COM 120 Intro to Interpersonal Communication
- DAN 110 Dance Appreciation
- DRA 111 Theatre Appreciation
- ENG 231 American Literature I
- ENG 232 American Literature II
- ENG 241 British Literature I
- ENG 242 British Literature II
- ENG 251 Western World Literature I
- ENG 252 Western World Literature II
- FRE 111 Elementary French I
- GER 111 Elementary German I
- HUM 130 Myth in Human Culture
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**Behavioral/Social Science Core**

Take 2 groups:

**Group 1:**
- Take 3 credits: 3.0
  - HIS 111 World Civilizations I
  - HIS 112 World Civilizations II
  - HIS 131 American History I
  - HIS 132 American History II

**Group 2:**
- Take 6 credits: 6.0
  - ECO 251 Principles of Microeconomics
  - ECO 252 Principles of Macroeconomics
  - POL 120 American Government
  - PSY 150 General Psychology
  - SOC 210 Introduction to Sociology

**Behavioral/Social Science Elective**

Take 3 credits: 3.0
- ANT 210 General Anthropology
- ECO 251 Principles of Microeconomics
- ECO 252 Principles of Macroeconomics
- GEO 111 World Regional Geography
- HIS 111 World Civilizations I
- HIS 112 World Civilizations II
- HIS 131 American History I
- HIS 132 American History II
- POL 120 American Government
- PSY 150 General Psychology
- SOC 210 Introduction to Sociology

**Math Core**

Take 1 course:
- Take 3 credits: 3.0
  - MAT 143 Quantitative Literacy
  - MAT 152 Statistical Methods I
  - MAT 171 Precalculus Algebra

**Math Elective:**

Take 4 credits: 4.0
- MAT 152 Statistical Methods I
- MAT 171 Precalculus Algebra
- MAT 172 Precalculus Trigonometry
- MAT 263 Brief Calculus
- MAT 271 Calculus I
- MAT 272 Calculus II
- MAT 273 Calculus III

**Natural Sciences Core:**

Take 1 of 7 Groups: 4.0
- Group 1:
  - Take 4 credits:
    - AST 111 Descriptive Astronomy
    - AST 111A Descriptive Astronomy Lab
- Group 2:
  - Take 4 credits:
    - AST 151 General Astronomy I
    - AST 151A General Astronomy I Lab
- Group 3:
  - Take 4 credits:
    - BIO 110 Principles of Biology
- Group 4:
  - Take 4 credits:
    - BIO 111 General Biology I
- Group 5:
  - Take 4 credits:
    - CHM 151 General Chemistry I
- Group 6:
  - Take 4 credits:
    - GEL 111 Geology
- Group 7:
  - Take 4 credits:
    - PHY 110 Conceptual Physics
    - PHY 110A Conceptual Physics Lab

**Natural Sciences Elective:**

Take 1 of 10 Groups: 4.0
- Group 1:
  - AST 111 Descriptive Astronomy
  - AST 111A Descriptive Astronomy Lab
- Group 2:
  - AST 151 General Astronomy I
  - AST 151A General Astronomy I Lab
- Group 3:
  - BIO 110 Principles of Biology
- Group 4:
  - BIO 111 General Biology I
- Group 5:
  - CHM 151 General Chemistry I
- Group 6:
  - GEL 111 Geology
- Group 7:
  - BIO 112 General Biology II
- Group 8:
  - CHM 152 General Chemistry II
- Group 9:
  - PHY 110 Conceptual Physics
  - PHY 110A Conceptual Physics Lab
## Other Required Hours:

### Required Courses:
- ACA 122 College Transfer Success 1.0

## College Transfer Electives:

Take 14 Credits: 14.0

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<td>GER 181</td>
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<td>HEA 110</td>
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<td>First Aid &amp; CPR</td>
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<tr>
<td>HIS 111</td>
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<td>HIS 112</td>
<td>World Civilizations II</td>
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<tr>
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<td>Genealogy &amp; Local History</td>
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<tr>
<td>HIS 162</td>
<td>Women and History</td>
</tr>
<tr>
<td>HIS 165</td>
<td>Twentieth-Century World</td>
</tr>
<tr>
<td>HIS 221</td>
<td>African-American History</td>
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<td>HIS 234</td>
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<td>HIS 261</td>
<td>East Asian History</td>
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<td>HIS 262</td>
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<td>HIS 271</td>
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<td>Myth in Human Culture</td>
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<td>HUM 160</td>
<td>Introduction to Film</td>
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<tr>
<td>JOU 110</td>
<td>Introduction to Journalism</td>
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<td>JOU 216</td>
<td>Writing for Mass Media</td>
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<td>Feature/Editorial Writing</td>
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<td>MAT 152</td>
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<td>MAT 171</td>
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<td>MAT 172</td>
<td>Precalculus Trigonometry</td>
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<td>Brief Calculus</td>
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<td>MAT 273</td>
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<tr>
<td>MAT 280</td>
<td>Linear Algebra</td>
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<tr>
<td>MAT 285</td>
<td>Differential Equations</td>
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<td>MUS 110</td>
<td>Music Appreciation</td>
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<td>MUS 111</td>
<td>Fundamentals of Music</td>
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<td>MUS 112</td>
<td>Introduction to Jazz</td>
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<td>MUS 121</td>
<td>Music Theory I</td>
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<td>Music Theory II</td>
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<td>Music Composition</td>
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<td>Jazz Ensemble I</td>
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<td>Ensemble I</td>
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<tr>
<td>MUS 142</td>
<td>Ensemble II</td>
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<td>Opera Production I</td>
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<td>Opera Production II</td>
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<td>Opera and Musical Theatre</td>
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<td>Big Band</td>
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<td>Walk, Jog, Run</td>
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<td>Golf-Beginning</td>
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<td>Swimming-Beginning</td>
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<td>PED 159</td>
<td>Sailboarding-Beginning</td>
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<td>Kayaking-Basic</td>
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<td>PED 169</td>
<td>Orienteering</td>
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<td>PED 170</td>
<td>Backpacking</td>
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<td>PED 173</td>
<td>Rock Climbing</td>
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<td>Philosophical Issues</td>
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<td>Western Philosophy I</td>
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<td>PHI 230</td>
<td>Introduction to Logic</td>
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<td>PHI 240</td>
<td>Introduction to Ethics</td>
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<td>PHS 110</td>
<td>Survey of Physical Science</td>
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<td>PHY 110</td>
<td>Conceptual Physics</td>
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<td>PHY 252</td>
<td>General Physics II</td>
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<td>POL 110</td>
<td>Introduction to Political Science</td>
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<td>POL 120</td>
<td>American Government</td>
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<td>POL 210</td>
<td>Comparative Government</td>
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<td>POL 220</td>
<td>International Relations</td>
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<td>PSY 150</td>
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<td>PSY 231</td>
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<td>Abnormal Psychology</td>
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<td>World Religions</td>
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<td>Eastern Religions</td>
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<td>REL 211</td>
<td>Introduction to Old Testament</td>
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<td>REL 212</td>
<td>Introduction to New Testament</td>
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<td>SOC 210</td>
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<tr>
<td>SOC 213</td>
<td>Sociology of the Family</td>
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<td>SOC 220</td>
<td>Social Problems</td>
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<td>Sociology of Gender</td>
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<td>Elementary Spanish II</td>
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<td>SPA 212</td>
<td>Intermediate Spanish II</td>
</tr>
<tr>
<td>SPA 221</td>
<td>Spanish Conversation</td>
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<td>SPA 281</td>
<td>Spanish Lab 3</td>
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<tr>
<td>WBL 111</td>
<td>Work-Based Learning I</td>
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<table>
<thead>
<tr>
<th>Course Title</th>
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<tbody>
<tr>
<td>ACA 111 OR ACA 120 may be used as an optional 61st credit in this program. They may not count toward the 60 credit total.</td>
</tr>
</tbody>
</table>

**Total Credits**: 60

***Note: Prior to registering for ASL 112, ASL 211, or ASL 212, students who have taken an ASL course at another college or university and/or who have had two or more consecutive semesters lapse since taking ASL must take a departmental ASL placement test to ensure proper placement.***

No diplomas offered.

No certificates offered.
College Transfer Associate in Engineering (A.E.) Degree

The Associate in Engineering (AE) degree is designed for students who plan to transfer to 4-year colleges and universities to major in Engineering. The degree will transfer as a block to North Carolina public universities and other institutions which participate in the Comprehensive Articulation Agreement (CAA). Electives should be selected based on the intended major. For specific requirements, consult an Engineering Advisor, Transfer Advisor, or the catalog for the 4-year school of the intended transfer. Students are encouraged to take the Accuplacer College Level Mathematics Test to be able to start with Calculus I in the first semester of study.

For the most current information on the Associate in Engineering degree, please visit http://www.cpcc.edu/et/academic-programs.

College Transfer Associate in Engineering Degree (A10500)

For the most current information on the Associate in Engineering degree, please visit http://www.cpcc.edu/et/academic-programs.

Program Requirements

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
<td>3.0</td>
</tr>
<tr>
<td>COM 231</td>
<td>Public Speaking</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 231</td>
<td>American Literature I</td>
<td>3.0</td>
</tr>
<tr>
<td>or ENG 232</td>
<td>American Literature II</td>
<td>3.0</td>
</tr>
<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</td>
<td>3.0</td>
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Select one of the following: 3.0

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>HIS 111</td>
<td>World Civilizations I</td>
</tr>
<tr>
<td>HIS 112</td>
<td>World Civilizations II</td>
</tr>
<tr>
<td>HIS 131</td>
<td>American History I</td>
</tr>
<tr>
<td>HIS 132</td>
<td>American History II</td>
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<tr>
<td>POL 120</td>
<td>American Government</td>
</tr>
<tr>
<td>PSY 150</td>
<td>General Psychology</td>
</tr>
<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
</tr>
</tbody>
</table>

MAT 271  Calculus I  4.0
MAT 272  Calculus II  4.0
MAT 273  Calculus III 4.0
CHM 151  General Chemistry I 4.0
PHY 251  General Physics I 4.0
PHY 252  General Physics II 4.0

Other Requirements:

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tr>
<td>ACA 122</td>
<td>College Transfer Success</td>
<td>1.0</td>
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<tr>
<td>EGR 150</td>
<td>Intro to Engineering</td>
<td>2.0</td>
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Select 15 credits from the following: 15.0

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CSC 134</td>
<td>C++ Programming</td>
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<tr>
<td>DFT 170</td>
<td>Engineering Graphics</td>
</tr>
<tr>
<td>EGR 212</td>
<td>Logic System Design I</td>
</tr>
<tr>
<td>EGR 220</td>
<td>Engineering Statics</td>
</tr>
</tbody>
</table>

Total Credits: 60

No diplomas offered.

No certificates offered.

College Transfer Associate in Fine Arts (A.F.A.) Degree

The Associate in Fine Arts Degree is designed for students who plan to transfer to a four-year college or university to major in art, dance, or music. However, the AFA degree is not included in the Comprehensive Articulation Agreement, so transfer credit at the four-year institution is awarded on a course-by-course basis along with the presentation of an art portfolio or an audition for dance or music. The AFA requires 31 semester hours of general education core courses and 33 semester hours of courses in one of the following concentrations: music, art, or dance. Transfer students should contact the senior (four-year) institution for specific transfer requirements.

Associate in Fine Arts Degree (64 credit hours)

A.F.A (A10200)

The Associate in Fine Arts degree is awarded for study leading toward a career in art, dance, or music. The A.F.A. degree is not included in the Comprehensive Articulation Agreement. It requires 28 semester hours of General Education, with the remaining 36-37 hours devoted to skill development in the chosen area of concentration. Transfer to a senior institution will be on a course-by-course basis along with the presentation of an art portfolio or an audition for dance or music. Students planning to transfer should contact the institution they plan to attend for specific transfer requirements.

List of General Education Core Courses for Associate in Fine Arts Degree

General Education Requirements

English Composition

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
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Research English: Take 3 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
</tr>
<tr>
<td>ENG 113</td>
<td>Literature-Based Research</td>
</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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</tbody>
</table>

Communication: Take 3 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
</tr>
<tr>
<td>COM 120</td>
<td>Intro to Interpersonal Communication</td>
</tr>
<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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Literature: Take 3 credits:

<table>
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<th>Title</th>
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<tbody>
<tr>
<td>ENG 231</td>
<td>American Literature I</td>
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<tr>
<td>ENG 232</td>
<td>American Literature II</td>
</tr>
<tr>
<td>ENG 241</td>
<td>British Literature I</td>
</tr>
<tr>
<td>ENG 242</td>
<td>British Literature II</td>
</tr>
<tr>
<td>ENG 251</td>
<td>Western World Literature I</td>
</tr>
<tr>
<td>ENG 252</td>
<td>Western World Literature II</td>
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</table>

Natural Sciences
The following are specific CPCC requirements for major areas of emphasis in the Associate of Fine Arts degree

**Major area of emphasis: Art**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
<td>3.0</td>
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<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 121</td>
<td>Two-Dimensional Design</td>
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<tr>
<td>ART 122</td>
<td>Three-Dimensional Design</td>
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</tr>
<tr>
<td>ART 131</td>
<td>Drawing I</td>
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</table>

**Total Credits** 15

Studio art courses must meet the following criteria:

- 6 contact hours for each 3 credit studio class.
- Students must take 21 credit hours from the following list of courses

**Select 15.0 credits from the following courses:**

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<th>Course</th>
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<tr>
<td>ART 171</td>
<td>Computer Art I</td>
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<td>ART 231</td>
<td>Printmaking I</td>
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<tr>
<td>ART 240</td>
<td>Painting I</td>
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<tr>
<td>ART 261</td>
<td>Photography I</td>
</tr>
<tr>
<td>ART 264</td>
<td>Digital Photography I</td>
</tr>
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<td>ART 135</td>
<td>Figure Drawing I</td>
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<td>ART 281</td>
<td>Sculpture I</td>
</tr>
<tr>
<td>ART 283</td>
<td>Ceramics I</td>
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<td>ART 266</td>
<td>Videography I</td>
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<td>ART 132</td>
<td>Drawing II</td>
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<td>ART 232</td>
<td>Printmaking II</td>
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<tr>
<td>ART 241</td>
<td>Painting II</td>
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<tr>
<td>ART 262</td>
<td>Photography II</td>
</tr>
<tr>
<td>ART 265</td>
<td>Digital Photography II</td>
</tr>
<tr>
<td>ART 235</td>
<td>Figure Drawing II</td>
</tr>
<tr>
<td>ART 242</td>
<td>Landscape Painting</td>
</tr>
<tr>
<td>ART 243</td>
<td>Portrait Painting</td>
</tr>
<tr>
<td>ART 244</td>
<td>Watercolor</td>
</tr>
</tbody>
</table>

**Select 6.0 credits from the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 132</td>
<td>Drawing II</td>
</tr>
<tr>
<td>ART 232</td>
<td>Printmaking II</td>
</tr>
<tr>
<td>ART 241</td>
<td>Painting II</td>
</tr>
<tr>
<td>ART 262</td>
<td>Photography II</td>
</tr>
<tr>
<td>ART 265</td>
<td>Digital Photography II</td>
</tr>
<tr>
<td>ART 235</td>
<td>Figure Drawing II</td>
</tr>
<tr>
<td>ART 242</td>
<td>Landscape Painting</td>
</tr>
<tr>
<td>ART 243</td>
<td>Portrait Painting</td>
</tr>
<tr>
<td>ART 244</td>
<td>Watercolor</td>
</tr>
</tbody>
</table>

Other ART courses can be taken as electives to satisfy the A.F.A. degree requirement as long as 21 credit hours of study are taken from the above list.

**Total Credits** 21

**Major area of emphasis: Dance**

Dancers are required to audition for acceptance into the Dance Program and to take selected courses.

The following are specific CPCC requirements for major areas of emphasis in the Associate of Fine Arts degree

**Major area of emphasis: Art**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 121</td>
<td>Two-Dimensional Design</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 122</td>
<td>Three-Dimensional Design</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 131</td>
<td>Drawing I</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Total Credits** 15

Studio art courses must meet the following criteria:

- 6 contact hours for each 3 credit studio class.
- Students must take 21 credit hours from the following list of courses

**Select 15.0 credits from the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 171</td>
<td>Computer Art I</td>
</tr>
<tr>
<td>ART 231</td>
<td>Printmaking I</td>
</tr>
<tr>
<td>ART 240</td>
<td>Painting I</td>
</tr>
<tr>
<td>ART 261</td>
<td>Photography I</td>
</tr>
<tr>
<td>ART 264</td>
<td>Digital Photography I</td>
</tr>
<tr>
<td>ART 135</td>
<td>Figure Drawing I</td>
</tr>
<tr>
<td>ART 281</td>
<td>Sculpture I</td>
</tr>
<tr>
<td>ART 283</td>
<td>Ceramics I</td>
</tr>
<tr>
<td>ART 266</td>
<td>Videography I</td>
</tr>
<tr>
<td>ART 132</td>
<td>Drawing II</td>
</tr>
<tr>
<td>ART 232</td>
<td>Printmaking II</td>
</tr>
<tr>
<td>ART 241</td>
<td>Painting II</td>
</tr>
<tr>
<td>ART 262</td>
<td>Photography II</td>
</tr>
<tr>
<td>ART 265</td>
<td>Digital Photography II</td>
</tr>
<tr>
<td>ART 235</td>
<td>Figure Drawing II</td>
</tr>
<tr>
<td>ART 242</td>
<td>Landscape Painting</td>
</tr>
<tr>
<td>ART 243</td>
<td>Portrait Painting</td>
</tr>
<tr>
<td>ART 244</td>
<td>Watercolor</td>
</tr>
</tbody>
</table>

**Select 6.0 credits from the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 132</td>
<td>Drawing II</td>
</tr>
<tr>
<td>ART 232</td>
<td>Printmaking II</td>
</tr>
<tr>
<td>ART 241</td>
<td>Painting II</td>
</tr>
<tr>
<td>ART 262</td>
<td>Photography II</td>
</tr>
<tr>
<td>ART 265</td>
<td>Digital Photography II</td>
</tr>
<tr>
<td>ART 235</td>
<td>Figure Drawing II</td>
</tr>
<tr>
<td>ART 242</td>
<td>Landscape Painting</td>
</tr>
<tr>
<td>ART 243</td>
<td>Portrait Painting</td>
</tr>
<tr>
<td>ART 244</td>
<td>Watercolor</td>
</tr>
</tbody>
</table>

Other ART courses can be taken as electives to satisfy the A.F.A. degree requirement as long as 21 credit hours of study are taken from the above list.

**Total Credits** 21

**Major area of emphasis: Dance**

Dancers are required to audition for acceptance into the Dance Program and to take selected courses.
Major area of emphasis and related course requirements:
DANCE A10200

Required Courses
DAN 225 Choreography I 3.0
Select 33.0 credits from the following courses: 33.0
DAN 132 Intermediate Ballet I
DAN 133 Intermediate Ballet II
DAN 142 Intermediate Modern Dance I
DAN 143 Intermediate Modern Dance II
DAN 236 Advanced Ballet I
DAN 237 Advanced Ballet II
DAN 221 Advanced Modern Dance I
DAN 222 Advanced Modern Dance II
DAN 226 Choreography II
DAN 262 Dance Performance
DAN 264 Dance Production
DAN 211 Dance History I
DAN 212 Dance History II
DAN 130 Ballet I
DAN 131 Ballet II
DAN 140 Modern Dance I
DAN 141 Modern Dance II
DAN 124 Jazz Dance I
DAN 125 Jazz Dance II
DAN 110 Dance Appreciation

Total Credits 36

Major area of emphasis: MUSIC

The Music Program at Central Piedmont Community College (CPCC) offers students not only a solid foundation in theory, history and performance, but also enables students with a wide variety of interests to work and study together. Our faculty members are dedicated teachers and accomplished musicians.

Major area of emphasis and related course requirements:
MUSIC A10200

Music Area of Emphasis
Take 5 groups
Group 1:
MUS 121 Music Theory I * 4.0
MUS 122 Music Theory II 4.0
MUS 221 Music Theory III 4.0
MUS 222 Music Theory IV 4.0
Group 2:
MUS 151P Class Music I (piano I) * 1.0
MUS 152P Class Music II (Piano II) 1.0
MUS 251P Class Music III (piano iii) 1.0
MUS 252P Class Music IV (piano iv) 1.0
Group 3:
Take 4 credits: 4.0
MUS 141 Ensemble I
MUS 142 Ensemble II
MUS 241 Ensemble III
MUS 161 Applied Music I **** 2.0
MUS 162 Applied Music II 2.0
MUS 261 Applied Music III 2.0
MUS 262 Applied Music IV 2.0
Group 4
MUS 271 Music History I 3.0
MUS 272 Music History II 3.0

* Placement exams are used by the Music Department to determine placement into Theory 1 or Fundamentals of Music as well as level of piano study required.
** Schedule of ensembles currently offered that fulfill the Performing Ensemble requirement.
*** Fulfills humanities requirement.
**** Audition required.
***** Does not fulfill humanities requirement.

No diplomas offered.
No certificates offered.

College Transfer Associate in Science (A.S.) Degree

The Associate in Science (AS) degree is designed for students who plan to transfer to 4-year colleges and universities with in majors Biology, Chemistry, Physics, Medicine, and Engineering. The degree will transfer as a block to North Carolina public universities and other institutions which participate in the Comprehensive Articulation Agreement (CAA). Electives should be selected based on the intended major. For specific requirements, consult a Transfer Advisor or the catalog of the four-year school to which transfer is intended. Electives must be chosen from transferrable coursework.

College Transfer Associate in Science Degree
A.S. (A10400B) Bio/Life Sciences Pathway

***Note: Prior to registering for ASL 112, ASL 211, or ASL 212, students who have taken an ASL course at another college or university and/or who have had two or more consecutive semesters lapse since taking ASL must take a departmental ASL placement test to ensure proper placement.

Program Requirements

General Education Requirements
ENG 111 Writing and Inquiry 3.0
ENG 112 Writing and Research in the Disciplines 3.0

Humanities/Fine Arts:
ENG 231 American Literature I 3.0
or ENG 232 American Literature II
Select one of the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
</tr>
<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
</tr>
<tr>
<td>COM 231</td>
<td>Public Speaking</td>
</tr>
<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
</tr>
<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
</tr>
<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
</tr>
<tr>
<td>PHI 240</td>
<td>Introduction to Ethics</td>
</tr>
</tbody>
</table>

Social/Behavioral Sciences:

Select one of the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS 111</td>
<td>World Civilizations I</td>
</tr>
<tr>
<td>HIS 112</td>
<td>World Civilizations II</td>
</tr>
<tr>
<td>HIS 131</td>
<td>American History I</td>
</tr>
<tr>
<td>HIS 132</td>
<td>American History II</td>
</tr>
</tbody>
</table>

Select one of the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>POL 120</td>
<td>American Government</td>
</tr>
<tr>
<td>PSY 150</td>
<td>General Psychology</td>
</tr>
<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
</tr>
</tbody>
</table>

Select one of the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 210</td>
<td>General Anthropology</td>
</tr>
<tr>
<td>ANT 220</td>
<td>Cultural Anthropology</td>
</tr>
<tr>
<td>ANT 221</td>
<td>Comparative Cultures</td>
</tr>
<tr>
<td>ECO 151</td>
<td>Survey of Economics</td>
</tr>
<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>GEO 111</td>
<td>World Regional Geography</td>
</tr>
<tr>
<td>HIS 111</td>
<td>World Civilizations I</td>
</tr>
<tr>
<td>HIS 112</td>
<td>World Civilizations II</td>
</tr>
<tr>
<td>HIS 131</td>
<td>American History I</td>
</tr>
<tr>
<td>HIS 132</td>
<td>American History II</td>
</tr>
<tr>
<td>POL 110</td>
<td>Introduction to Political Science</td>
</tr>
<tr>
<td>POL 120</td>
<td>American Government</td>
</tr>
<tr>
<td>POL 210</td>
<td>Comparative Government</td>
</tr>
<tr>
<td>POL 220</td>
<td>International Relations</td>
</tr>
<tr>
<td>PSY 150</td>
<td>General Psychology</td>
</tr>
<tr>
<td>PSY 237</td>
<td>Social Psychology</td>
</tr>
<tr>
<td>PSY 241</td>
<td>Developmental Psychology</td>
</tr>
<tr>
<td>PSY 281</td>
<td>Abnormal Psychology</td>
</tr>
<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
</tr>
<tr>
<td>SOC 213</td>
<td>Sociology of the Family</td>
</tr>
<tr>
<td>SOC 220</td>
<td>Social Problems</td>
</tr>
<tr>
<td>SOC 225</td>
<td>Social Diversity</td>
</tr>
</tbody>
</table>

Math Core:

Select two of the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
</tr>
<tr>
<td>MAT 172</td>
<td>Precalculus Trigonometry</td>
</tr>
<tr>
<td>MAT 271</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MAT 272</td>
<td>Calculus II</td>
</tr>
</tbody>
</table>

Natural Science:

Must complete two 2-course lab science sequences. Choose 2 of the following groups from two different disciplines:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 151</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>&amp; CHM 152</td>
<td>General Chemistry II</td>
</tr>
<tr>
<td>PHY 151</td>
<td>College Physics I</td>
</tr>
<tr>
<td>&amp; PHY 152</td>
<td>College Physics II</td>
</tr>
<tr>
<td>PHY 251</td>
<td>General Physics I</td>
</tr>
<tr>
<td>&amp; PHY 252</td>
<td>General Physics II</td>
</tr>
<tr>
<td>BIO 111</td>
<td>General Biology I</td>
</tr>
<tr>
<td>&amp; BIO 112</td>
<td>General Biology II</td>
</tr>
</tbody>
</table>

Other Required Hours:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACA 122</td>
<td>College Transfer Success</td>
</tr>
</tbody>
</table>

Humanities/Fine Arts:

Select one of the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
</tr>
<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
</tr>
<tr>
<td>ART 116</td>
<td>Survey of American Art</td>
</tr>
<tr>
<td>ART 117</td>
<td>Non-Western Art History</td>
</tr>
<tr>
<td>DAN 110</td>
<td>Dance Appreciation</td>
</tr>
<tr>
<td>DRA 111</td>
<td>Theatre Appreciation</td>
</tr>
<tr>
<td>DRA 112</td>
<td>Literature of the Theatre</td>
</tr>
<tr>
<td>DRA 122</td>
<td>Oral Interpretation</td>
</tr>
<tr>
<td>ENG 231</td>
<td>American Literature I</td>
</tr>
<tr>
<td>ENG 232</td>
<td>American Literature II</td>
</tr>
<tr>
<td>ENG 241</td>
<td>British Literature I</td>
</tr>
<tr>
<td>ENG 242</td>
<td>British Literature II</td>
</tr>
<tr>
<td>ENG 251</td>
<td>Western World Literature I</td>
</tr>
<tr>
<td>ENG 252</td>
<td>Western World Literature II</td>
</tr>
<tr>
<td>FRE 111</td>
<td>Elementary French I</td>
</tr>
<tr>
<td>GER 111</td>
<td>Elementary German I</td>
</tr>
<tr>
<td>HUM 120</td>
<td>Cultural Studies</td>
</tr>
<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</td>
</tr>
<tr>
<td>HUM 211</td>
<td>Humanities I</td>
</tr>
<tr>
<td>HUM 212</td>
<td>Humanities II</td>
</tr>
<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
</tr>
<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
</tr>
<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
</tr>
<tr>
<td>PHI 220</td>
<td>Western Philosophy I</td>
</tr>
<tr>
<td>PHI 240</td>
<td>Introduction to Ethics</td>
</tr>
<tr>
<td>REL 110</td>
<td>World Religions</td>
</tr>
<tr>
<td>REL 111</td>
<td>Eastern Religions</td>
</tr>
<tr>
<td>REL 211</td>
<td>Introduction to Old Testament</td>
</tr>
<tr>
<td>REL 212</td>
<td>Introduction to New Testament</td>
</tr>
<tr>
<td>SPA 111</td>
<td>Elementary Spanish I</td>
</tr>
</tbody>
</table>

Information Technology/Mathematics:

Select one of the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 115</td>
<td>Intro to Programming &amp; Logic</td>
</tr>
<tr>
<td>CSC 120</td>
<td>Computing Fundamentals I</td>
</tr>
<tr>
<td>CSC 134</td>
<td>C++ Programming</td>
</tr>
<tr>
<td>CSC 151</td>
<td>JAVA Programming</td>
</tr>
<tr>
<td>MAT 280</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>MAT 285</td>
<td>Differential Equations</td>
</tr>
</tbody>
</table>
No diplomas offered.

No certificates offered.

**Corporate and Continuing Education Programs**

Corporate and Continuing Education Customer Service Center: 704.330.4223
Visit the Corporate and Continuing Education website (https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs) to see all courses and programs offered.

**Learning Options**

Choose from hundreds of non-degree courses and programs (https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs), from beginner to more advanced, to acquire the job skills and knowledge to meet any professional goal. A growing list of professional and industry-based non-credit credentials (http://www.cpcc.edu/cce/job-and-career-enhancement/credentials) also is offered to build confidence and to improve skill levels and expertise. In addition to job and career enhancement, personal enrichment (http://www.cpcc.edu/cce/personal-enrichment) programming spans many areas of interest and all skill levels. Topics include music, fitness, dance, art, gardening, languages, cooking and much more.

**Corporate Learning Center**

Professionals in CPCC’s Corporate Learning Center (http://www.cpcc.edu/clc) offer no-cost discovery sessions to help companies assess organizational and training needs and design a program to meet their objectives. With custom design and delivery, training can fit any work cycle, can be held onsite and effectively target employees’ skill levels. For more recognized industry standards in management and processes, such as Lean, Six Sigma or information technology, the Corporate Learning Center (http://www.cpcc.edu/clc) provides a one-stop resource that leverages the strengths of the entire College.

**Customized Learning**

Corporate and Continuing Education also serves group learning needs (employers, homeowners’ associations, alumni groups, book clubs, etc.) or requests from employers who want to sponsor an employee’s professional development. Call Corporate Learning Services at 704.330.4660 to learn more about custom programming and unique arrangements for design, delivery and invoice options.

Whether seeking new job skills, preparing for a second career or looking for personal enrichment, Corporate and Continuing Education has what is needed.

Browse Corporate and Continuing Education (http://www.cpcc.edu/cce) to learn how CPCC can help meet any ongoing learning needs. These non-degree courses and programs are offered on differing days and times, including weekends, as well as on various campuses and community locations throughout Mecklenburg County, including the CPCC Ballantyne Center starting in 2015. For added access and convenience, a growing number of fully online or blended online/classroom courses, including comprehensive certification programs are offered.

**Individuals** may choose from hundreds of non-degree courses and programs – from beginner to more advanced – to help gain the job skills and knowledge to meet their goals. When industry-specific and professional certifications or exam prep is needed to get ahead or validate job skills, CPCC can help. Job and Career Enhancement (http://www.cpcc.edu/cce/job-and-career-enhancement) programs provide professional development courses that offer continuing education units (CEUs) to keep credentials up to date.

Contact customer service at 704.330.4223 for individual registration, the course schedule, class locations and more. Also may view the Course Schedule (http://www.cpcc.edu/cce/courseschedule/courseschedule) online or request a print version by contacting customer service.

Employers need a ready, talented and knowledgeable workforce to stay competitive. Corporate and Continuing Education responds with flexible, focused programming that covers all aspects of business – from hiring to worker training through leadership and succession management. Fee-based public classes are offered for employees as well as custom programming designed to meet unique challenges.

**Online Search Tool**

The online tool called Schedule Builder (https://schedule.cpcc.edu/myschedule) permits searches by topic to explore course descriptions, along with days, times and locations of current courses and programs. Non-degree options in various formats, including online, offer flexible day or evening schedules with start dates and ongoing registration throughout the year. Since courses may be added during the term to fit student needs, call Customer Service at 704.330.4223 for help in finding course(s).

**Registration**

Registration (http://www.cpcc.edu/cce/register-now) is ongoing throughout each semester with registration dates and new classes typically announced in late April, early July and late November. Most continuing education courses and programs are open enrollment and do not require prerequisites, enrollment applications or transcripts. For detailed information, visit our website at www.cpcc.edu/cce.

**Computer and Information Technology**

Corporate and Continuing Education: 704.330.4223
Visit the Computer and Information Technology website (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/computer-technology).

Computer courses train students for a new career in information technology and enhance existing skills. From the novice user to the
network system analyst, computer training has the diversity to help achieve lifelong learning goals.

For employers, the Corporate Learning Center (http://www.cpcc.edu/cce/job-and-career-enhancement) offers group training or assists in sponsoring staff in publicly offered sessions. Learn more by calling 704.330.4660.

Program areas include:

**Basic Computer Skills** (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/computer-technology/basic-computer/basic-computer-skills)

Basic Computer Skill courses make learners feel comfortable learning the new technologies and moving forward into the world of technology.

**CAD** (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/computer-technology/autocad)

The Computer-aided design (CAD) courses offered are short-term and taught by industry experts. Learn CAD to increase productivity, improve the quality of design and improve communications through documentation. Classes are offered in CAD, Inventor and Revit.

**Certiport Testing Center** (http://www.cpcc.edu/cce/job-and-career-enhancement/credentials/exams-and-exam-prep/certiport-testing-center)

Certiport was established in 1997 to validate computer skills and knowledge through performance-based testing. Testing for IT certifications includes Microsoft Technology Associate, Adobe Certified Associate, Autodesk Certified User, and CompTIA Strata™ IT Fundamentals.


There is a program for the business analyst, project manager or developer. Learn the technical skills for career enhancement in Database Management/Administration and/or Business Intelligence/Data Analytics.

**Digital Media and Photography** (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/computer-technology/digital-media)

Digital Media is the major form of advertising and marketing. Learn how to move art and create digital masterpieces in film, photography, art and Web using Adobe and Apple products. Take marketing to the next level by learning the secrets behind the power of social media marketing. Class participants benefit with personal marketing to boost career opportunities and their companies benefit, as well from tools taught in these courses.

**IT Infrastructure** (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/computer-technology/networking-and-security)

Every company requires a strong IT Infrastructure to support day-to-day business operations. ComputerWorld Magazine rates Infrastructure skills in their top four IT skills needed in today's workplace. Begin a career in help desk/technical Support and move to network/security management roles. All courses refer to the skills required on most industry-specific certification exams, including CompTIA and Microsoft.

**Programming and App Development** (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/computer-technology/programming/programming)

ComputerWorld Magazine reports that programming is the number one skill needed today. Enter the exciting world of application development. CPCC classes range from basic coding to both front-end and back-end operations of Web development. Both online and instructor-led courses are offered.

**SAP** (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/computer-technology/online-computer-courses/sap)

Online courses for this German-made enterprise software program are designed to establish a foundational skill level in one or more phases of the enterprise. SAP is used in many Charlotte-based companies, like Siemens, to help manage business operations and customer relations.

**Corporate and Community Resources**

**Center for Sustainability** (p. 246)

The vision of the Center for Sustainability is to increase awareness of the importance of living and working in a manner that enhances the economic, environmental and social well being of our community through education, regional partnerships and community engagement. Sustainability topics and related courses in continuing education are offered as part of the Sustainability Technologies (http://www.cpcc.edu/science/sustainability-technologies/sustainability-technologies-a40370) Program. For more information, contact 704.330.6738.

**Corporate Learning Center** (p. 246)

The Corporate Learning Center supports businesses and organizations in Mecklenburg County in training and development, organizational effectiveness and workplace learning through various college initiatives, training and business centers.

**Economic Recruitment** (p. 246)

CPCC and the North Carolina Community College System support the economic recruitment of employers to Mecklenburg County by providing education and skills training to employees of eligible businesses and industries. The Corporate Learning Center and the Customized Training Program coordinates state and local resources to develop and deliver custom programs to employers, including the WorkKeys® assessment tool and the N.C. Career Readiness Certificate program.

**Global Logistics Center** (p. 247)

The Global Logistics Center (http://www.cpcc.edu/global/logistics) offers training and educational courses, certificates or degree programs for individuals seeking jobs in logistics, transportation, warehousing, import/export compliance and business processes.
Small Business Center (p. 248)
The Small Business Center is part of the statewide Small Business Center Network to promote entrepreneurship as a career option. Its supports small business owners, and prepares businesses for global commerce through resources such as seminars and webinars, individual counseling, small business networking and continuing education.

Center for Sustainability
Corporate and Continuing Education Customer Service: 704.330.4223
Visit the Center for Sustainability website (http://www.cpcc.edu/cfs).

Sustainability topics and related courses in continuing education are offered as part of Sustainability Technologies. For more information, contact 704.330.6738.

Vision Statement
The vision of the center is to increase awareness of the importance of living and working in a manner that enhances the economic, environmental and social well being of our community through education, regional partnerships and community engagement.

As a community leader in environmental education, the primary mission of the Center for Sustainability is:

1. To infuse sustainability concepts across the College's curriculum
2. To develop and conduct workforce training and certification to support a green regional economy
3. To engage the community through partnerships with public and private sectors to foster sustainability

Corporate Learning Center
Corporate Learning Services: 704.330.4660
Visit the Corporate Learning Center website at http://www.cpcc.edu/clc.

The Corporate Learning Center (http://www.cpcc.edu/clc) is the gateway for CPCC to serve the learning and development needs of businesses and organizations in Mecklenburg County. The College's span of learning, expertise and experience make it a uniquely-positioned resource to help meet company performance and organizational demands. College initiatives supported by the Corporate Learning Center include:

- Charlotte Region Small Business International Training Center (http://www.cpcc.edu/sbictc)
- Customized Training
- Global Competitiveness
- Global Logistics Center
- Small Business Center

Based on long-standing success and client requests, service is organized into three segments:

- Training and Development (http://www.cpcc.edu/clc/services/training-and-development): From process improvement to leadership or technical skills, CPCC offers hundreds of courses, many leading to industry-recognized credentials.
- Organizational Effectiveness (http://www.cpcc.edu/clc/services/organizational-effectiveness): We can guide companies in building a solid learning strategy to address critical issues. Successful learning programs often require change management, succession planning and team building.
- Workplace Learning (http://www.cpcc.edu/workplacelearning): Leverage the strength of the entire College by working with us to place students into work environments. Employers get fresh talent, and students experience hands-on learning through programs, including Apprenticeship Charlotte (https://www.cpcc.edu/apprenticeships), Co-op (http://www.cpcc.edu/workplacelearning/cooperative_education) and internships. Students interested in workplace learning opportunities may visit www.cpcc.edu/workplacelearning or call 704.330.6217.

If a presentation tailored to company employees or to a private group is desired, the Corporate Learning Center can arrange custom delivery to suit any needs. Call 704.330.4660 for questions or a quote.

Economic Recruitment
Corporate Learning: 704.330.4660
Economic Development website (http://www.cpcc.edu/clc/economic-development)

Corporate Learning Center (http://www.cpcc.edu/clc)
CPCC and the North Carolina Community College System supports the economic recruitment of employers to Mecklenburg County by providing education and skills training to employees of eligible businesses and industries. The Corporate Learning Center and the Customized Training Program (http://www.cpcc.edu/clc/economic-development/customized-training) allows the College to help coordinate state and local resources needed to design and develop custom programs and training services to new hires and existing employees of business and industry, thus enabling these employers to start operations and to remain productive and profitable within the state.


The N.C. Career Readiness Certificate (CRC) is an assessment-based credential designed to meet the needs of both employers and job seekers. For employers, the CRC reliably demonstrates that a potential employee has the necessary literacy, math and problem-solving skills to be successful on the job. For job seekers, the CRC serves as a portable credential to showcase their respective core competencies and employability skills.

WorkKeys® is a comprehensive skills assessment tool recognized by thousands of companies in the U.S. and by state and federal agencies. The assessments can lead to a N.C. Career Readiness Certificate or fulfill the assessment requirements for teacher assistants in compliance with the No Child Left Behind (NCLB) Act. Job profiling is also available through the WorkKeys® System to assist employers in making sound hiring decisions based on core employability skills that are EEOC compliant.
Global Logistics Center

The Global Logistics Center (http://www.cpcc.edu/global/logistics) offers training and educational programs for individuals seeking jobs in logistics, transportation, warehousing, import/export compliance, business processes and more. Choose shorter courses or longer-term certificates and degree programs, including workplace learning (apprenticeship) opportunities.

Degrees, Certificates, Areas of Study

Programs range in level of difficulty, length and format while providing either skills and competencies alone or in conjunction with credit-based degree and certificates. Our newest degree program is an Associate in Applied Science degree in Global Logistics and Distribution Management (http://www.cpcc.edu/business_accounting).


Employer-based Programs

The Corporate Learning Center (http://www.cpcc.edu/clc) offers custom-designed group training or sponsors staff in publicly offered sessions. CPCC can work directly with a management team to assess unique needs and learning objectives, or work with employers to connect them with state funding sources and grants. For more information, call 704.330.4660.

Go Global: Exporting is Possible, Profitable and Patriotic (http://www.cpcc.edu/sbc/course-pages/export) for exploring business creation and growth, exporting, marketing and more to increase opportunities in global trade. Courses include:

- International Business
- Certified Customs Specialist (NCBFAA)
- Certified Global Business Professional (CGBP)
- Essentials of Global Trade Financing (https://www.cpcc.edu/sbc/course-pages/globalfinance)
- Going Global: Exporting is Possible, Profitable and Patriotic (https://www.cpcc.edu/sbc/course-pages/export)
- Tariff Classification

Small Business

- New Product Idea: Going from Concept to Commercialization (https://www.cpcc.edu/sbc/course-pages/newproductidea)
- Transform Your Business: Creativity, Innovation and Change (https://www.cpcc.edu/sbc/course-pages/transformyourbusiness)

Supply Chain Management Logistics

Association for Operations Management (APICS) and Institute for Supply Management (ISM) programs:
- Production and Inventory Management Certification (https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/manufacturing/apics/apics)
Training and exams for nationally recognized third-party industry credentials, include the following:

- Manufacturing Skills Standards Council
- National Institute of Metalworking Skills
- Packaging Machinery Manufacturers

**Small Business Center**

Small Business Center: 704.330.6736  
Corporate and Continuing Education Customer Service: 704.330.4223  
Visit the Small Business Center website (http://www.cpcc.edu/sbc) at:  
http://www.cpcc.edu/sbc.

The CPCC Small Business Center expands the College’s role in promoting entrepreneurship as a career option, supporting small business owners, and preparing businesses for global commerce. Continuing education courses and services also help entrepreneurs keep pace with the ever-changing small business environment. The Small Business Center is a part of the statewide Small Business Center Network (SBCN) (https://www.ncsbc.net), a community college-funded initiative across the state. This state funding provides many of the resources, including counseling, at no cost to the client or student.

Components of the Small Business Center include:

1. Introductory seminars and webinars, workshops and forums to promote awareness and answer student questions
2. A Business Resource Center located on Central Campus with books, periodicals, videos and a lending library collection, as well as touch-down computer research stations for clients equipped with specialized business software
3. Individual counseling to assist small business owners and to offer referrals for those who need additional skills or consulting
4. Small business networking events to showcase small business owners, their services and products
5. Non-degree continuing education courses focused on critical, practical skills with classes ranging from start-up and financing to marketing, along with comprehensive certificate courses and exam preparation. Courses and topic areas include:
   - How to Start a Business
   - Business Plan Writing
   - Marketing
   - Sales and Management
   - International Business
   - Accounting with QuickBooks®
   - Funding and Financing
   - Nonprofit Fundraising Essentials
   - Business Growth and Development

**Exam Prep, Licensures, Professional Certifications**

Corporate and Continuing Education Customer Service: 704.330.4223  
http://www.cpcc.edu/cce/job-and-career-enhancement/credentials

Corporate and Continuing Education helps students achieve professional goals of knowledge, skill or ability through established non-degree programs in college completion, industry-specific competencies or requirements and nationally recognized exam preparation. Choose from an expanded number of industry-specific programs to assist in entering a career field, getting ahead and validating job skills. Short-term and more advanced programs offer professional development courses to earn continuing education units (CEUs) or keep credentials up to date. The following list represents some of the present offerings for certificates, certifications, exams and exam prep or professional licensure, which change in response to relevant learning needs.

Find additional information by visiting the Corporate and Continuing Education Credentials web page at: http://www.cpcc.edu/cce/job-and-career-enhancement/credentials (http://www.cpcc.edu/cce/job-and-career-enhancement/credentials)

**Business, Finance and Insurance**

- Bank Teller
- Professional Bookkeeper
- Entrepreneurship
- Certified Financial Planner (CFP®)  
- FINRA Series 6 and 63 Licensure Prep
- FINRA Series 7 Review
- Certified Global Business Professional (CGBP)  
- Human Resources (PHR/SPHR and GPHR)  
- Insurance Agent
- Mortgage Banking
- Mortgage Loan Originator Licensure Prep
- N.C. Accident, Sickness and Health Agent Licensure Prep
- N.C. Casually Insurance Agent Licensure Prep
- N.C. Life Insurance Agent Licensure Prep
- N.C. Property Insurance Agent Licensure Prep
- Notary - Electronic Notary Certification
- Certified Payroll Professional (CPP) Prep Review: Fundamental Payroll Certification (FPC)
- Tax Professionals

**Computer and Information Systems**

- Adobe Certified Associate - Various applications (Dreamweaver Web Communication, Photoshop Visual Communication)
- AutoCAD Basic User
- Comp TIA (CompTIA A +, CompTIA Network +, CompTIA Security+)
- Microsoft Business Skills
- Microsoft Office Specialist (MOS) Exam Prep  
- Microsoft Technology Associate (MTA) - Various applications
- Web Designer

**Healthcare**

- Activity Director
- Aging Studies
- Assisted Living Administrator
- Certified Dietary Manager (CDM)
- EKG Technician
- EMT (N.C.) Initial/Renewal Certification
- Hospital Unit Secretary
- Medical Reimbursement Specialist
- Medical Transcription
- Medication Technician
- Nurse Aide 1
- Personal Trainer
- Pharmacy Technician
- Phlebotomy Technician
Job and Career Enhancement

Trust CPCC to provide the knowledge and tools needed for a successful career.

Whether the goal is to acquire new job skills, prepare for a second career, earn professional level credentials or launch a small business, Corporate and Continuing Education can make it all happen. Flexible day or evening schedules and online courses are available with start dates and ongoing registration throughout the year.

Corporate and Continuing Education courses are offered to the public at all campus locations as well as multiple community locations and centers, including the Ballantyne Center. For location specific information, use Campus Finder (http://www.cpcc.edu/campuses).

Visit Job and Career Enhancement (https://www.cpcc.edu/cce/job-and-career-enhancement) to learn more about the hundreds of courses and programs available. To search for CCE course descriptions, dates, times and locations, use the online Schedule Builder (https://schedule.cpcc.edu/myschedule) tool. Corporate and Continuing Education courses may be added at any time during the semester and registration is continual. Contact Customer Service Center at 704.330.4223 for assistance in finding any course.

- Aging Studies (p. 249)
- Applied Technologies (p. 250)
- Automotive, Motorsports and Related Training (p. 251)
- ESL Instructor Fast-Track Training (p. 252)
- Fitness Professionals (p. 252)
- Health Information Technology (p. 252)
- Hospitality and Event Planning (p. 252)
- Human Resources (p. 253)
- Industry, Manufacturing and Supply Chain (p. 253)
- Language and Culture (p. 254)
- Manufacturing and Technical Skills (p. 254)
- N.C. Professional Educators (p. 254)
- Notary Public (p. 255)
- O.P. and W.T. Crowder Construction Institute (p. 255)
- Payroll Professionals (p. 259)
- Process Improvement (p. 259)
- Public Safety for Healthcare Providers (p. 260)
- Six Sigma Certifications (p. 260)
- Study Abroad and International Learning (p. 254)
- Workplace Basic Skills (p. 261)

Aging Studies

Visit the Aging Studies website. (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/aging-studies)

Aging Studies, also called gerontology, is one of the fastest growing areas of study. With one in four people expected to be 65 or older by 2050, Aging Studies is increasingly attractive for the growing number of job opportunities. Courses and career credentials in Aging Studies provide students with knowledge, skill and understanding of the aging process and the many issues associated with older adults. Programs in Aging Studies include:

Qualify to be an activity director in assisted living communities and nursing homes according to North Carolina state regulations and start earning certification with the National Certification Council for Activity Professionals. The content includes recognizing the needs of older adults as they age, activity assessments, interdisciplinary team planning, goal setting for residents, documentation in health records, resources, volunteer management and regulations and requirements that impact delivery of activities in long-term care settings.


Learn about the aging process and key issues affecting the entire aging population. The CPCC Aging Studies Certificate consists of Part I, Part II and one elective. Each course covers specific topics and is designed to be stand-alone, if desired. Part I focuses on issues that span the entire aging population, including the specific concerns of Alzheimer’s and hospice and palliative care. Part II continues to explore aging with a specific focus on nutrition and activities that help keep older adults living longer and healthier lives. The certificate requires Parts I and II plus electives.


This program serves individuals who want to become an assisted living administrator. Topics include resource management, management of environmental services, finance, food services, marketing, budgeting and resident care. The required preceptorship is on the site of an approved assisted living community under the supervision of a state-approved preceptor.

Resident Care Director Certificate ([http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/aging-studies/assisted-living/Resident-Care-Director](http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/aging-studies/assisted-living/Resident-Care-Director))

Learn the latest information on North Carolina rules and regulations in this two-part course specifically designed for assisted living resident care and wellness staff. Nurses, care providers, directors, supervisors and executive administrators learn proper and up-to-date policies and practices that comply with North Carolina state regulations. Placement and discharge criteria, documentation and resident records, assessments, care plans, medication administration, tracking methods, as well as safety and training requirements are covered for regular assisted living and special care units. Part II focuses on the additional requirements for assisted living special care units. Students learn the regulations governing the care of persons with a diagnosis of Alzheimer’s disease or related dementias.

Applied Technologies

Applied Technologies Office: 704.330.4413 or 704.330.4558

Applied Technologies ([http://www.cpcc.edu/applied-technologies](http://www.cpcc.edu/applied-technologies)) offers non-degree courses in four areas:

- Advertising and Graphic Design
- Graphic Arts and Imaging Technology
- Non-Destructive Examination
- Welding.

Courses serve both the beginner and advanced student. Courses are taught by qualified, experienced professionals with classroom and industry experience. Class dates and times vary each semester, with new classes, events and seminars added during the year.

Check the online Schedule Builder ([https://schedule.cpcc.edu/myschedule](https://schedule.cpcc.edu/myschedule)) tool for actual courses available in Corporate and Continuing Education (enter keywords or topic) or call customer service at 704.330.4223. Events and seminars also may be scheduled at various times and dates.

Call the Applied Technology area at 704.330.4558 to learn more or to discuss specific needs. For business or group training, contact the Corporate Learning Center ([http://www.cpcc.edu/clc](http://www.cpcc.edu/clc)) at 704.330.4660.

Typical course topics include:

**Advertising + Graphic Design** ([http://www.cpcc.edu/addesign](http://www.cpcc.edu/addesign))

Creativity for Designers
Business for Designers
Tools for Designers
- Adobe Photoshop, Illustrator and InDesign
- Graphic Novels and Comic Books

**Graphic Arts and Imaging Technology** ([http://www.cpcc.edu/graphic-arts](http://www.cpcc.edu/graphic-arts)) / Flexography ([http://www.cpcc.edu/flexo](http://www.cpcc.edu/flexo))

Build the knowledge and skills to succeed in printing, publishing, packaging and related industries.

Pre-Press
- Adobe Photoshop
- Adobe Illustrator
- Adobe InDesign

Graphic Communications/Printing
- Flexography
- Offset
- Screen Printing

**Non-Destructive Examination** ([http://www.cpcc.edu/ndet](http://www.cpcc.edu/ndet))

Non-destructive examination is a form of examining a material or part without damaging the intended usefulness of the component. NDE is often
a routine part of the design, manufacture and in-service testing process that is performed to better establish and assess the reliability of the part in its design function.

Classes include:

Introduction to Non-Destructive Examination

Level I and II Training:

- (ET) Eddy Current Testing
- (MT) Magnetic Particle Testing
- (PT) Liquid Penetrate Testing
- (RT) Radiographic Testing
- (UT) Ultrasonic Testing and Phased Array
- (VT) Visual Testing

**Welding Technology** ([http://www.cpcc.edu/welding](http://www.cpcc.edu/welding))

**Certification**

American Welding Society (AWS) Weld Certification Testing [Position(s), Configuration(s), Alloy Type(s), and Welding Procedure Specification(s) to be specified by customer or test candidate.]

- Automated Welding/Cutting
- Basic Welding Processes
- Basic Welding for Transportation
- Certification Practices
- Cutting Processes
- Fabrication
- (FCAW) Flux Cored Arc Welding (flux-core)
- (GMAW) Gas Metal Arc Welding (MIG)
- (GTAW) Gas Tungsten Arc Welding (TIG)
- Inspection and Testing
- (SMAW) Shielded Metal Arc Welding (stick)
- Symbols and Specifications
- Welding Metallurgy

**Welding Technology Customized Training**

For employers, the Corporate Learning Center ([http://www.cpcc.edu/clc](http://www.cpcc.edu/clc)) offers group training or assists in sponsoring staff in publicly offered sessions. Learn more by calling 704.330.4660.

- Blacksmithing/Forge Welding and Wrought Iron Fabrication
- FCAW Plate or Pipe (carbon or stainless steel)
- GMAW Plate or Pipe, Short Circuit or Spray or Pulsed Spray (carbon steel, aluminum or stainless steel)
- GTAW Plate or Pipe, Foot pedal or "Touch Start Control" (carbon steel, aluminum or "stainless steel")
- Orbital GTAW, Pipe (carbon or stainless steel)
- Oxy-Fuel Silver Soldering (carbon steel to copper or copper to copper)
- Oxy-Fuel Cutting (carbon steel)
- Oxy-Fuel Brazing (carbon steel, iron or copper)
- Plasma-Arc Cutting (carbon steel, aluminum or stainless steel)
- Robotic GMAW, Plate (carbon or stainless steel)
- SMAW Plate or Pipe (carbon or stainless steel)

**Welding/Mechanical Drawing/Print Interpretation**

- Alphabet of lines/use and understanding of lines
- Welding Symbols
- Bill of Materials

- Alternate Views of Drawings
- Location Understanding, Azimuth/Degree, Elevation, Radius, Column Lines
- Referencing and Using Supporting Documents

**Welding Code and Use of Welding Procedure Specifications**

- Advanced/Certified Welder use of code and WPS’s
- AWS Certified Welding Inspector (CWI) Training

**Welding Safety**

- General Welding Safety
- Use of Personal Protective Equipment (PPE)

**Automotive, Motorsports and Related Training**

Transportation Systems Technology: 704.330.4122

Transportation Systems Technologies ([http://www.cpcc.edu/transport_systems](http://www.cpcc.edu/transport_systems)) at CPCC offers a variety of non-degree training courses related to the repair and operation of vehicles and small engines. New classes may be added during the year.


- Auto Body Restoration
- Auto Empowerment


- Assembly
- Body Hanging
- Finish Fabrication
- Heavy Fabrication
- MIG/TIG Welding
- Paint, Body and Decaling

**N.C. Safety and Emissions Inspection Certification**

- OBD II Inspection Initial Certification
- OBD II Inspection Re-certification
- Safety and Inspection Initial Certification
- Safety Inspection Re-certification

**Small Engine Repair Skills**

- Small Engine Overhaul
Small Engine Repair

N.C. Used Car Dealer Certification


ESL Instructor Fast-Track Training

704.330.6917 or 704.330.4223  

ESL Instructor Fast-Track Training takes approximately six weeks and is designed for prospective or new English as a Second Language (ESL) instructors in adult basic education, community-based or mission programs. It is a 30-hour, instructor-facilitated online course on the theory and practice of English language teaching and learning for adults. Participants will be able to obtain a certificate of completion and three CEUs in a flexible online format that does not require set meeting times or traveling costs.

Fitness Professionals

http://www.cpcc.edu/cce

Personal Trainer National Certification

A CPCC partnership with World Instructor Training Schools (WITS) (http://www.witseducation.com) allows you to become a Certified Personal Trainer to then work one-on-one with clients in fitness facilities. Study focuses on anatomy, exercise physiology, nutrition, musculoskeletal injuries, health assessments and more. Students must hold current Cardiopulmonary Resuscitation (CPR) certification. Additional courses are available to provide Continuing Education Unit (CEU) credits.

To learn more about current courses available, contact Corporate and Continuing Education Customer Service at 704.330.4223 or use the online Schedule Builder and enter keyword terms including “personal trainer.”

Health Information Technology

Contact the Health Information Technology Department at: 704.330.6162  
Visit the Health Information Technology website (http://www.cpcc.edu/health_sciences/health-information-technology).

The Health Information Technology (HIT) curriculum prepares individuals with the knowledge and skills to process, analyze, abstract, compile, maintain, manage, and report health information. The HIT Program at CPCC is fully accredited by CAHIIM - Commission on Accreditation for Health Informatics and Information Management Education.

Graduates of the program receive an Associate in Applied Science degree and are eligible to write the national certification examination to become a Registered Health Information Technician (RHIT). RHITs work in supervisory and technical positions throughout health care—analyzing and managing health information.

The program is offered entirely online with the exception of Professional Practice Experience courses.

Health Information Technology (http://www.cpcc.edu/programs/37)  
Program of Study

Hospitality and Event Planning

704.330.4223


CPC offers a Floral Design Certificate for students who successfully complete the four required classes:

1. Floral Design,
2. Master Floral Design,
3. Sympathy Flowers, and
4. Wedding Flowers.

Certified Dietary Manager (CDM) (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/hospitality/dietary-manager)

Approved by the Association of Nutrition and Foodservice Professionals (ANFP), this professional-level program at CPCC follows established industry requirements with coursework in food service management, human resources management, nutrition and medical nutrition therapy and food safety.


Learn the industry standard in food safety training. The ServSafe® program provides accurate, up-to-date information for all levels of employees on every aspect of handling food, from receiving and storing to preparing and serving. This program is available for exclusive or group training by calling Corporate Learning (https://www.cpcc.edu/clc) at 704.330.4660.


This 60-hour certificate provides participants with an introduction to the event industry, including basic principles of planning and executing events, meetings and conferences. It gives students the necessary skills and tools for success and provides participants with a comprehensive understanding of the meeting and event planning industry. Students acquire required competencies through classroom study as well as practical application, guest lectures and field trips.
Human Resources

Corporate and Continuing Education Human Resources and Payroll website (https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/human-resources-and-payroll)


Master the fundamentals in HR management, then study the finer points of employment law, recruitment, employee relations and benefits with our HR Certificate Program. This comprehensive program consists of the following five courses:


While each course may stand alone for completion certificates, all are required for the HR Certificate. Prerequisites are not required, but we recommend you start with Fundamentals (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/human-resources-and-payroll/human-resource-certificate/fundamentals-of-hr-management).


CPCC is proud to offer HR seminars designed for HR professional seeking recertification credit hours through HRCI. Seminars include:

- Strategic HR Metrics
- HR’s Seat at the Table
- The Training Process
- ADA, FMLA and WC: The Three-Headed HYDRA
- Ethics for Human Resources

Industry, Manufacturing and Supply Chain

APICS (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/manufacturing/apics/apics) - Certified in Production and Inventory Management

Exam preparation review courses are designed for professionals in operations and inventory management who would like to earn the professional CPIM (Certified in Production and Inventory Management) designation. A weekend instructional format allows a concentrated review of topics.

Fast Track CPIM Exam Prep courses:


APICS Certified Supply Chain Professional Exam Preparation

The Certified Supply Chain Professional (CSCP) program of the American Production and Inventory Control Society (APICS) is the first comprehensive educational program designed especially for supply chain management and operations professionals. The CSCP program takes a broad view of operations, extending beyond internal operations to encompass the entire supply chain - from supplier, through the company, to the end consumer.

The program provides professionals with the knowledge necessary to understand and manage the integration and coordination of end-to-end supply chain activities. To earn the APICS CSCP designation, candidates
must pass one comprehensive four-hour exam with 175 questions taken from more than 150 references.


**International Learning and Study Abroad**

704.330.6167  
http://www.cpcc.edu/study-abroad

Gain a global perspective through travel and learning in selected programs open to community members. Such programs include:

- studying language in Peru, Germany and Montreal,
- getting a taste of the cuisine and art in France, Greece and England, and
- exploring the emerging economies of Brazil and China.

Learn more about participating in these learning adventures by calling 704.330.6167.

**Language and Culture**

704.330.4223  
http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/international-learning-and-languages

Continuing education language courses emphasize grammar, speaking and listening skills. Beginning courses are offered in three levels:

1. **Level I** assumes little or no prior knowledge of the language,
2. **Level II** requires basic skill communication in short sentences or phrases, and
3. **Level III** requires basic conversational skills.

Intermediate courses are designed to be taught in the target language as much as possible with little or no conversation in English.


**Languages for Business and Industry**

CPCC offers customized occupational Spanish training for businesses and various professions. We do this through consultation and as the licensed registered provider of Command Spanish® in Charlotte and Mecklenburg County. This program provides skills to enhance job-specific communication in a variety of industries, including health care. Courses range from eight hours in length to 30 hours or more, depending on need. For information, call the Corporate Learning Center ([http://www.cpcc.edu/clc](http://www.cpcc.edu/clc)) at 704.330.4660.

**Manufacturing and Technical Skills**

Corporate and Continuing Education Customer Service Center: 704.330.4223  
Corporate Learning Center: 704.330.4660

These courses address specific skill sets and hands-on applications needed in an industrial production environment. Many are adapted from longer courses to fit individual, operational and safety requirements found in manufacturing. Often courses are customized with company-specific content and course delivery is adjusted to meet production and shift schedules. A partial listing includes:

- Basic and advanced machining
- Basic assembly and hand tools
- Basic electricity
- Basic shop practices
- Blueprint reading
- Geometric Dimensioning and Tolerancing
- Internal Auditor
- ISO/QS awareness
- Lean manufacturing
- Maintenance training
- Metrology
- OSHA 501 General Industry 10-hour and 30-hour
- Plant safety (first aid/CPR, bloodborne pathogens, HazCom, lock out/tag out, ergonomics, powered lift truck and others)
- Problem-solving techniques
- Quality inspection
- Shop math
- Statistical process control
- Team work and communication
- Welding

**N.C. Professional Educators**

704.330.4223  
http://www.cpcc.edu/teacher-renewal

**Renewal Credit and Lateral Entry**

CPCC offers programs to help N.C. professional educators in various stages of their careers. For teachers who need to renew their state teaching license, a wide variety of online, face-to-face and hybrid courses at affordable fees is offered to provide Continuing Education Units (CEUs). See the Teacher Education website ([http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/teacher-education](http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/teacher-education)) for more information. Lateral entry teachers also are assisted in pursuing their
initial licenses. Find more information about lateral entry classes (http://www.cpcc.edu/teasersed) online.

To learn about current renewal courses or to register for a class, call Corporate and Continuing Education Customer Service at 704.330.4223.

Students taking continuing education courses to renew a teaching license, should get verification that course(s) for which they want to register meet state requirements. Contact the Department of Public Instruction at 800.577.7994 (toll-free in-state).

Licensure information also is available at the N.C. DPI website (http://www.ncpublicschools.org). Please note that continuing education courses do not meet the requirements for an initial license. Continuing education courses are for licensure renewal only. For related instruction, see ESL Instructor Fast-Track Training (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/international-learning-and-languages/esl-instructor-fast-track).

**Notary Public**

704.330.4223
http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/notary-1

Notary Public classes provide a thorough introduction to the statutes that regulate the acts of North Carolina notaries public. Find additional information at the Secretary of State website here (http://www.secretary.state.nc.us/notary). The purpose of the education requirement is to enable the applicant to become a responsible, qualified candidate for Notary Public commission. This course also serves as qualification for re-commissioning of existing notaries public. Book must be purchased prior to class.

**Electronic Notary Certification** (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/notary-1/notary-1/e-notary)

This course will instruct existing North Carolina notaries public in the legislated procedure required to exercise electronic notarial acts as set forth by the N.C. Secretary of State. Participants must hold a valid commission as a N.C. notary public to qualify for this certification. The course covers the N.C. E-Notary Act, eligibility and registration, E-notary processes, technology solutions and providers, ethics reg, E-notarizations, consequences of misconduct, security standards, best practices and departmental recommendations.

**O.P. and W.T. Crowder Construction Institute**

704.330.4428 or 704.330.4223
http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/construction/construction

**Brick Masonry**

**Introduction to Brick Masonry**

This is a course covering the fundamental techniques and practice in the building of brick walls, steps, corners, chimneys and other brick structures.

Emphasis is placed on the correct use of the mason’s trowel, level, plumb line and tape measure. Job safety and safe work habits is covered.

**Building Codes** (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/construction/code-qualification)

**Comprehensive Review of the N.C. Residential Building Code**

This course offers construction supervisors and others currently working in the industry a comprehensive review of those sections of the N.C. Residential Building Code applicable in Mecklenburg County. The class includes a review of applicable state and local code interpretations and Mecklenburg County’s code inspection procedures. A county code enforcement official observes each class and conducts an inspection field trip where students observe an actual code inspection and have an opportunity to ask questions and to discuss concerns.

**Building Contractor Licensing** (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/construction/building-contractor-licensing)

**Building/Commercial Contractors Exam Review**

Review the laws, codes and procedures covered by the General Contractor License Examination for commercial construction.

**Home Construction Methods and Details**

This course helps the inexperienced builder to identify and evaluate information and procedures pertaining to home construction, including lot surveys, excavation and foundation construction, foundation wall, floor, wall and roof framing and much more.

**Residential Blueprint Reading and Estimating**

Learn the fundamentals of reading and interpreting residential blueprints and estimating the quantities of materials and labor required to construct a house.

**Residential Contractors Exam Review**

Review the laws, codes and procedures covered by the General Contractor License Examination for residential and light construction.
Building Trade Skills (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/construction/carpentry)

Carpentry (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/construction/carpentry)

CPCC offers four levels of instruction in carpentry beginning with basic construction knowledge and advancing into more specialized skill areas and competencies. Each course leads to certification of competency for construction apprentices, current craft workers and others. Written and practical testing is required for area certification in each level. See also NCCER – Core.

Introduction to Carpentry
This course uses the NCCER (NCCER.org) training format and provides certificates of competency in some basic skills needed for the requirements to enter into craft training at The Crowder Construction Institute. Those interested in employment in the construction industry, remodeling existing projects, or becoming handy will also find this course a good beginning for basic skills in safety, hand tools, power tools and blueprint reading.

This course is a prerequisite for CIX7006 Carpentry II, TRM8000 Trim Molding, and CAB8300 Furniture/Cabinet Making.

Carpentry II
This course provides construction apprentices, current craft workers and others with a certification of competency in basic floor, wall, ceiling and roof framing. Completion of Carpentry I, Wheels of Learning Construction Core or documented UBC Step 2 is a prerequisite. Competency testing is required for area certification and will be both written and practical. Topics include platform floor, cantilevers, well openings, decking, snap-out, plating, detailing, metal and wood studding, ROs, flat, vault and coffered ceilings, gable rafters, and trusses, etc. Completion and certification in this course allows trainees to pursue Carpentry III and IV Level course modules.

Carpentry III
Topics focus on exterior finishing operations, including shingle roof application, cornice and siding application, vinyl siding, hardboard siding, cement board siding and shake shingle siding. Pre-requisites are required and may include Carpentry I and II. Completion and certification in this course allows trainees to pursue Level IV.

Carpentry IV
This course provides a certification or competency in the basic application and installation of residential interior trim work. Topics include safety practices, plan details (floors, walls and ceiling moldings) and door and window trim (pre-hung doors, interior locks and casework installation). Competency testing is required for area certification and is in both written and practical form. This course is recommended to potential employees by the construction industry for employment qualifications, as well as for currently employed craft workers as certified qualifications for career advancement.

Electrical Code
Electrical Contractors Exam Review
This course reviews the National Electrical Code and Calculations for those who are preparing to take the examination to be licensed as an electrical contractor in North Carolina.

Code Qualification (http://www.cpcc.edu/codeinspector/classes-in-code-inspection)

Law and Administration
This course provides an overview of North Carolina’s building regulation system and is designed for the education and training of building, electrical, mechanical, plumbing and fire prevention code enforcement officials. Participants will study the structure of the federal, state and local governments, the history of the N.C. State Building Code, the General Statutes relating to the Code and to code enforcement and the enforcement responsibilities of local inspection departments.

Upon completion, participants understand the scope of code enforcement and are able to describe the powers and responsibilities of inspectors. In addition, by successful completion of the Law and Administration course and others specified by the N.C. Code Officials Qualification Board, participants will be eligible to take the state exam.

Building Level I Standard Inspection
This course is designed for the Building Level I code enforcement official who has the responsibility of inspecting residential and small commercial construction up to 20,000 square feet. Upon completion, students effectively understand the Building Code, the Residential Code and the Accessibility Code of the N.C. State Building Code and are able to apply the codes in field inspection. In addition, with the successful completion of the Building Level I and the Law and Administration courses in conjunction with other requirements specified by the N.C. Code Officials Qualification Board, participants will be eligible to take the Building Level I state exam.

Building Level II Standard Inspection
Building Level II picks up from Level I and is designed for the Building Level II code enforcement official who has the responsibility of inspecting all types of construction up to 60,000 square feet. Upon completion, students effectively understand the Building Code and the Accessibility Code of the N.C. State Building Code and are able to apply the Code in the inspection field. In addition, with the successful completion of the Building Level II and the Law and Administration courses in conjunction with other requirements specified by the N.C. Code Officials Qualification Board, students will be eligible to take the Building Level II state exam.

Building Level III Standard Inspection
This course is designed for of the Building Level III code enforcement official who has the responsibility of inspecting all types of construction of unlimited size and is built upon information presented in the Building Level I and Building Level II courses. Upon completion, students effectively understand the Building Code and the Accessibility Code of the N.C. State Building Code and are able to apply the Code in the inspection field. In addition, with the successful completion of the Building Level III and the Law and Administration courses in conjunction with other requirements specified by the N.C. Code Officials Qualification Board, students will be eligible to take the Building Level III state exam.
Electrical Level I Standard Inspection
This course is designed for the Electrical Level I code enforcement official who has the responsibility of inspecting residential and small commercial electrical installations in construction up to 20,000 square feet. Upon completion, students effectively understand the Electrical Code of the N.C. State Building Code and are able to apply the Code in the inspection field. Successful completion of the Electrical Level I course. In addition, with the successful completion of the Electrical Level II and the Law and Administration courses in conjunction with other requirements specified by the N.C. Code Officials Qualification Board, participants will be eligible to take the Electrical Level I state exam.

Electrical Level II Standard Inspection
This course is designed for the Electrical Level II code enforcement official who has the responsibility of inspecting electrical installations in all types of construction up to 60,000 square feet and is built upon content in the Electrical Level I course. Upon completion, participants effectively understand the Electrical Code of the N.C. State Building Code and are able to apply the Code in the inspection field. Successful completion of the Electrical Level II and the Law and Administration courses in conjunction with other requirements specified by the N.C. Code Officials Qualification Board, participants will be eligible to take the Electrical Level II state exam.

Electrical Level III Standard Inspection
This course is designed for the Electrical Level III code enforcement official who has the responsibility of inspecting electrical installations in all types of construction of unlimited size and is built upon content in the Electrical Level I and Electrical Level II courses. Upon completion, participants effectively understand the Electrical Code of the N.C. State Building Code and are able to apply the Code in the inspection field. In addition, with the successful completion of the Electrical Level III and the Law and Administration courses in conjunction with other requirements specified by the N.C. Code Officials Qualification Board, participants will be eligible to take the Electrical Level III state exam.

Mechanical Level I Standard Inspection
This course is designed for the Mechanical Level I code enforcement official who has the responsibility of inspecting mechanical installations in construction up to 20,000 square feet. Upon completion, participants effectively understand the Mechanical Code and the Fuel Gas Code of the N.C. State Building Code and are able to apply the Code in the inspection field. In addition, with the successful completion of the Mechanical Level I and the Law and Administration courses in conjunction with other requirements specified by the N.C. Code Officials Qualification Board, participants will be eligible to take the Mechanical Level I state exam.

Mechanical Level II Standard Inspection
This course is designed for the Mechanical Level II code enforcement official who has the responsibility of inspecting mechanical installations in all types of construction up to 60,000 square feet and is built upon content in the Mechanical Level I course. Upon completion, participants effectively understand the Mechanical Code of the N.C. State Building Code and are able to apply the Code in the inspection field. In addition, with the successful completion of the Mechanical Level II and the Law and Administration courses in conjunction with other requirements specified by the N.C. Code Officials Qualification Board, participants will be eligible to take the Mechanical Level II state exam.

Mechanical Level III Standard Inspection
This course is designed for the Mechanical Level III code enforcement official who has the responsibility of inspecting mechanical installations in all types of construction of unlimited size and is built upon information presented in the Mechanical Level I and Mechanical Level II courses. Upon completion, participants effectively understand the Mechanical Code and the Fuel Gas Code of the N.C. State Building Code and are able to apply the Code in the inspection field. In addition, with the successful completion of the Mechanical Level III and the Law and Administration courses in conjunction with other requirements specified by the N.C. Code Officials Qualification Board, participants will be eligible to take the Mechanical Level III state exam.

Plumbing Level I Standard Inspection
This course is designed for the Plumbing Level I code enforcement official who has the responsibility of inspecting residential and small commercial plumbing installations in construction up to 20,000 square feet. Upon completion, participants effectively understand the Plumbing Code of the N.C. State Building Code and are able to apply the Code in the inspection field. Successful completion of the Plumbing Level I course. In addition, with the successful completion of the Plumbing Level II and the Law and Administration courses in conjunction with other requirements specified by the N.C. Code Officials Qualification Board, participants will be eligible to take the Plumbing Level I state exam.

Plumbing Level II Standard Inspection
This course is designed for the Plumbing Level II code enforcement official who has the responsibility of inspecting plumbing installations in construction up to 60,000 square feet and is built upon information presented in the Plumbing Level I course. Upon completion, participants effectively understand the Plumbing Code of the N.C. State Building Code and are able to apply the Code in the inspection field. In addition, with the successful completion of the Plumbing Level II and the Law and Administration courses in conjunction with other requirements specified by the N.C. Code Officials Qualification Board, participants will be eligible to take the Plumbing Level II state exam.

Plumbing Level III Standard Inspection
This course is designed for the Plumbing Level III code enforcement official who has the responsibility of inspecting plumbing installations in all types of construction of unlimited size and is built upon information presented in the Plumbing Level I and Plumbing Level II courses. Upon completion, participants effectively understand the Plumbing Code of the N.C. State Building Code and are able to apply the Code in the inspection field. In addition, with the successful completion of the Plumbing Level III and the Law and Administration courses in conjunction with other requirements specified by the N.C. Code Officials Qualification Board, participants will be eligible to take the Plumbing Level III state exam.

Annual Code Updates and Credits
CPCC offers annual update training to give code officials, general contractors and anyone working in the building industry the latest information. These approved courses meet the six hours required by N.C. Qualification Board Mandatory Continuing Education Credits for Code Officials.

N.C. Residential Building Code
N.C. Plumbing Code
N.C. Mechanical Code
N.C. Mechanical/Fuel Gas Code
Green Building and Remodeling (http://www.cpcc.edu/construction/crowder-construction-institute/green-building)

Green Building and Remodeling - NARI
For both homeowners and professional builders and remodelers, this course covers the basic principles, materials and methods used in Green Building construction. This course is the National Association of the Remodeling Industry (NARI) Green Remodeling course and qualifies for NARI Green Certified Professional certification continuing education.

See related courses under Center for Sustainability (http://www.cpcc.edu/cfs).

Handyman Classes
CPCC offers short courses and project-related workshops to help participants improve their homes. As non-degree programs, these are designed for beginners. Take advantage of hands-on assistance, ask questions, get professional tips, learn about materials, tools and more. Classes include:

Home Improvement/Do it Yourself (DIY)
Typically held on one Saturday, these short classes are designed for homeowners who want to be more knowledgeable and then be able to test their skills on their own home improvements and projects. Courses include:

- Introduction to Hand and Power Tools
- Build an Adirondack Chair
- Tile Your Home

Introduction to Furniture/Cabinet Making
This course uses a “hands on” approach to learning basic woodworking techniques. It provides an introduction to the properties and machining processes of wood that influence the design and construction of furniture, cabinetry and the artistic applications of wood. Students learn the practical use of hand tools, power tools and design principles related to woodworking. Upon completion of the course, students apply their newly acquired skills and knowledge to produce a finished woodworking project.

Introduction to Interior Trim Molding
This course uses the NCCER (National Center for Construction Education and Research) form to provide training in the application and installation of interior residential trim. Topics covered include: safety, plan details, floor, wall and ceiling moldings, door and window trim.

Introduction to Tile Setting
This course will cover the different methods of home tiling, including but not limited to:

- The tools used to complete a home project
- The different types of setting products available in the market and which one will be best suited for your application
- The different types of tiles and the proper application for each type and size

Home Inspection Licensing (http://www.cpcc.edu/construction/crowder-construction-institute/home-inspection)

The House as a System
This class covers information students need to complete a basic evaluation of a house and to better understand how it works as a system. This course is valuable for anyone involved in residential real estate, builders and supervisors. It is the prerequisite course for enrolling in the Professional Home Inspection Training. Subjects include construction methods, plumbing, building codes, insulation and more.

Professional Home Inspector Training
Learn the information and skills needed to perform home inspections, plus the knowledge necessary for the pre-licensing examination. Topics include licensing law, Standards of Practice and Code of Ethics, N.C. State Building Code for Residential Construction along with electrical, heating, plumbing and air conditioning systems. Also included are actual field inspections of houses with their associated written reports. Professional inspectors also provide guest lectures.

NCCER (National Center for Construction Education and Research) Core Curriculum
This class meets the requirements for the NCCER Core Curriculum. It can be used with welding, plumbing, carpentry and electrical programs. This class provides apprentices, craft workers and others with a certification of competency in basic construction knowledge. Topics include safety, hand tools, power tools, construction math and blueprint reading. It is a prerequisite for Carpentry I.

Plumbing (http://www.cpcc.edu/construction/crowder-construction-institute/plumbing)

Plumbing 1-2-3
Put away the yellow pages, and learn how to tackle plumbing projects. This class leads participants through basic plumbing methods, including the tools and materials used to install plumbing pipe work and plumbing fixtures. The focus is on home plumbing systems.

Backflow Valve Testing
This course develops entry level skills and knowledge for backflow assembly field tester. A working knowledge of the causes and principles of backflow and backflow prevention is demonstrated. Recognizing proper backflow prevention assembly application, installation and operation are stressed. Record keeping and backflow program responsibilities also
Backflow Prevention Assembly and Tester Recertification

This is a review of the basic skills and knowledge for a backflow assembly field tester. Student must have completed a Charlotte-Mecklenburg Utility Department (CMUD) approved course in cross connection control and required recertification of original certificate.

Payroll Professionals

Payroll Preparation Review Courses for FPC and CPP

In partnership with the American Payroll Association, the College offers non-degree review courses designed for payroll professionals who want to study for the Fundamental Payroll Certification (FPC) or Certified Payroll Professional (CPP) exam.

- PayTrain Fundamentals (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/human-resources-and-payroll/paytrain-fundamentals)  A 30-hour course providing basic knowledge and skills for successful entry into the payroll industry
- PayTrain Mastery (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/human-resources-and-payroll/paytrain-mastery)  A 36-hour course providing a solid understanding of advanced payroll topics necessary for payroll managers and supervisors

Human Resources and Payroll (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/human-resources-and-payroll) website

Corporate and Continuing Education Customer Service: 704.330.4223

Personal Finance

https://www.cpcc.edu/cce/personal-enrichment/finance

The Financial Services Institute at CPCC offers you courses to help you understand your finances and ways to improve your financial future. Whether you are just graduating from high school or planning for retirement, we provide you with the knowledge and skills necessary to take charge of your finances.

Course topics include:

- Budgeting Basics for Paying Off Debt (https://www.cpcc.edu/cce/personal-enrichment/finance/budgeting-basics)
- Financial Planning for Women (https://www.cpcc.edu/cce/personal-enrichment/finance/financial-planning-for-women)
- Investing for Life (https://www.cpcc.edu/cce/personal-enrichment/finance/investing-for-life)
- Investing 102: Turning Your Retirement Nest Egg into a Monthly Income (https://www.cpcc.edu/cce/personal-enrichment/finance/advanced-investing-for-life)
- Retirement Planning Today (https://www.cpcc.edu/cce/personal-enrichment/finance/retirement-planning-today)
- Stocks, Bonds and Investing (https://services.cpcc.edu/cceoutlines/ECO8052)

Need a presentation tailored to your employees or for a private group? The Corporate Learning Center (http://www.cpcc.edu/clc) can arrange custom delivery to suit your needs. Call 704.330.4660 for questions or a quote.

Process Improvement

Corporate and Continuing Education Customer Service: 704.330.4223

Business Processes website (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/process-improvement)


Lean improvement efforts enable organizations to dramatically reduce waste and non-value-added activities to become highly effective, competitive and profitable operations. The basic concept of lean is to “do more with less.” The CPCC certification builds lean change agent expertise that can be applied in both manufacturing and non-manufacturing enterprises.


Experience first-hand the power of Lean Manufacturing in this fun, eight-hour course and factory simulation. Learn, then apply principles and practices immediately in your organization to reduce waste and remove non-value added activities. This course is especially relevant to front-line leaders, hourly production employees and work teams.

Project Management (https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/process-improvement/project-management-1)


This comprehensive program is for individuals who lead or direct projects and programs, either fully or in part. The extensive training follows the PMBOK® (Project Management Body of Knowledge) standards that include Project Planning and Control, Determining Business Requirements, Stakeholder Management (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/business-processes/project-management-1/leading-the-way-in-stakeholder-management) plus powerful hands-on management applications of Microsoft Project using real-world scenarios. The program also prepares participants to take PMP® (Project Management Professional) and CAPM® (Certified
Creating Functional Specifications

elicitation)

improvement/business-analysis/data-gathering-and-requirements-

cce/job-and-career-enhancement/courses-and-programs/process-improvement/project-

management-1/project-planning-and-control)

Determining Business Requirements

(https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/process-improvement/project-

management-1/project-management-fundamentals)

Stakeholder Management

(http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/business-processes/project-

management-1/leading-the-way-in-stakeholder-management)

Using Microsoft Project for Effective Project Management

(https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/process-improvement/project-

management-1/using-microsoft-project-for-effective-project-management)

PMP/CAPM Exam Prep

(https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/process-improvement/project-

management-1/pmp-capm-exam-prep)

Business Analysis Plus Certificate Program

(IIBA® Compliant) (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/process-

improvement/business-analysis)

The Business Analysis Plus Certificate is a comprehensive program for anyone who determines project needs or who needs to define, communicate, recommend and manage the scope of a business solution. The program provides extensive training on determining business requirements, project planning and control, data gathering, creating functional specifications and structured testing utilizing the BABOK® (Business Analysis Body of Knowledge) of the IIBA®, International Institute of Business Analysis. Courses include:

Determining Business Requirements

(https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/process-improvement/project-

management-1/project-management-fundamentals)

Project Planning and Control

(https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/process-improvement/project-

management-1/project-planning-and-control)

Data Gathering and Requirements Elicitation

(https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/process-improvement/business-

analysis/data-gathering-and-requirements-elicitation)

Creating Functional Specifications

(https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/process-improvement/business-

analysis/creating-functional-specifications)

Structured Testing Techniques

(https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/process-improvement/business-

analysis/structured-testing-techniques)

Building a Requirements Package

(https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/process-improvement/business-

analysis/building-a-requirements-package)

Public Safety for Healthcare Providers

Corporate and Continuing Education Customer Service Center:

704.330.4223

Visit the Emergency Medical Services Training website (http://www.cpcc.edu/emstraining)

The following courses are designed as continuing education for healthcare professionals. Continuing Education Units (CEUs) are provided for all participants.

Courses adhere to standards and guidelines of the American Heart Association, the American Academy of Pediatrics and the National Association of EMS Physicians. Not all courses are offered each semester. Learn Emergency Medical Technician general information here (https://www.cpcc.edu/emstraining/general-information).

Advanced Cardiac Life Support Renewal

EMT Methodology of Teaching

EMT Renewal (https://www.cpcc.edu/emstraining/EMT%20Reresher%20course)

Paramedic Training

Pediatric Advanced Life Support Renewal

CPR (Cardiopulmonary Resuscitation) and First Aid

American Heart Association Basic Life Support Courses (CPR) are available for healthcare providers, the general public and any business or industry. All CPR courses are sanctioned by the American Heart Association. CPCC is an American Heart Association Community Training Center. Classes may be provided individually or in combinations for business, industry or personal groups. For information on custom delivery, call 704.330.6508 or the Corporate Learning Center (http://www.cpcc.edu/clc) at 704.330.4660.

Six Sigma Certifications

Six Sigma Black Belt Certification


After successful completion of this 100-hour course, participants are better prepared to provide an organization with the leadership and knowledge expertise of a certified Six Sigma Black Belt. The course content is built on the American Society for Quality (http://asq.org/about-asq/who-we-are) (ASQ) body of knowledge. Six Sigma Black Belts lead cross-functional project teams to carry out identified improvement projects. As such, Black Belts need to be able to implement all of the appropriate tools of Six Sigma and provide statistical expertise for project teams. They work with, lead and mentor cross-functional teams to define and measure problems, analyze the root causes, implement improvements and establish control at new levels. This course blends classroom instruction (40 hours) with required online assignments (60 hours). Additional non-
degree certificates, certifications and licensure or test preparation are available. For a complete schedule or to learn more, call 704.330.4223.

**Six Sigma Green Belt Certification**


This course blends classroom instruction with online assignments and exams. There are 24 hours of required instructor-led classroom sessions every other week during the session and approximately 22 hours of online activities. Online hours may vary, per student based on knowledge and skill. There are no prerequisites to taking this course. Participants who successfully complete the program will receive a CPCC certificate and be awarded 4.6 Continuing Education Units (CEUs).

**Workplace Basic Skills**

Foundational Skills Office: 704.330.4554
Corporate Learning Services: 704.330.4660

A skilled and productive workforce begins with employees that have fundamental knowledge and skills such as reading to understand and to follow directions, using math for measurement and simple calculations and writing to record data or communicate. CPCC works with business and industry to offer basic skills classes to serve those employees’ needs. Courses often are held on-site at the workplace and are coordinated with work schedules. The College also offers courses for English as a Second Language (ESL), for High School Equivalency Diploma or GED Testing preparation. Learn more about how a company or organization can offer basic skills to employees by calling the Foundational Skills Office at 704.330.4554. For information on additional customized training for employees or for an assessment of employees’ skill levels, contact Corporate Learning at 704.330.4660. Courses available include the following:

- Math
- Reading
- General Educational Development (GED) test preparation
- English as a Second Language (ESL) – beginning, intermediate and advanced
- Math for ESL students

**Personal Enrichment**

Corporate and Continuing Education Customer Service Center: 704.330.4223

Visit the Personal Enrichment website (http://www.cpcc.edu/cce/personal-enrichment) at: www.cpcc.edu/cce/personal-enrichment.

Find balance, pleasure and discovery in life through continuing education courses designed for recreation, leisure and personal enrichment. Offered year-round and throughout Mecklenburg County, these non-degree courses focus on individual well-being and lifelong learning. Categories and topics are selected based on student interest and vary in length from short seminars of a few hours to 30 hours or more of in-depth instruction. Most of these courses are fee-based, and all are open to the public.

Many personal enrichment courses are introductory and do not require any specific skill level or prerequisites. Some, however, are designed in progressive sequence from beginner to the more advanced.

A complete schedule of non-degree courses is available each semester (spring, summer and fall). Registration and payment typically is available until the starting date of classes, unless the course is at maximum enrollment or is canceled with less than minimum enrollment. No enrollment application or transcripts are required. Courses and programs vary each semester, but typically include these topic areas.

**Arts**

(https://www.cpcc.edu/cce/personal-enrichment/arts)

Explore all things creative, including creative writing, dance, drawing and painting, film critique, mixed media and music.

**Automotive**

(https://www.cpcc.edu/cce/personal-enrichment/automotive)

Whether you’re ready to start tinkering or to build an engine, CPCC shares your passions. Our experienced automotive and auto body instructors provide the hands-on guidance and knowledge needed to succeed.

**Charlotte Cooks™**

(https://www.cpcc.edu/cce/personal-enrichment/cooking)

Expert, friendly instructors guide learning and practice as students prepare delicious meals, desserts and more in professional kitchens. The option to experience Charlotte Cooks’ team-building sessions also is available by request through the Corporate Learning Center by calling 704.330.4660. These fun and popular sessions can be customized, hands-on and affordable for special interest groups, businesses and special occasions.

**Home and Outdoors**

(https://www.cpcc.edu/cce/personal-enrichment/home-and-outdoors)

Topics include interior design, gardening and landscaping, sewing and quilting, and home improvement for personal pleasure, skills and discovery.

**Language and Culture**

(https://www.cpcc.edu/cce/personal-enrichment/language-and-culture-home)

Connect and learn to better communicate with individuals from near and far with non-degree courses. Beginner to intermediate classes feature conversational practice and encourage participants to use their new language skills in real-world situations. Courses are taught at several locations in Mecklenburg County, including Myers Park High School. Group classes for travel clubs or businesses also are available by contacting the Corporate Learning Center (http://www.cpcc.edu/clc) at 704.330.4660.

- French
  (https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/international-learning-and-languages/french)
- German
- Spanish
  (https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/international-learning-and-languages/spanish-1)
- Italian
Recreation and Wellness


Motorcycle (https://www.cpcc.edu/cce/personal-enrichment/automotive/motorcycle-safety/motorcycle-safety)

Register early for one of the popular, public motorcycle riding and safety classes taught in small groups for added attention. Experienced rider courses and courses taught just for women help riders find what fits their needs.

Personal Finance (http://www.cpcc.edu/cce/personal-enrichment/personal-finance)

Visit the Personal Finance website at: www.cpcc.edu/cce/personal-enrichment/finance

The James R. Worrell Sr. Financial Services Institute (http://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/financial-services-home/Banking-and-Financial-Service/fsi-home/financial-services-home) at CPCC helps individuals understand finances and improve their financial future. Whether participants are just out of high school or planning for retirement, programs provide the knowledge and skills to allow them to take charge of their finances.

Course topics include:

- Budgeting Basics for Paying Off Debt (https://www.cpcc.edu/cce/personal-enrichment/finance/budgeting-basics)
- Financial Planning for Women (https://www.cpcc.edu/cce/personal-enrichment/finance/financial-planning-for-women)
- Investing for Life (https://www.cpcc.edu/cce/personal-enrichment/finance/investing-for-life)
- Investing 102: Turning your Retirement Nest Egg into a Monthly Income (https://www.cpcc.edu/cce/personal-enrichment/finance/advanced-investing-for-life)
- Retirement Planning Today (https://www.cpcc.edu/cce/personal-enrichment/finance/retirement-planning-today)
- Stocks, Bonds and Investing (https://services.cpcc.edu/cceoutlines/ECO8052)

Personal Safety (http://www.cpcc.edu/cce/personal-enrichment/personal-safety)

Gain confidence and learn self defense in these hands-on courses. Learn tips and techniques from top, experienced safety experts. Classes also are available for special group or custom delivery.


Writing and Cultural Arts (https://www.cpcc.edu/cce/personal-enrichment/leisure)

Film Critique and Analysis (https://www.cpcc.edu/cce/personal-enrichment/leisure/Film-Critique-and-Analysis)

History of Charlotte (https://www.cpcc.edu/cce/personal-enrichment/leisure/History-of-Charlotte)
Social Media 101 (https://www.cpcc.edu/cce/personal-enrichment/leisure/Social-Media-101)
Songwriting (https://www.cpcc.edu/cce/personal-enrichment/leisure/Songwriting-Made-Easy)
Storytelling (https://www.cpcc.edu/cce/personal-enrichment/leisure/The-Craft-of-Storytelling)
Writing Courses and Workshops (https://www.cpcc.edu/cce/personal-enrichment/leisure/writing-courses-and-workshops)
Languages (https://www.cpcc.edu/cce/job-and-career-enhancement/courses-and-programs/international-learning-and-languages) (French, German, Greek, Italian, Mandarin Chinese, Spanish)

Recreation and Wellness

Start or maintain a more active and healthy lifestyle through fun and popular recreation and wellness courses. With day, evening and weekend sessions, CPCC gets you off the sofa, helps you meet new people and reach your goals.

Dance (https://www.cpcc.edu/cce/personal-enrichment/recreation/dance)

Get moving! Dance classes are a great way to stay in shape while learning and having fun. Choices are offered at several locations throughout the city. Courses include:

Beginning Shag (https://www.cpcc.edu/cce/personal-enrichment/recreation/dance/beginning-shag)
Belly Dance (https://www.cpcc.edu/cce/personal-enrichment/recreation/dance/belly-dance)
Dance Basics

Recreation and Health (https://www.cpcc.edu/cce/personal-enrichment/recreation/fitness)

CPCC is guaranteed to get you moving! Select from time honored disciplines, fitness-based activities or choose unique health offerings all designed to improve your life. Classes in Yoga, Tai Chi, dance for fitness, Pilates and more get students moving and on a path to better health. Great facilities on various campuses welcome all levels of participants. Participants may set their own pace with no annual commitment or fees.

Hip-Hop/Latin Dance Aerobics (https://www.cpcc.edu/cce/personal-enrichment/recreation/fitness/hip-hop-latin-dance)
Mindful Health Workshop (https://www.cpcc.edu/cce/personal-enrichment/recreation/fitness/health-and-wellness/mindful-health-workshop)
Pilates (https://www.cpcc.edu/cce/personal-enrichment/recreation/fitness/Fitness/copy_of_Disciplines/tai-chi/Pilates)
Tai Chi (http://www.cpcc.edu/cce/personal-enrichment/recreation/copy_of_Disciplines/tai-chi/TaiChiForHealth)
Yoga (http://www.cpcc.edu/cce/personal-enrichment/recreation/yoga-1)
Sports (http://www.cpcc.edu/cce/personal-enrichment/recreation/sports-home) and Fitness (http://www.cpcc.edu/cce/personal-enrichment/recreation/fitness)

Enjoy learning a new sport at CPCC or polish skills while meeting new people and getting expert instruction. Classes are small and offered at convenient times for a great experience - and a great workout! Options include tennis, golf, kayaking, sailing and boot camp fitness. For those making fitness a specialty or career, Personal Trainer National Certification (comprehensive exam prep) by World Instructor Training School (W.I.T.S) is offered.

Boot Camp Fitness (https://www.cpcc.edu/cce/personal-enrichment/recreation/fitness/boot-camp-fitness)
Fitness Professional Certification (https://www.cpcc.edu/cce/personal-enrichment/recreation/sports-home/golf)
Golf
Kayaking (https://www.cpcc.edu/cce/personal-enrichment/recreation/sports-home/kayaking)
Tennis (https://www.cpcc.edu/cce/personal-enrichment/recreation/sports-home/tennis)
Courses / Course Registration

Regardless of where students are on their academic path, CPCC has the resources needed to help them find success.

College and Career Readiness Courses

The college’s College and Career Readiness staff takes a student-focused approach to helping students develop vital life skills, working with participants one-on-one before they enroll at college or seek employment. Classes range from English as a Second Language to foundational skills, GED preparation and more.

College-Level Curriculum Courses

CPCC has developed a variety of affordable, two-year degree and online learning programs that respond to the immediate needs of the local workforce, including the areas of science, technology, engineering, math and more.

Corporate and Continuing Education

Students can choose from hundreds of non-degree courses and programs at CPCC. Whether an person is seeking to learn new job skills, enhance their workforce’s competitiveness in the marketplace or explore a new hobby in a personal enrichment class, CPCC’s Corporate and Continuing Education courses are the solution.

College and Career Readiness Courses

ESL College and Career (ECC) Courses

ECC 6000. College & Career Multilevel. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
ECC 6000 courses are offered on several campuses and designate courses with combined English proficiency.

ECC 6007. College & Career Literacy. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
Beginning ESL Literacy introduces students to basic literacy concepts, bringing students to an understanding of the English alphabet and building key vocabulary skills. Students in this course will develop basic oral and written communication skills, learning to communicate personal information, and complete basic work-related functions and develop an understanding of basic civics concepts.

ECC 6009. College & Career Beginning High. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
High Beginning ESL expands student's proficiency in listening, speaking, reading and writing. Students are given instruction in basic grammar and mechanics and learn to read and write English at the sentence and paragraph level. Students improve their listening and speaking skills and ability to discuss everyday activities. Students will further refine basic workplace communication and understanding of civics-related concepts.

ECC 6010. College & Career Intermediate Low. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
Low Intermediate ESL further develops student's comprehension of spoken and written English by developing their ability to communicate on familiar topics across all four skills. Routine social conversations and simple reading and writing exercises build the student's basic communication skills. Students begin to follow workplace instructions and to interpret signs, schedules, maps, instructions for basic technology, and so on. Students will also learn more detailed civics concepts related to American culture, the political system, and the citizenship exam.

ECC 6011. College & Career Intermediate High. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
High Intermediate ESL expands student's basic English language skills to improve comprehension and production of English. Students will read and write basic paragraphs with some control of structure, increase their knowledge of verb tenses and mechanics, and communicate verbally with greater fluency and accuracy. Students in this course will expand workplace communication skills to complete more complex work-related tasks and comprehend more complex topics related to civics. This course may introduce basic technological skills such as a word processing and emailing, as well.

ECC 6102. College & Career Advanced. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
Advanced ESL assists students in acquiring more complex language and critical thinking skills to allow them to read, write, speak and comprehend material on unfamiliar topics, including more academic subject matter. Students in this course will make use of authentic materials and learn strategies for negotiating meaning. They will be given opportunities to improve performance in a wider variety of work-related tasks, demonstrate a high level of understanding in regard to civics topics and utilize basic software and applications where appropriate and feasible.

ESL Distance Learning (EDL) Courses

EDL 6000. ESL English Distance Learning Multilvl. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
The ESL course provides English language at all levels with technology enhanced contextualized civic engagement content. The course is designed for students with skills proficiency in English and with special needs and the ability to communicate. It is designed for students to develop the skills necessary to succeed in the English language and to develop the necessary skills to succeed in the workplace.

EDL 6000 courses are designed to provide students with opportunities to learn and practice English in a variety of contexts, including workplace, personal and community settings. The courses offer opportunities for students to develop their oral and written communication skills, critical thinking skills, and problem-solving skills. The courses also offer opportunities for students to develop their self-esteem, confidence, and independence. The courses are designed to help students develop the skills necessary to succeed in the English language and to succeed in the workplace or in other areas of life.
Foundational Mathematics (FMA) Courses

FMA 6000. Foundational Math Multilevel. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a multilevel course. Skills covered in this course overlap between levels FMA 6001, 6002, 6003, or 6004.

FMA 6003. Foundational Math Intermediate Low. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
Upon completion of this course, students will be able to add, subtract, multiply and divide whole numbers, fractions and decimals to solve everyday problems. The students will also be able to determine correct math operations for solving word problems and convert fractions to decimals and decimals to fractions.

FMA 6004. Foundational Math Intermediate High. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to help students to interpret and solve simple algebraic equations, tables, and graphs. In addition, students use formulas and mathematical calculations involving percents, ratio and proportion, scientific notation, positive and negative numbers, geometry and the Pythagorean Theorem to solve real-life problems.

Foundational Language Arts (FLA) Courses

FLA 6000. Foundational Language Arts Multilevel. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a multilevel Foundational Language Arts course. Skills covered in this course overlap between levels FLA-6001, 6002, 6003, or 6004.

FLA 6003. Foundational Lang Arts Intermediate Low. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
This course offers helpful strategies for reading and understanding short stories and newspaper articles. You will practice following multi-step procedures, comparing and contrasting, and determining the difference between fact and opinion. During this course you will also practice writing descriptions and short essays using proper punctuation and spelling.

FLA 6004. Foundational Language Arts Inter High. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
This course focuses on understanding multi-step directions and reading common legal forms and manuals. The student will learn how to integrate information from texts, charts and graphs and be introduced to more complex themes and elements in literature, science and social studies. Upon completion of this course, students will also be able to write in an organized and cohesive manner with few mechanical errors and a complex sentence structure.

Foundational Learning Resource (FLR) Courses

FLR 6000. Foundational L R C Multilevel. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a multi-level course. Learning Resource Center (LRC) are open labs designed to be a supplement or alternative to direct instructional classes. The LRC provides instructional support to learn basic language arts, reading, writing, and math skills similar to what is taught in FMA and FLA courses.

FLR 6001. Foundational Math/Lang Arts L R C. 0.0 Hours.
Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
Learning Resource Center (LRC) are open labs designed to be a supplement or alternative to direct instructional classes. This LRC provides instructional support to learn basic Language Arts, Reading, Writing, and Math Skills similar to what is taught in FMA 6001 and FLA 6001.

FLR 6002. Foundational Math/Lang Arts L R C. 0.0 Hours.
Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
Learning Resource Centers (LRC) are open labs designed to be a supplement or alternative to direct instructional classes. This LRC provides instructional support to learn basic Language Arts, Reading, Writing, and Math Skills similar to what is taught in FMA 6002 and FLA 6002.

FLR 6003. Foundational Math/Lang Arts L R C. 0.0 Hours.
Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
Learning Resource Centers (LRC) are open labs designed to be a supplement or alternative to direct instructional classes. This LRC provides instructional support to learn basic Language Arts, Reading, Writing, and Math Skills similar to what is taught in FMA 6003 and FLA 6003.

FLR 6004. Foundational Math/Lang Arts L R C. 0.0 Hours.
Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
Learning Resource Centers (LRC) are open labs designed to be a supplement or alternative to direct instructional classes. This LRC provides instructional support to learn basic Language Arts, Reading, Writing, and Math Skills similar to what is taught in FMA 6004 and FLA 6004.

ESL Crossroads Cafe' (CDL) Courses

CDL 6000. Crossroads Cafe Civics D L Multilevel. 0.0 Hours.
Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
CDL 6000 courses designate Distance Learning options in the Adult English as a Second Language program. These options include ESL courses delivered in video format as Crossroads Cafe.

GED Language Arts (GLA) Courses

GLA 6000 GED Language Arts

This is an eight-week, writing intensive course designed to help students develop the reading, writing and grammar skills necessary to successfully pass the Language Arts High School Equivalency Test. Upon completion of this course, students should be able to demonstrate critical reading skills, write clearly, and edit and understand the use of standard written English in context. To ensure student success, a strict attendance policy is enforced.

GLA 6000. Fast Track Language Arts Multilevel. 0.0 Hours.
Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to help students develop the reading, writing and grammar skills necessary to successfully pass the Language Arts High School Equivalency Test. Upon completion of this course, students should be able to demonstrate critical reading skills, write clearly, edit and understand the use of standard written English in context. To ensure student success, a strict attendance policy is enforced.
GED Learning Resources (GLR) Courses

GLR 6000 Learning Resource Center (LRC)
The Adult Basic Education (GLR) Learning Resource Center offers individualized and small group instruction for students who desire instructional support as they prepare to take the High School Equivalency Tests. Students can dual enroll in both the LRC and any High School Equivalency (HES) preparation course for additional support and practice. Similar courses: GLR 6004, GLR 6005 and GLR 6006.

GLR 6000. G E D Learning Resource Ctr Multilvl. 0.0 Hours.
Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
The GLR Learning Resource Center offers individualized and small group instruction for students who desire instructional support as they prepare to take the High School Equivalency Tests. Students can dual enroll in the LRC and any of the HSE preparation courses for additional support and practice.

GLR 6004. G E D Learning Resource Ctr Inter High. 0.0 Hours.
Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
GLR 6004 Learning Resource Center Inter High.

GLR 6005. G E D Learning Resource Ctr Sec Low. 0.0 Hours.
Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
GLR 6005 GED Learning Resource Center Sec Low.

GLR 6006. G E D Learning Resource Ctr Sec High. 0.0 Hours.
Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
GLR 6006 GED Learning Resource Center Sec High.

GED Distance Learning (GDL) Courses

GDL 6000 HSE Distance Learning (Online)
High School Equivalency (HSE) Online is designed for students who are unable to attend traditional HSE preparation classes on campus. A customized Internet-based instructional program is provided, based on each student's assessment results. Students can access the course from any computer with Internet service.

GDL 6000. G E D - D L Multi-Subj Multilvl. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
GDL 6000 HSE Distance Learning (Online) is designed for students who are unable to attend traditional HSE preparation classes on campus. A customized Internet-based instructional program is provided based on each student's assessment results. Students can access the course from any computer with Internet.

Adult High School (HSD) Courses

Computer Literacy

HSD 6068 Computer Literacy I
This course provides a brief overview of computer concepts. Emphasis is placed on the use of personal computers and software applications for personal use as well as the work environment. Upon completion of this course, students will be able to demonstrate basic computer skills, using Microsoft Office Professional Applications, such as Word, PowerPoint and Excel. Students also will have a working knowledge of the Internet and be able to successfully navigate the World Wide Web.

English

HSD 6002 High School Diploma English I
This course introduces the basic study of grammar and develops writing mastery through the writing process. Types of writing include narrative and descriptive paragraphs and essays. Vocabulary development, reading comprehension and oral communication skills also are introduced.

HSD 6003 High School Diploma English II
This course expands on skills in reading, writing and oral communication that were introduced in English I. New concepts and skills are added to give students a basic foundation in English grammar, punctuation and vocabulary. Students are expected to demonstrate a mastery of these skills.

HSD 6004 High School Diploma English III
This course emphasizes literature with a focus on understanding the definition and application of certain literary terms as applied to selected passages. Writing includes the development of comparison-and-contrast research papers relating to literary selections. Application of grammar skills learned in all levels of English is reviewed.

HSD 6005 High School Diploma English IV
Students increase their knowledge of grammar, reading comprehension and vocabulary by focusing on the writing and punctuation of a variety of sentence types, a review of the parts of speech and regular use of the newspaper. A major emphasis in this course is on writing persuasive research papers.

Mathematics

HSD 6013 Applications of Mathematics
This course expands the basic math skills to include the solution of word problems involving percent applications, proportions, reading charts and graphs for information, estimation, working with measurement and basic geometry concepts. Applications of the use of math in real-life situations are emphasized throughout the course.

HSD 6014 Pre-Algebra
This course builds a foundation for algebra. Topics covered include subsets of the real numbers, simplifying radicals, properties of the real numbers, prime factorization, the language of algebra, working with signed numbers, combining like terms, solving first degree equations, setting up and solving word problems as well as solving and graphing inequalities.

HSD 6040 Algebra I
Upon completion of this course, students should be able to solve problems using the symbolism of algebra, solve first degree equations, recognize and graph linear equations, solve systems of two equations, manipulate literal equations, recognize and use properties of real numbers, simplify expressions containing exponents, multiply polynomials and factor polynomials.
HSD 6044 Geometry
This course stresses plane geometry with a brief overview of trigonometry and solid geometry. Upon completion of this course, students should be able to do simple proofs, problem solve, demonstrate basic geometric constructions and use a scientific calculator to solve problems.

Health
HSD 6085 Health
This course is an exploration into health in relation to our bodies, our environment and careers. Topics include exercise and nutrition, pollution and X-ray technology. Field trips, speakers and hands-on activities are offered along with the book work.

History
HSD 6022 United States History
Upon completion of this course, students should be able to recount major events in U.S. history from Columbus to the present, reflecting the development and changes in economic, social, political and foreign policy in relation to these events.

HSD 6023 Government and Economics
This course is designed to give students a basic overview of critical issues related to government and economics. The study of government emphasizes the United States Constitution as it relates to the structure of our national government and to the rights of individuals in our society. The study of economics involves a discussion of key economic systems and their influences on public issues. Application of these concepts to current events and practical situations is emphasized throughout the course.

HSD 6024 World Cultures
This course is a topical review of the beginnings of civilizations in the Mesopotamian basin to an analysis of the political and economic climate fostering the democratization of the world in the modern era. Students should be able to develop an appreciation for cultural differences and similarities of the peoples of the world as they relate to evolving economic, religious, social and political customs.

Science
HSD 6032 Physical Science
This course introduces the basic laws and principles of chemistry and physics. Topics include the scientific method, motion, energy, machines, the nature of matter, atomic structure, chemical bonds, waves, light, sound and electricity. Upon completion, students will be able to demonstrate an understanding of basic physical science concepts.

HSD 6033 Biology
This course is a basic study of biological concepts and principles of biology. Upon completion, students should be able to demonstrate an understanding of the nature of science, cell structure and function, chemical and physical basis of life, diversity and classification of living things, genetic inheritance, human anatomy and physiology and the influence of human activity on the environment.

HSD 6038 Earth/Environmental Science
This course introduces the principles of environmental science. Topics include ecosystems, populations, communities, the interconnectivity of living organisms, conservation, effects of human activity on the environment, renewable and nonrenewable resources and energy flow. Upon completion, students will be able to demonstrate an understanding of basic ecological concepts.

Electives
HSD 6007 The World Today
This course focuses on providing the student with information on dramatic issues, events and topics that shaped the 1990s. Class discussion and research along with the textbook help identify the major developments to be examined.

HSD 6008 You and the Law
This course introduces a few of the many areas in which the law operates, providing students with some idea of the countless ways in which the law may affect their everyday life.

HSD 6072 Career Planning
This course, through a variety of activities, is designed to help students discover their interests and possible careers. They are taught to set goals and how and where to acquire information and tools necessary for success in a job or in college.

HSD 6074 Psychology
This course examines various theories of psychology, giving students an overview of what it is and how it is used in today's society. Field trips, speakers and hands-on activities are included in the curriculum.

HSD 6075 Errors in Reasoning: Games, Puzzles, Etc.
Upon completion, students will be able to identify three types of errors people make in solving problems. Students will learn to verbalize a systematic, problem-solving process and apply the process to different problems. Each student will learn to observe and use all available facts to solve problems. These skills build confidence in problem solving.

HSD 6077 Unlocking the Printed Page
Upon completion of this course, students will be more confident with a variety of reading materials. Students will learn the appropriate reading strategies for English, history, math and science materials as well as short stories and essays. Emphasis is placed on building students' vocabulary through context clues, identifying relationships and dictionary skills.

HSD 6078 Creative Writing
This course is designed to offer students the experience of four different genres in literature: autobiography, the short story, poetry and playwrights. Along the way, students learn various terms and create a portfolio of their own works in these specific genres for a final grade. Emphasis is placed on knowledge of genre components, comprehension, creative enthusiasm and participation.
HSD 6015 Study Skills

This course is designed to allow students the opportunity to receive additional instructional support in a Learning Resource Center (LRC). Web-based instruction is provided through online software. This course is not offered for high school credit; therefore, students can enroll in study skills as frequently as they deem necessary.

HSD 6002. Adult High School English I. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

English I - This course is designed to give students a close look at the elements of literature and composition, while also developing vocabulary, spelling, grammar, speaking, and listening skills.

HSD 6003. Adult High School English II. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

English II - This course introduces literary global perspectives focusing on literature from the Americas. Influential U.S. documents and introduction to different literary genres should be included.

HSD 6004. Adult High School English III. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

English III - This course is an in-depth study of U.S. literature and U.S. literary nonfiction, especially foundational works and documents from the 17th century through the early 20th century.

HSD 6005. Adult High School English IV. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

English IV - This course completes the global perspective initiated in English II. Though its focus is on European (Western, Southern, Northern) literature, this course includes important U.S. documents and literature (texts influenced by European philosophy or action). At least one Shakespearean play should be included.

HSD 6007. The World Today. 1.0 Hour. Class-64.0. Clinical-0.0. Lab-0.0. Work-0.0

This course focuses on providing the student with information on dramatic issues, events and topics that shaped the 1990s. Class discussion and research along with the textbook help identify the major developments to be examined.

HSD 6008. You and the Law. 1.0 Hour. Class-64.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces a few of the many areas in which the law operates, providing students with some idea of the countless ways in which the law may affect their everyday life.

HSD 6012. Adult High School Mathematics I. 1.0 Hour. Class-64.0. Clinical-0.0. Lab-0.0. Work-0.0

Math I - This course focuses on whole numbers, fractions and mixed numbers, decimals, ratios, rates and proportions, percents, measurement, and real numbers. You will use math to solve everyday and 21st Century work-related problems; with applications to life skills like budgeting and career fields such as health care, office administration and building and technical careers.

HSD 6013. Adult High School Mathematics II. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

Math II - The focus of Math II is to develop Algebra skills for academic and career success. This course focuses on solving equations and inequalities; exponents and polynomials; factoring; graphing. Students will use Algebra to solve every day and 21st Century work-related problems with applications to life skills, budgeting, and career fields such as health care, office administration and building, and technical careers.

HSD 6014. Adult High School - Mathematics III. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

Math III - The focus in Math III is to help students pull together and apply the accumulation of learning from their previous courses. Students will apply methods from Algebra II; expand their repertoire of functions to include rational and radical functions; and bring together all of their experience with functions and Geometry to create models and solve everyday and 21st Century work-related problems with applications to life skills, budgeting, and career fields.

HSD 6015. Adult High School Diploma College Prep. 1.0 Hour. Class-64.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to allow students the opportunity to receive additional instructional support in a learning resource center (LRC). Web-based instruction is provided through online software. This course is not offered for high school credit, therefore, students can enroll in study skills as frequently as they deem necessary.

HSD 6016. Adult High School Math IV. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

Math IV - This course focuses on exponential and logarithmic functions, Geometry, Trigonometry and Statistics. Students will expand upon the use of Algebra and Geometry to solve everyday and 21st Century work-related problems with applications to life skills, budgeting, and career fields.

HSD 6021. Adult High School US History I. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

US History I - This course covers the history of the United States from the Age of Discovery through the Civil War. A survey of U.S. History to the post-Civil War period. The course focuses on the geographical, intellectual, political, economic and cultural development of the American people, and places U.S. events in the context of world politics.

HSD 6022. Adult High School US History II. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

US History II - Upon completion of this course, students should be able to interpret major events occurring in American History from 1865 to the present, including changes in social, economic, political, and the foreign policy. Topics will include the Reconstruction, Westward Expansion, Industrial Development, The Great Depression, World Wars I & II, and events of the Cold War and Post-Cold War periods.

HSD 6023. Adult High School- Gov/Econ Economics. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is designed to give students a basic overview of critical issues related to government and economics. The study of government emphasizes the United States Constitution as it relates to the structure of our national government and to the rights of individuals in our society. The study of economics involves a discussion of key economic systems and their influences on public issues. Application of these concepts to current events and practical situations is emphasized throughout the course.

HSD 6024. High School Diploma--World Cultures. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0

World Cultures - This course is a topical review of cultural diversity in a global context. Students should be able to develop an appreciation for the cultural differences and similarities of the peoples of the world as they relate to evolving economic, religious, social, and political customs.
HSD 6025. HSD-6025 World History. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
World History: The World History course will address six (6) periods in the study of World History, with a key focus of study from the mid-15th century to present. Students taking this course will study major turning points that shaped the modern world. The desired outcome of this course is that students develop relevant enduring understandings of current world issues and relate them to their historical, political, economic, geographical and cultural contexts.

HSD 6032. High School Diploma - General Science. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the basic laws and principles of chemistry and physics. Topics include the specific method, motion, energy, machines, the nature of matter, atomic structure, chemicals bonds, waves, light, sound and electricity. Upon completion, students will be able to demonstrate an understanding of basic physical science concepts.

HSD 6033. AHS Diploma - Biology. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a basic study of biological concepts and principles of biology. Upon completion, students should be able to demonstrate an understanding of the nature of science, cell structure and function, chemical and physical basis of life, diversity and classification of living things, genetic inheritance, human anatomy and physiology and the influence of human activity on the environment.

HSD 6035. Adult High School Chemistry. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a non-laboratory based introduction to basic chemical concepts. Topics include measurements, matter, energy, atomic theory, bonding, molecular structure, nomenclature, balancing equations, stoichiometry, solutions, acids and bases, gases, and basic organic chemistry. Upon completion, students should be able to understand and apply basic chemical concepts necessary for success in college-level science courses.

HSD 6038. AHS Diploma - Earth/Environmental Science. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the principles of environmental science. Topics include ecosystems, populations, communities, and interconnections of living organisms, conservation, and effects of human activity on the environment, renewable and nonrenewable resources, and energy flow. Upon completion, students will be able to demonstrate an understanding of basic ecological concepts.

HSD 6040. High School Diploma - Algebra I. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
Upon completion of this course students should be able to solve problems using the symbolism of algebra, solve first degree equations, recognize and graph linear equations, solve systems of two equations, manipulate literal equations, recognize and use of properties of real numbers, simplify expressions containing exponents, multiply and factor polynomials.

HSD 6066. Oral Communications. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is an introduction to basic oral communications. Covered in the course are oral communication tools, topics and speech delivery. Upon completion of this course, students will display an increased confidence in oral and interpersonal communications. Students will be able to evaluate other speakers and assess the importance of verbal and non-verbal communications in various settings.

HSD 6068. AHS Computer Literacy I. 1.0 Hour. Class-64.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a brief overview of computer concepts. Emphasis is placed on the use of personal computers and software applications for personal use as well as the work environment. Upon completion of this course, students will be able to demonstrate basic computer skills, using Microsoft Office Professional Applications, such as, Word, Powerpoint and Excel. Students will also have a working knowledge of the internet and be able to successfully navigate the World Wide Web.

HSD 6072. Career Planning. 1.0 Hour. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
This course, through a variety of activities, is designed to help students discover their interests and possible careers. They will be taught to set goals, how and where to acquire the information and tools necessary for success whether it is for a job or college.

HSD 6074. AHS Psychology. 1.0 Hour. Class-64.0. Clinical-0.0. Lab-0.0. Work-0.0
This course examines various theories of psychology, giving students an overview of what it is and how it is used in today's society. Field trips, speakers, and hands-on activities are included in the curriculum.

HSD 6075. Games, Puzzles and Problem Solving. 1.0 Hour. Class-64.0. Clinical-0.0. Lab-0.0. Work-0.0
Upon completion students will be able to identify three types of errors people make in solving problems. Students will learn to verbalize a systematic problem solving process and apply the process to different problems. Each student will learn to observe and use all available facts to solve problems. These skills build confidence in problem solving.

HSD 6077. Unlocking the Printed Page. 1.0 Hour. Class-64.0. Clinical-0.0. Lab-0.0. Work-0.0
Upon completion of this course students will be more confident with a variety of reading material. Students will learn the appropriate reading strategies for English, History, Math, and Science materials as well as short stories and essays. Emphasis will be placed on building student's vocabulary through context clues, identifying relationships and dictionary skills.

HSD 6078. High School Diploma Creative Writing. 1.0 Hour. Class-64.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is an exploration into health in relation to our bodies, our environment and careers. Topics will include exercise and nutrition, pollution and X-ray technician. Field trips, speakers, and hands-on activities are offered along with the book work.

Chemistry (CHM) Courses

CHM 090. Chemistry Concepts. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a non-laboratory based introduction to basic concepts of chemistry. Topics include measurements, matter, energy, atomic theory, bonding, molecular structure, nomenclature, balancing equations, stoichiometry, solutions, acids and bases, gases, and basic organic chemistry. Upon completion, students should be able to understand and apply basic chemical concepts necessary for success in college-level science courses.
Computer Information Technology (CTS) Courses

CTS 060. Essential Computer Usage. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the basic functions and operations of the computer. Topics include identification of components, overview of operating systems, and other basic computer operations. Upon completion, students should be able to perform basic computer commands, access files, print documents and complete fundamental application operations.

ESL Community (ECO) Courses

ECO 6000. Ventures Multilevel Life & Work. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
ECO 6000 courses are offered in sites throughout the community. These sites include public schools, community centers and religious organizations. Multi-level ESL meets the needs of students with varying degrees of English language proficiency. By identifying the strengths and weaknesses of students across a range of levels, the instructor targets appropriate goals and prepares lessons to meet students' needs. The instructor may make use of small group or whole class instruction, utilizing technology where appropriate and feasible.

Refugee Education Multilevel (ELT) Courses

ELT 6000. Refugee Education Multilevel. 0.0 Hours. Class-1500.0. Clinical-0.0. Lab-0.0. Work-0.0
This course prepares refugee students with the skills needed to acclimate to the U.S. and find immediate employment.

English As a Foreign Language (EFL) Courses

EFL 050. English for Academic Purp. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide instruction in academic and professional language skills for non-native speakers of English. Emphasis is placed on development of integrated language skills for use in studying a particular content area. Upon completion, students will demonstrate improved academic language, content-specific vocabulary and skills, and cultural knowledge in the topic area.

EFL 055. English for Special Purpo. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide instruction in academic and professional language for non-native speakers of English. Emphasis is placed on development of integrated language use for carrying out a specific academic task. Upon completion, students should be able to demonstrate improved language skills for participation and success within the particular topic area.

EFL 061. Listening/Speaking I. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to provide the basic oral/aural language skills needed for essential daily conversation on campus and in the community. Emphasis is placed on vocabulary building, communication in various social and academic situations, and various spoken grammatical skills. Upon completion, students should be able to produce and understand English dealing with routine topics using basic syntax and vocabulary skills.

EFL 062. Listening/Speaking II. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to enhance intermediate listening and speaking skills of non-native speakers of English. Emphasis is placed on the ability to hold extended conversation and on the ability to understand extended spoken discourse. Upon completion, students should be able to demonstrate improved listening skills and strategies in a variety of settings. Prerequisites: Take EFL 061

EFL 063. Listening/Speaking III. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to increase the ability and confidence of high intermediate-level non-native speakers of English in verbal expression and listening comprehension. Emphasis is placed on listening/speaking skills which would be appropriate for group discussions, oral presentations, and note taking. Upon completion, students should be able to successfully participate in high intermediate-level listening and speaking activities. Prerequisites: Take EFL 062

EFL 064. Listening/Speaking IV. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to prepare advanced-level non-native speakers of English for academic and professional speaking and listening activities. Emphasis is placed on learning and practicing strategies of effective oral expression and comprehension of spoken discourse in informal and formal settings. Upon completion, students should be able to effectively participate in activities appropriate to academic and professional settings. Prerequisites: Take EFL 063

EFL 071. Reading I. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to help those literacy skills achieve reading fluency in English at the beginning level. Emphasis is placed on basic academic and cultural vocabulary and reading strategies which include self-monitoring, and recognizing organizational styles and context clues. Upon completion, students should be able to use these strategies to read and comprehend basic academic, narrative, and expository texts. This course is intended for non-native speakers of English.

EFL 072. Reading II. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides preparation in academic and general purpose reading in order to achieve reading fluency at the low-intermediate level. Emphasis is placed on expanding academic and cultural vocabulary and developing effective reading strategies to improve comprehension and speed. Upon completion, students should be able to read and comprehend narrative and expository texts at the low-intermediate instructional level. This course is intended for non-native speakers of English. Prerequisites: Take EFL 071
EFL 083. Grammar III. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to develop fundamental reading and study strategies at the intermediate level needed for curriculum programs. Emphasis is placed on building vocabulary and cultural knowledge, improving comprehension, and developing study strategies on basic-level college materials and literary works. Upon completion, students should be able to read and comprehend narrative and expository texts at the intermediate instructional level. This course is intended for non-native speakers of English.
Prerequisites: Take EFL 081

EFL 084. Grammar IV. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to enhance the academic reading skills for successful reading ability as required in college-level courses. Emphasis is placed on strategies for effective reading and the utilization of these strategies to improve comprehension, analytical skills, recall, and overall reading speed. Upon completion, students should be able to comprehend, synthesize, and critique multi-disciplinary college-level reading/textbook materials. This course is intended for non-native speakers of English.
Prerequisites: Take EFL 083

EFL 081. Grammar I. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides non-native speakers of English with a variety of fundamental grammatical concepts which enrich language skills and comprehension. Emphasis is on key basic grammatical structures and opportunities for practice which incorporate grammatical knowledge into various skills areas. Upon completion, students should be able to demonstrate comprehension and correct usage of specified grammatical concepts.
Prerequisites: Take EFL 073

EFL 082. Grammar II. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides non-native speakers of English with a variety of basic grammatical concepts which enrich language skills and comprehension. Emphasis is on key low-intermediate grammatical structures and opportunities for practice which incorporate grammatical knowledge into various skills areas. Upon completion, students should be able to demonstrate by written and oral means the comprehension and correct usage of specified grammatical concepts.
Prerequisites: Take EFL 081

EFL 083. Grammar III. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to provide high-intermediate non-native speakers of English with a knowledge of grammatical structures that improves academic communication. Emphasis is placed on using high-intermediate grammatical structures in meaningful contexts through exercises integrating the use of newly acquired structures with previously learned structures. Upon completion, students should be able to demonstrate improved proficiency, comprehension, and grammatical accuracy.
Prerequisites: Take EFL 082

EFL 084. Grammar IV. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to give non-native speakers of English a full understanding of advanced grammatical structures and techniques. Emphasis is placed on oral and written communicative fluency through the study of advanced grammatical forms. Upon completion, students should be able to incorporate the structures covered in both spoken and written form, demonstrating improved proficiency, comprehension, and grammatical accuracy.
Prerequisites: Take EFL 083

EFL 085. Composition V. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to prepare advanced non-native speakers of English for college-level composition courses. Emphasis is placed on the study and process of writing formal essays and research papers and the analysis of literary, expository, and descriptive writings. Upon completion, students should be able to write and analyze professional and peer compositions and apply basic research principles. This course is intended for non-native speakers of English.
Prerequisites: Take EFL 094

EFL 091. Composition I. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces basic sentence structure and writing paragraphs. Emphasis is placed on word order, verb tense-aspect system, auxiliaries, word forms, and simple organization and basic transitions in writing paragraphs. Upon completion, students should be able to demonstrate a basic understanding of grammar and ability to write English paragraphs using appropriate vocabulary, organization, and transitions. This course is intended for non-native speakers of English.
Prerequisites: Take EFL 091

EFL 092. Composition II. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides preparation in low-intermediate academic and general-purpose writing. Emphasis is placed on writing as a process, paragraph development, and basic essay organization. Upon completion, students should be able to write and independently edit and use the major elements of the writing process, sentence, paragraph, and essay. This course is intended for non-native speakers of English.
Prerequisites: Take EFL 091

EFL 093. Composition III. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers intermediate-level academic and general-purpose writing. Emphasis is placed on the writing process, content, organization, and language use in formal academic compositions in differing rhetorical modes. Upon completion, students should be able to effectively use the writing process in a variety of rhetorical modes. This course is intended for non-native speakers of English.
Prerequisites: Take EFL 092

EFL 094. Composition IV. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course prepares low-advanced non-native speakers of English to determine the purpose of their writing and to write paragraphs and essays to fulfill that purpose. Emphasis is placed on unity, coherence, completeness, audience, the writing process, and the grammatical forms and punctuation appropriate for each kind of writing. Upon completion, students should be able to write unified, coherent, and complete paragraphs and essays which are grammatical and appropriate for the intended audience. This course is intended for non-native speakers of English.
Prerequisites: Take EFL 093

EFL 095. Composition V. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to prepare advanced non-native speakers of English for college-level composition courses. Emphasis is placed on the study and process of writing formal essays and research papers and the analysis of literary, expository, and descriptive writings. Upon completion, students should be able to write and analyze professional and peer compositions and apply basic research principles. This course is intended for non-native speakers of English.
Prerequisites: Take EFL 094
Information Systems (CIS) Courses

CIS 070. Fundamentals of Computing. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers fundamental functions and operations of the computer. Topics include identification of components, overview of operating systems, and other basic computer operations. Upon completion, students should be able to operate computers, access files, print documents and perform basic applications operations.

Mathematics (MAT)

MAT 001. Math Skills Support. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.
Corequisites: Take One Course: MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171

MAT 001M. Math Skills Support - Measmnt & Literacy. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.
Corequisites: Take One Course: MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171

MAT 001P. Math Skills Support - Precalculus Algebra. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.
Corequisites: Take One Course: MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171

MAT 001Q. Math Skills Support Quantitative Lit. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.
Corequisites: Take One Course: MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171

MAT 001S. Math Skills Support Statistical Methd I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.
Corequisites: Take One Course: MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171

MAT 001T. Math Skills Support Algebra/Trig I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.
Corequisites: Take One Course: MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171

MAT 001U. Math Skills Support Algebra/Trig II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.
Corequisites: Take One Course: MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171

MAT 001V. Math Skills Support Linear Algebra. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.
Corequisites: Take One Course: MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171

MAT 001W. Math Skills Support Analytical Geom. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.
Corequisites: Take One Course: MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171

MAT 001X. Math Skills Support Modern Math. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.
Corequisites: Take One Course: MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171

MAT 001Y. Math Skills Support Calculus I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.
Corequisites: Take One Course: MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171

MAT 001Z. Math Skills Support Calculus II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides opportunities for students to build a stronger foundation for success in their corequisite math course by obtaining skills through a variety of instructional strategies. Emphasis is placed on foundational skills as well as concepts, skills, vocabulary and definitions necessary to master student learning outcomes of the co-requisite math course. Upon completion, students should be able to apply mathematical concepts and critical thinking skills to solve problems relevant to the student's co-requisite math course.
Corequisites: Take One Course: MAT 110 MAT 121 MAT 143 MAT 152 or MAT 171

College-Level Curriculum Courses

Academic Related (ACA)

ACA 111. College Student Success. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the college's physical, academic, and social environment and promotes the personal development essential for success. Topics include campus facilities and resources; policies, procedures, and programs; study skills; and life management issues such as health, self-esteem, motivation, goal-setting, diversity, and communication. Upon completion, students should be able to function effectively within the college environment to meet their educational objectives.
AACA 118. College Study Skills. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers skills and strategies designed to improve study behaviors. Topics include time management, note taking, test taking, memory techniques, active reading strategies, critical thinking, communication skills, learning styles, and other strategies for effective learning. Upon completion, students should be able to apply appropriate study strategies and techniques to the development of an effective study plan. This course is also available through the Virtual Learning Community.

AACA 120. Career Assessment. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides the information and strategies necessary to develop clear personal, academic, and professional goals. Topics include personality styles, goal setting, various college curricula, career choices, and campus leadership development. Upon completion, students should be able to clearly state their personal, academic, and professional goals and have a feasible plan of action to achieve those goals. This course is also available through the Virtual Learning Community.

AACA 122. College Transfer Success. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides information and strategies necessary to develop clear academic and professional goals beyond the community college experience. Topics include the CAA, college policies and culture, career exploration, gathering information on senior institutions, strategic planning, critical thinking, and communications skills for a successful academic transition. Upon completion, students should be able to develop an academic plan to transition successfully to senior institutions.

Accounting (ACC)

ACC 110. Ten-Key Skills. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to enable mastery of the "touch system" on the ten-key device. Emphasis is placed on the "touch system" on the ten-key device. Upon completion, students should be able to use the "touch system" on a ten-key device in making computations necessary in accounting.

ACC 115. College Accounting. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces basic accounting principles for a business. Topics include the complete accounting cycle with end-of-period statements, bank reconciliation, payrolls, and petty cash. Upon completion, students should be able to demonstrate an understanding of accounting principles and apply those skills to a business organization. This course is intended for those who have not received credit for ACC 120.

ACC 120. Principles of Financial Accounting. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces business decision-making using accounting information systems. Emphasis is placed on analyzing, summarizing, reporting, and interpreting financial information. Upon completion, students should be able to prepare financial statements, understand the role of financial information in decision-making and address ethical considerations.
Prerequisites: Take DMA 050 MAT 121 MAT 122 MAT 167 MAT 171 MAT 172 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 with a minimum grade of C
Take DRE 098 or ENG 111 with a minimum grade of C

ACC 121. Principles of Managerial Accounting. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course includes a greater emphasis on managerial and cost accounting skills. Emphasis is placed on managerial accounting concepts for external and internal analysis, reporting and decision-making. Upon completion, students should be able to analyze and interpret transactions relating to managerial concepts including product-costing systems. This course is a continuation of acc 120. Emphasis is placed on corporate and managerial accounting for both external and internal reporting and decision making. Upon completion, students should be able to analyze and record corporate transactions, prepare financial statements and reports, and interpret them for management.
Prerequisites: Take ACC 120

ACC 129. Individual Income Taxes. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the relevant laws governing individual income taxation. Topics include tax law, electronic research and methodologies, and the use of technology for preparation of individual income tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various individual tax forms.

ACC 130. Business Income Taxes. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the relevant laws governing business and fiduciary income taxes. Topics include tax law relating to business organizations, electronic research and methodologies, and the use of technology for the preparation of business tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various business tax forms.
Prerequisites: Take ACC 129 with a minimum grade of C

ACC 140. Payroll Accounting. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers federal and state laws pertaining to wages, payroll taxes, payroll tax forms, and journal and general ledger transactions. Emphasis is placed on computing wages; calculating social security, income, and unemployment taxes; preparing appropriate payroll tax forms; and journalizing/posting transactions. Upon completion, students should be able to analyze data, make appropriate computations, complete forms, and prepare accounting entries using appropriate technology.
Prerequisites: Take One: ACC 115 or ACC 120

ACC 149. Intro to Acc Spreadsheets. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a working knowledge of computer spreadsheets and their use in accounting. Topics include pre-programmed problems, model-building problems, beginning-level macros, graphics, and what-if analysis enhancements of template problems. Upon completion, students should be able to use a computer spreadsheet to complete many of the tasks required in accounting.
Prerequisites: Take One: ACC 115 or ACC 120
ACC 150. Accounting Software Applications. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces microcomputer applications related to accounting systems. Topics include general ledger, accounts receivable, accounts payable, inventory, payroll, and correcting, adjusting, and closing entries. Upon completion, students should be able to use a computer accounting package to solve accounting problems.
Prerequisites: Take One: ACC 115 or ACC 120

ACC 220. Intermediate Accounting I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of the study of accounting principles with in-depth coverage of theoretical concepts and financial statements. Topics include generally accepted accounting principles and extensive analysis of balance sheet components. Upon completion, students should be able to demonstrate competence in the conceptual framework underlying financial accounting, including the application of financial standards.
Prerequisites: Take ACC 120

ACC 221. Intermediate Accounting II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of ACC 220. Emphasis is placed on special problems which may include leases, bonds, investments, ratio analyses, present value applications, accounting changes, and corrections. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered.
Prerequisites: Take ACC 220

ACC 225. Cost Accounting. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the nature and purposes of cost accounting as an information system for planning and control. Topics include direct materials, direct labor, factory overhead, process, job order, and standard cost systems. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered.
Prerequisites: Take ACC 121

ACC 240. Gov & Not-For-Profit Acct. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces principles and procedures applicable to governmental and not-for-profit organizations. Emphasis is placed on various budgetary accounting procedures and fund accounting. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered.
Prerequisites: Take ACC 121

ACC 250. Advanced Accounting. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to analyze the special accounting issues, which may include business combinations, partnerships, international accounting, estates, and trusts. Emphasis is placed on analyzing transactions and preparing working papers and financial statements. Upon completion, students should be able to solve a wide variety of problems by advanced application of accounting principles and procedures.
Prerequisites: Take ACC 220

ACC 269. Auditing & Assurance Services. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces selected topics pertaining to the objectives, theory and practices in engagements providing auditing and other assurance services. Topics include planning, conducting and reporting, with emphasis on the related professional ethics and standards. Upon completion, students should be able to demonstrate an understanding of the types of professional services, the related professional standards, and engagement methodology.
Prerequisites: Take ACC 220

ACC 270. International Accounting. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course includes identifying, recording, and interpreting financial information for accounting systems used in different countries. Topics include currency exchange rates, methods of setting and selecting transfer prices, practices used to account for rates of inflation, and major types of taxes. Upon completion, students should be able to describe accounting systems and their impacts on different currencies and demonstrate a basic knowledge of international accounting. This course includes identifying, recording, and interpreting financial information for accounting systems used in different countries. Topics include currency exchange rates, methods of setting and selecting transfer prices, practices used to account for rates of inflation, and major types of taxes. Upon completion, students should be able to describe accounting systems and their impacts on different currencies and demonstrate a basic knowledge of international accounting. This course is a unique concentration requirement in the international business concentration in the business administration program.
Prerequisites: Take ACC 120

ACC 275

Air Cond, Heating, and Refrig (AHR)

AHR 110. Introduction to Refrigeration. 5.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the basic refrigeration process used in mechanical refrigeration and air conditioning systems. Topics include terminology, safety, and identification and function of components; refrigeration cycle; and tools and instrumentation used in mechanical refrigeration systems. Upon completion, students should be able to identify refrigeration systems and components, explain the refrigeration process, and use the tools and instrumentation of the trade.

AHR 111. HVACR Electricity. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces electricity as it applies to HVACR equipment. Emphasis is placed on power sources, interaction of electrical components, wiring of simple circuits, and the use of electrical test equipment. Upon completion, students should be able to demonstrate good wiring practices and the ability to read simple wiring diagrams.

AHR 112. Heating Technology. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers the fundamentals of heating including oil, gas, and electric heating systems. Topics include safety, tools and instrumentation, system operating characteristics, installation techniques, efficiency testing, electrical power, and control systems. Upon completion, students should be able to explain the basic oil, gas, and electrical heating systems and describe the major components of a heating system.
AHR 113. Comfort Cooling. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers the installation procedures, system operations, and maintenance of residential and light commercial comfort cooling systems. Topics include terminology, component operation, and testing and repair of equipment used to control and produce assured comfort levels. Upon completion, students should be able to use psychrometrics, manufacturer specifications, and test instruments to determine proper system operation.

AHR 114. Heat Pump Technology. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers the principles of air source and water source heat pumps. Emphasis is placed on safety, modes of operation, defrost systems, refrigerant charging, and system performance. Upon completion, students should be able to understand and analyze system performance and perform routine service procedures.
Prerequisites: Take One: AHR 111 or AHR 113

AHR 115. Refrigeration Systems. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces refrigeration systems and applications. Topics include defrost methods, safety and operational control, refrigerant piping, refrigerant recovery and charging, and leak testing. Upon completion, students should be able to assist in installing and testing refrigeration systems and perform simple repairs.
Prerequisites: Take AHR 110

AHR 125. HVACR Electronics. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the common electronic control components in HVACR systems. Emphasis is placed on identifying electronic components and their functions in HVACR systems and motor-driven control circuits. Upon completion, students should be able to identify components, describe control circuitry and functions, and use test instruments to measure electronic circuit values and identify malfunctions.
Prerequisites: Take One: AHR 111, ELC 111, or ELC 112

AHR 130. HVAC Controls. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the types of controls found in residential and commercial comfort systems. Topics include electrical and electronic controls, control schematics and diagrams, test instruments, and analysis and troubleshooting of electrical systems. Upon completion, students should be able to diagnose and repair common residential and commercial comfort system controls.
Prerequisites: Take One: AHR 111, ELC 111, or ELC 112

AHR 140. All-Weather Systems. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the principles of combination heating and cooling systems including gas-electric, all-electric, and oil-electric systems. Topics include PTAC's and package and split-system units. Upon completion, students should be able to understand systems performance and perform routine maintenance procedures.
Prerequisites: Take One: AHR 112 or AHR 113

AHR 160. Refrigerant Certification. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the requirements for the EPA certification examinations. Topics include small appliances, high pressure systems, and low pressure systems. Upon completion, students should be able to demonstrate knowledge of refrigerants and be prepared for the EPA certification examinations.

AHR 180. HVACR Customer Relations. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces common business and customer relation practices that may be encountered in HVACR. Topics include business practices, appearance of self and vehicle, ways of handling customer complaints, invoices, telephone communications, and warranties. Upon completion, students should be able to present themselves to customers in a professional manner, understand how the business operates, complete invoices, and handle complaints.

AHR 211. Residential System Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the principles and concepts of conventional residential heating and cooling system design. Topics include heating and cooling load estimating, basic psychrometrics, equipment selection, duct system selection, and system design. Upon completion, students should be able to design a basic residential heating and cooling system. This course introduces the principles and concepts of conventional residential heating and cooling system design. Topics include heating and cooling load estimating, basic psychrometrics, equipment selection, duct system selection, and system design. Upon completion, students should be able to design a basic residential heating and cooling system.

AHR 212. Advanced Comfort Systems. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers water-cooled comfort systems, water-source/ geothermal heat pumps, and high efficiency heat pump systems including variable speed drives and controls. Emphasis is placed on the application, installation, and servicing of water-source systems and the mechanical and electronic control components of advanced comfort systems. Upon completion, students should be able to test, analyze, and troubleshoot water-cooled comfort systems, water-source/geothermal heat pumps, and high efficiency heat pump systems including variable speed drives and controls. Emphasis is placed on the application, installation, and servicing of water-source systems and the mechanical and electronic control components of advanced comfort systems. Upon completion, students should be able to test, analyze, and troubleshoot water-cooled comfort systems, water-source/geothermal heat pumps, and high efficiency heat pumps.
Prerequisites: Take AHR 114

AHR 213. HVACR Building Code. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the North Carolina codes that are applicable to the design and installation of HVACR systems. Topics include current North Carolina codes as applied to HVACR design, service, and installation. Upon completion, students should be able to demonstrate the correct usage of North Carolina codes that apply to specific areas of the HVACR trade.

AHR 215. Commercial HVAC Controls. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces HVAC control systems used in commercial applications. Topics include electric/electronic control systems, pneumatic control systems, DDC temperature sensors, humidity sensors, pressure sensors, wiring, controllers, actuators, and controlled devices. Upon completion, students should be able to verify or correct the performance of common control systems with regard to sequence of operation and safety.
Prerequisites: Take One: AHR 111, ELC 111, or ELC 112
AHR 225. Commercial System Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the principles of designing heating and cooling systems for commercial buildings. Emphasis is placed on commercial heat loss/gain calculations, applied psychometrics, air-flow calculations, air distribution system design, and equipment selection. Upon completion, students should be able to calculate heat loss/gain, design and size air and water distribution systems, and select equipment.

AHR 235. Refrigeration Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the principles of commercial refrigeration system operation and design. Topics include walk-in coolers, walk-in freezers, system components, load calculations, equipment selection, defrost systems, refrigerant line sizing, and electric controls. Upon completion, students should be able to design, adjust, and perform routine service procedures on a commercial refrigeration system.
Prerequisites: Take AHR 110

AHR 240. Hydronic Heating. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the accepted procedures for proper design, installation, and balance of hydronic heating systems for residential or commercial buildings. Topics include heating equipment; pump, terminal unit, and accessory selection; piping system selection and design; and pipe sizing and troubleshooting. Upon completion, students should be able to assist with the proper design, installation, and balance of typical hydronic systems.
Prerequisites: Take AHR 112

AHR 245. Chiller Systems. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the fundamentals of liquid chilling equipment. Topics include characteristics of water, principles of water chilling, the chiller, the refrigerant, water and piping circuits, freeze prevention, purging, and equipment flexibility. Upon completion, students should be able to describe the components, controls, and overall operation of liquid chilling equipment and perform basic maintenance tasks.
Prerequisites: Take AHR 110

AHR 293. Selected Topics in HVACR. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

Alternative Energy Technology (ALT)

ALT 110. Biofuels I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to provide an introduction to the fundamentals of biobased fuels. Emphasis is placed on proper handling and use guidelines, basic chemistry of biofuels, production methods, and the social, environmental, and economic impacts of biofuels. Upon completion, students should be able to demonstrate a general understanding of biofuels.

ALT 120. Renewable Energy Technologies. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an introduction to multiple technologies that allow for the production and conservation of energy from renewable sources. Topics include hydro-electric, wind power, passive and active solar energy, tidal energy, appropriate building techniques, and energy conservation methods. Upon completion, students should be able to demonstrate an understanding of renewable energy production and its impact on humans and their environment.

ALT 250. Thermal Systems. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces concepts, tools, techniques, and materials used to convert thermal energy into a viable, renewable energy resource. Topics include forced convection, heat flow and exchange, radiation, the various elements of thermal system design, regulations, and system installation and maintenance. Upon completion, students should be able to demonstrate an understanding of geothermal and solar thermal systems and corresponding regulations.

American Sign Language (ASL)

ASL 111. Elementary ASL I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the fundamental elements of American Sign Language within a cultural context. Emphasis is placed on the development of basic expressive and receptive skills. Upon completion, students will be able to comprehend and respond with grammatical accuracy to expressive American Sign Language and demonstrate cultural awareness.
Corequisites: Take ASL 181

ASL 112. Elementary ASL II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a continuation of ASL 111 focusing on the fundamental elements of American Sign Language in a cultural context. Emphasis is placed on the progressive development of expressive and receptive skills. Upon completion, the students should be able to comprehend and respond with increasing accuracy to expressive American Sign Language and demonstrate cultural awareness.
Corequisites: Take ASL 182

ASL 120. ASL for the Workplace. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course offers applied American Sign Language (ASL) for the workplace to facilitate basic communication with people whose native language is ASL. Emphasis is placed on expressive and receptive communication and career-specific vocabulary that targets health, business, and/or public service professions. Upon completion, students should be able to communicate at a functional level with native speakers and to demonstrate cultural sensitivity.

ASL 151. Numbers and Fingerspelling. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an in-depth study of number systems and fingerspelling techniques in ASL. Emphasis is placed on generating and receiving numbers and fingerspelling in context. Upon completion, students should be able to accurately express and receive numbers and fingerspelling.
Prerequisites: Take ASL 111 with a minimum grade of C
Take ASL 111
Corequisites: Take ASL 211;

ASL 181. ASL Lab 1. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to enhance acquisition of the fundamental elements of American Sign Language. Emphasis is placed on the progressive development of basic expressive and receptive skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to expressive American Sign Language and demonstrate cultural awareness.
ASL 182. ASL Lab 2. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to enhance acquisition of the fundamental elements of American Sign Language. Emphasis is placed on the progressive development of basic expressive and receptive skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to expressive American Sign Language and demonstrate cultural awareness.
Prerequisites: Take ASL 181
Corequisites: Take ASL 112

ASL 211. Intermediate ASL I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a review and expansion of the essential skills of American Sign Language. Emphasis is placed on the progressive development of expressive and receptive skills, study of authentic and representative literacy and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively using American Sign Language about the past, present, and future.
Prerequisites: Take ASL 112
Corequisites: Take ASL 281

ASL 212. Intermediate ASL II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a continuation of ASL 211. Emphasis is placed on the continuing development of expressive and receptive skills, with study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and accurately with increasing complexity and sophistication.
Prerequisites: Take ASL 211
Corequisites: Take ASL 282

ASL 221. Advanced American Sign Language I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an expansion of the essential and advanced skills of ASL, including advanced vocabulary, lexicalized fingerspelling, and complex grammatical structures. Emphasis is placed on the advanced development of expressive, receptive and conversational skills, study of authentic and representative literacy and cultural texts. Upon completion, students will communicate more accurately with advanced complexity, and to present the topics in the various registers, pragmatics and genres of ASL.
Prerequisites: Take ASL 212

ASL 222. Advanced American Sign Language II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides more expansion of the essential and advanced skills of ASL, including advanced vocabulary, lexicalized fingerspelling, story telling, and complex grammatical structures. Emphasis is placed on the more advanced development of expressive, receptive, conversational and presentational skills in a variety of discourse genres. Upon completion, students should be able to debate and lecture with advanced complexity, create story telling, and to present the complementary issues of Deaf community.
Prerequisites: Take ASL 221

ASL 225. Global Deaf Community. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of issues related to D/deaf people focusing on Deaf history, causes of deafness, communication, and attitudes toward D/deaf people globally. Emphasis is placed on deaf history, causes of deafness, communication, and attitude toward D/deaf people. Upon completion, students should be able to discuss significant issues related to deafness.
Prerequisites: Take ASL 212 with a minimum grade of C

ASL 250. Linguistics of American Sign Language. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to increase knowledge and skills necessary to linguistically analyze ASL. Emphasis is placed on applying phonology, morphology, syntax, semantics, discourse and socio-linguistics of ASL. Upon completion, students should be able to demonstrate knowledge and understanding of the basic linguistics of ASL through a variety of assessment methods.
Prerequisites: Take ASL 112

ASL 252. American Sign Language Classifiers. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to enhance the use of principles of ASL classifiers and to expand the use of ASL classifiers. Emphasis is placed on using different categories of classifiers including bodypart, descriptive, element, instrument and semantic classifiers. Upon completion, students should be able to communicate effectively, accurately, and creatively incorporating ASL classifiers.
Prerequisites: Take ASL 212

ASL 253. American Sign Language Non-Manual Signals. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to enhance and expand the essential skills of ASL’s non-manual signals. Emphasis is placed on using different parts of non-manual signals including listener’s feedback, ASL mouth morphemes, eye and forehead expressions, and head and shoulder shifts. Upon completion, students should be able to use ASL non-manual signals effectively, accurately and creatively.
Prerequisites: Take ASL 212

ASL 255. American Sign Language Literature and Folklore. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces students to a comprehensive look at ASL literature and folklore as a vital component of Deaf Culture. Emphasis is placed on historical background, cultural context, and literary analysis of selected fictional and non-fictional works by representative authors from a variety of genres. Upon completion, students should be able to analyze and discuss selected literatures and folklores within relevant cultural and historical contexts.
Prerequisites: Take ASL 221

ASL 260. American Sign Language Semantics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to expand students’ knowledge and ability to use ASL semantics in their expressive, receptive and conversational skills. Emphasis is placed on analyzing, discussing and selecting appropriate ASL utterances to convey appropriate semantic intent in discourse with consideration given to differing registers. Upon completion, students should be able to expand their knowledge of ASL semantic networking, which will fluency of their ASL discourse.
Prerequisites: Take ASL 222
ANT 221. Comparative Cultures. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an ethnographic survey of societies around the world covering their distinctive cultural characteristics and how these relate to cultural change. Emphasis is placed on the similarities and differences in social institutions such as family, economics, politics, education, and religion. Upon completion, students should be able to demonstrate knowledge of a variety of cultural adaptive strategies.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

Architecture (ARC)

ARC 111. Introduction to Architectural Technology. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces basic architectural drafting techniques, lettering, use of architectural and engineer scales, and sketching. Topics include orthographic, axonometric, and oblique drawing techniques using architectural plans, elevations, sections, and details; reprographic techniques; and other related topics. Upon completion, students should be able to prepare and print scaled drawings within minimum architectural standards.

ARC 112. Construction Materials & Methods. 4.0 Credits. Class-3.0. Clinical-2.0. Lab-0.0. Work-0.0
This course introduces construction materials and methodologies. Topics include construction terminology, traditional and alternative materials and their properties, manufacturing processes, construction techniques, and other related topics. Upon completion, students should be able to detail construction assemblies and identify construction materials and properties.

ARC 113. Residential Architectural Technology. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers intermediate residential working drawings. Topics include residential plans, elevations, sections, details, schedules, and other related topics. Upon completion, students should be able to prepare a set of residential working drawings that are within accepted architectural standards.

ANT 220. Cultural Anthropology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the nature of human culture. Emphasis is placed on cultural theory, methods of fieldwork, and cross-cultural comparisons in the areas of ethnology, language, and the cultural past. Upon completion, students should be able to demonstrate an understanding of basic cultural processes and how cultural data are collected and analyzed.

ANT 210. General Anthropology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the physical, archaeological, linguistic, and ethnological fields of anthropology. Topics include human origins, genetic variations, archaeology, linguistics, primatology, and contemporary cultures. Upon completion, students should be able to demonstrate an understanding of the four major fields of anthropology.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

ANT 202. ASL Lab 4. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0.
This course provides an opportunity to enhance the review and expansion of the essential skills of American Sign Language. Emphasis is placed on the progressive development of expressive and receptive skills through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.
Prerequisites: Take ASL 281
Corequisites: Take ASL 212

ANT 201. ASL Lab 3. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0.
This course provides an opportunity to enhance the review and expansion of the essential skills of American Sign Language. Emphasis is placed on the progressive development of expressive and receptive skills through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.
Prerequisites: Take ASL 182
Corequisites: Take ASL 211

ASL 281. ASL Lab 3. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0.
This course provides an opportunity to enhance the review and expansion of the essential skills of American Sign Language. Emphasis is placed on the progressive development of expressive and receptive skills through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.
Prerequisites: Take ASL 182
Corequisites: Take ASL 211

ASL 282. ASL Lab 4. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0.
This course provides an opportunity to enhance the review and expansion of the essential skills of American Sign Language. Emphasis is placed on the progressive development of expressive and receptive skills through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.
Prerequisites: Take ASL 281
Corequisites: Take ASL 212

Anthropology (ANT)

ANT 111. Introduction to Architectural Technology. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers principles of light construction and materials. Topics include terminology, components, and light construction codes. Upon completion, students should be able to understand light construction principles.
Prerequisites: Take ARC 111
ARC 131. Building Codes. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the methods of researching building codes for specific projects. Topics include residential and commercial building codes. Upon completion, students should be able to determine the code constraints governing construction projects.
Prerequisites: Take One: ARC 112 or CAR 111

ARC 132. Specifications & Contracts. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the development of written specifications and the implications of different contractual arrangements. Topics include specification development, contracts, bidding material research, and agency responsibilities. Upon completion, students should be able to write a specification section and demonstrate the ability to interpret contractual responsibilities.
Prerequisites: Take ARC 112

ARC 133. Construction Document Analysis. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the analysis of building construction drawings. Emphasis is placed on material identification, understanding construction details, and the relationships of building structural, mechanical, plumbing, and electrical systems. Upon completion, students should be able to analyze a set of construction drawings by identifying building construction materials and understanding construction details and engineering systems.

ARC 141. Elementary Structures for Architecture. 4.0 Credits.
Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers concepts of elementary structures in architecture. Topics include structural form, statics, strength of materials, structural behavior, and the relationship between structures and architectural form. Upon completion, students should be able to size simple structural elements.
Prerequisites: Complete one of the following options:
  - ARC 111 and MAT 121
  - ARC 111 and MAT 171

ARC 160. Residential Design. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the methodology of basic residential design. Topics include residential site design, space organization and layout, residential styles, and the development of schematic design. Upon completion, students should be able to design a residence.
Prerequisites: Take ARC 111
Corequisites: Take ARC 112

ARC 192. Selected Topic in Arc Tech. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

ARC 197. Select Seminar in Arch Tech. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore topics of current interest. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

ARC 210. Intro to Sustain Design. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces concepts and principles related to sustainable site development and architectural design. Topics include low impact and sustainable site development, water efficiency, energy efficiency, material and resource management, indoor environmental quality, and return on investment. Upon completion, students should be able to articulate and integrate sustainable design principles into site and architectural design.
Prerequisites: Take ARC 111

ARC 212. Commercial Constr Tech. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces regional construction techniques for commercial plans, elevations, sections, and details. Topics include production of a set of commercial contract documents and other related topics. Upon completion, students should be able to prepare a set of working drawings in accordance with building codes.
Prerequisites: Take ARC 111
Corequisites: Take ARC 112

ARC 213. Design Project. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides the opportunity to design and prepare a set of contract documents within an architectural setting. Topics include schematic design, design development, construction documents, and other related topics. Upon completion, students should be able to prepare a set of commercial contract documents.
Prerequisites: Take All: ARC 111, ARC 112, and ARC 114

ARC 220. Advanced Architectural CAD. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides file management, productivity, and CAD customization skills. Emphasis is placed on developing advanced proficiency techniques. Upon completion, students should be able to create prototype drawings and symbol libraries, compose sheets with multiple details, and use advanced drawing and editing commands.
Prerequisites: Take ARC 114

ARC 221. Architectural 3-D CAD. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces architectural three-dimensional CAD applications. Topics include three-dimensional drawing, coordinate systems, viewing, rendering, modeling, and output options. Upon completion, students should be able to prepare architectural three-dimensional drawings and renderings.
Prerequisites: Take ARC 114

ARC 225. Architectural Building Information Modeling I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is an introduction to the fundamentals of Building Information Modeling (BIM) as a construction documentation system. Topics include basic parametric modeling, creating new types and families of components, and using 3D models to create design drawings. Upon competition, students should be able to use BIM software to create, edit, and print rudimentary architectural 3D computer models. Focus for this course will be AutoDesk Revit Architecture & Revit Structure software.
Prerequisites: Take ARC 114
ARC 226. Architectural Building Information Modeling II. 2.0 Credits. 
Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers advanced concepts of Building Information Modeling (BIM) including complex drawing generation and inter-disciplinary collaboration. Topics include advanced parametric modeling and model analysis, inter-disciplinary coordination, design web format models, material take-off, schedules, and rendering. Upon completion, students should be able to apply BIM software to create full 3D project models and convert them to scaled working or presentation drawings.
Prerequisites: Take ARC 225

ARC 230. Environmental Systems. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces plumbing, mechanical (HVAC), and electrical systems for the architectural environment. Topics include basic plumbing, mechanical, and electrical systems for residential and/or commercial buildings with an introduction to selected code requirements. Upon completion, students should be able to develop schematic drawings for plumbing, mechanical, and electrical systems and perform related calculations.
Prerequisites: Complete one of the following options:
  • ARC 111 and MAT 121
  • ARC 111 and MAT 171

ARC 231. Architectural Presentations. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces architectural presentation techniques. Topics include perspective drawing, shadow projection, texturization, rendered plans, elevations, and other related topics. Upon completion, students should be able to present ideas graphically and do rendered presentation drawings.
Prerequisites: Take ARC 111

ARC 235. Architectural Portfolio. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the methodology for the creation of an architectural portfolio. Topics include preparation of marketing materials and a presentation strategy using conventional and/or digital design media. Upon completion, students should be able to produce an architectural portfolio of selected projects.

ARC 250. Survey of Architecture. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the historical trends in architectural form. Topics include historical and current trends in architecture. Upon completion, students should be able to demonstrate an understanding of significant historical and current architectural styles.

ARC 262. Architectural Animation & Video. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers three-dimensional architectural animation. Topics include storyboarding, rendered animation creation, audio and video input/output, and techniques for camera and object movement in and around buildings. Upon completion, students should be able to produce rendered architectural animations with sound and archive data to selected media.
Prerequisites: Take ARC 221

ARC 264. Digital Architecture. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers multiple digital architectural techniques. Topics include spreadsheets and word processing procedures, on-line resources, modems, e-mail, image capture, multimedia, and other related topics. Upon completion, students should be able to transmit/receive electronic data, create multimedia presentations, and produce a desktop publishing document. Focus for this course will be SketchUP and Adobe PhotoShop software.
Prerequisites: Take ARC 111 with a minimum grade of C

Art (ART)

ART 111. Art Appreciation. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the origins and historical development of art. Emphasis is placed on the relationship of design principles to various art forms including but not limited to sculpture, painting, and architecture. Upon completion, students should be able to identify and analyze a variety of artistic styles, periods, and media. Students seeking to take this course to meet the college transfer humanities requirement may also take ART-114 or ART-115. (no ART prerequisites) Concepts related to media and technique will be introduced.

ART 113. Art Methods and Materials. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an overview of media and techniques. Emphasis is placed on exploration and manipulation of materials. Upon completion, students should be able to demonstrate familiarity with a variety of methods, materials, and processes.

ART 114. Art History Survey I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the development of art forms from ancient times to the Renaissance. Emphasis is placed on content, terminology, design, and style. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development. Students seeking to take this course to meet the college transfer humanities requirement may also take ART-111 or ART-115. (no ART prerequisites).

ART 115. Art History Survey II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the development of art forms from the Renaissance to the present. Emphasis is placed on content, terminology, design, and style. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development. Students seeking to take this course to meet the college transfer humanities requirement may also take ART-111 or ART-114. (no ART prerequisites).

ART 116. Survey of American Art. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the development of American art forms from colonial times to the present. Emphasis is placed on architecture, painting, sculpture, graphics, and the decorative arts. Upon completion, students should be able to demonstrate understanding of the history of the American creative experience.
ART 171. Non-Western Art History. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces non-Western cultural perspectives. Emphasis is placed on, but not limited to, African, Oriental, and Oceanic art forms throughout history. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of non-Western social and cultural development.

ART 121. Two-Dimensional Design. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the elements and principles of design as applied to two-dimensional art. Emphasis is placed on the structural elements, the principles of visual organization, and the theories of color mixing and interaction. Upon completion, students should be able to understand and use critical and analytical approaches as they apply to two-dimensional visual art.

ART 122. Three-Dimensional Design. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces basic studio problems in three-dimensional visual design. Emphasis is placed on the structural elements and organizational principles as applied to mass and space. Upon completion, students should be able to apply three-dimensional design concepts.

ART 131. Drawing I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the language of drawing and the use of various drawing materials. Emphasis is placed on drawing techniques, media, and graphic principles. Upon completion, students should be able to demonstrate competence in the use of graphic form and various drawing processes.

ART 132. Drawing II. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course continues instruction in the language of drawing and the use of various materials. Emphasis is placed on experimentation in the use of drawing techniques, media, and graphic materials. Upon completion, students should be able to demonstrate increased competence in the expressive use of graphic form and techniques.
Prerequisites: Take ART 131

ART 135. Figure Drawing I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces rendering the human figure with various drawing materials. Emphasis is placed on the use of the visual elements, anatomy, and proportion in the representation of the draped and undraped figure. Upon completion, students should be able to demonstrate competence in drawing the human figure.
Prerequisites: Take ART 131

ART 171. Computer Art I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the use of the computer as a tool for solving visual problems. Emphasis is placed on fundamentals of computer literacy and design through bit-mapped image manipulation. Upon completion, students should be able to demonstrate an understanding of paint programs, printers, and scanners to capture, manipulate, and output images.

ART 212. Gallery Assistantship I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the practical application of display techniques. Emphasis is placed on preparation of artwork for installation, hardware systems, and exhibition graphics. Upon completion, students should be able to demonstrate basic gallery exhibition skills.

ART 213. Gallery Assistantship II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides additional experience in display techniques. Emphasis is placed on preparation of artwork for exhibition, alternative methods of installation, hardware systems, and exhibition graphics. Upon completion, students should be able to demonstrate independent decision-making and exhibition expertise.
Prerequisites: Take ART 212

ART 231. Printmaking I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces printmaking: its history, development techniques, and processes. Emphasis is placed on basic applications with investigation into image source and development. Upon completion, students should be able to produce printed images utilizing a variety of methods. This course introduces relief, intaglio, serigraphy and planographic processes.

ART 232. Printmaking II. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course includes additional methods and printmaking processes. Emphasis is placed on the printed image as related to method, source, and concept. Upon completion, students should be able to produce expressive images utilizing both traditional and innovative methods.
Prerequisites: Take ART 231

ART 235. Figure Drawing II. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course extends the study and rendering of the draped and undraped human figure. Emphasis is placed on the exploration of materials and approaches to drawing. Upon completion, students should be able to demonstrate creativity in the representation of the figure.
Prerequisites: Take ART 135

ART 240. Painting I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the language of painting and the use of various painting materials. Emphasis is placed on the understanding and use of various painting techniques, media, and color principles. Upon completion, students should be able to demonstrate competence in the use of creative processes directed toward the development of expressive form.

ART 241. Painting II. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides a continuing investigation of the materials, processes, and techniques of painting. Emphasis is placed on the exploration of expressive content using a variety of creative processes. Upon completion, students should be able to demonstrate competence in the expanded use of form and variety. As in painting I, students will principally work on easels using oil or acrylic.
Prerequisites: Take ART 240

ART 242. Landscape Painting. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces and practices the skills and techniques of open-air painting. Emphasis is placed on techniques of painting summer foliage, skies, and mountains, and the elements of aerial perspective. Upon completion, students should be able to complete an open-air landscape painting employing brush, knife, scumbling, and glazing techniques. Historical and contemporary styles and techniques related to landscape painting will be introduced.
Prerequisites: Take ART 240
ART 243. Portrait Painting. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers the portrait as subject matter by use of live models. Topics include composition, color mixing, and the history of portraiture. Upon completion, students should be able to demonstrate competence in the traditional approach to portrait painting.
Prerequisites: Take ART 240

ART 244. Watercolor. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces basic methods and techniques used in watercolor. Emphasis is placed on application, materials, content, and individual expression. Upon completion, students should be able to demonstrate a variety of traditional and nontraditional concepts used in watercolor media.

ART 245. Metals I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces basic metal design in traditional and contemporary art forms using brass, copper, and silver. Emphasis is placed on designing and fabricating jewelry, small sculptures, and utilitarian objects. Upon completion, students should be able to design and produce small art objects.

ART 246. Metals II. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides a continuation of metal design utilizing basic methods of casting and other processes. Emphasis is placed on individualized design. Upon completion, students should be able to design and produce expressive forms.
Prerequisites: Take ART 245

ART 247. Jewelry I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces a basic understanding of the design and production of jewelry. Emphasis is placed on concepts and techniques using metals and other materials. Upon completion, students should be able to demonstrate an ability to use appropriate methods to create unique jewelry. Processes such as piercing, filing, forming and forging will be introduced.

ART 248. Jewelry II. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course is a continuation of the skills learned in ART 247. Emphasis is placed on the creation of individual designs that utilize a variety of techniques such as casting, cloisonne, and plaque-a-jour. Upon completion, students should be able to create jewelry which demonstrates originality.
Prerequisites: Take ART 247

ART 249. Photography I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the origins and historical development of photography. Emphasis is placed on the study of composition and history of photography as an art form. Upon completion, students should be able to recognize and produce, using color transparencies, properly exposed, well-composed photographs. Using their own 35MM cameras, students will receive instruction and practice in camera handling, films, filter, lenses and composition.

ART 250. Photography Appreciation. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces photographic equipment, theory, and processes. Emphasis is placed on camera operation, composition, darkroom technique, and creative expression. Upon completion, students should be able to successfully expose, develop, and print a well-conceived composition. Using their own 35MM camera to take photographs, students will develop printing techniques such as burning dodging, controlling density and contrast, and basic photo finishing.
Prerequisites: Take ART 260 with a minimum grade of C

ART 251. Photography I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the creative manipulation of alternative photographic materials and processes such as toning, hand coloring, infrared, and multiple exposure. Emphasis is placed on personal vision and modes of seeing. Upon completion, students should be able to create properly exposed images using a variety of photographic materials and processes.
Prerequisites: Take ART 261

ART 252. Color Photography. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides an introduction to the procedures and processes involved in color photography. Emphasis is placed on the study of light, filtration, exposure, and films along with the processing and printing of color negative materials. Upon completion, students should be able to demonstrate an understanding of color principles, theories, and processes by using them creatively in the production of color prints.
Prerequisites: Take ART 251

ART 253. Digital Photography I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces digital photographic equipment, theory and processes. Emphasis is placed on camera operation, composition, computer photo manipulation and creative expression. Upon completion, students should be able to successfully expose, digitally manipulate, and print a well-conceived composition.
Prerequisites: Take ART 252

ART 254. Digital Photography II. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides exploration of the concepts and processes of photo manipulation through complex composite images, special effects, color balancing and image/text integration. Emphasis is placed on creating a personal vision and style. Upon completion, students should be able to produce well-executed images using a variety of photographic and photo manipulative approaches.
Prerequisites: Take ART 253

ART 255. Videography I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces various aspects of basic video production including concept development, scripting, camera operation, and post-production. Emphasis is placed on creative expression, camera handling, storyboarding, and editing. Upon completion, students should be able to demonstrate a basic understanding of video camera operation and production techniques.
ART 267. Videography II. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course is designed to provide a framework for the production of a long-term video project. Emphasis is placed on realization of the unique creative vision. Upon completion, students should be able to produce a thematically coherent, edited video with sound and titling.
Prerequisites: Take ART 266

ART 271. Computer Art II. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course includes advanced computer imaging techniques. Emphasis is placed on creative applications of digital technology. Upon completion, students should be able to demonstrate command of computer systems and applications to express their personal vision.
Prerequisites: Take ART 171

ART 281. Sculpture I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides an exploration of the creative and technical methods of sculpture with focus on the traditional processes. Emphasis is placed on developing basic skills as they pertain to three-dimensional expression in various media. Upon completion, students should be able to show competence in variety of sculptural approaches. Students will develop an understanding of historical as well as contemporary ideas related to sculpture.

ART 282. Sculpture II. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course builds on the visual and technical skills learned in ART 281. Emphasis is placed on developing original solutions to sculptural problems in a variety of media. Upon completion, students should be able to express individual ideas using the techniques and materials of sculpture.
Prerequisites: Take ART 281

ART 283. Ceramics I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides an introduction to three-dimensional design principles using the medium of clay. Emphasis is placed on fundamentals of forming, surface design, glaze application, and firing. Upon completion, students should be able to demonstrate skills in slab and coil construction, simple wheel forms, glaze technique, and creative expression. Assignments are structured to encourage students to explore their own personal expression.

ART 284. Ceramics II. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers advanced hand building and wheel techniques. Emphasis is placed on creative expression, surface design, sculptural quality, and glaze effect. Upon completion, students should be able to demonstrate a high level of technical competence in forming and glazing with a development of three-dimensional awareness. The aesthetics of pottery form are explored.
Prerequisites: Take ART 283

ART 285. Ceramics III. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides the opportunity for advanced self-determined work in sculptural and functional ceramics. Emphasis is placed on developing the technical awareness of clay bodies, slips, engobes, and firing procedures necessary to fulfill the student's artistic goals. Upon completion, students should be able to demonstrate a knowledge of materials and techniques necessary to successfully create original projects in the clay medium. Through contractual agreement with the instructor, students continue to explore personal expression using the medium of clay.
Prerequisites: Take ART 284

ART 286. Ceramics IV. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides the opportunity for self-determined work in sculptural and functional ceramics. Emphasis is placed on developing the technical awareness of glaze materials, glaze formulation, and firing techniques necessary to fulfill the student's artistic goals. Upon completion, students should be able to demonstrate knowledge of materials and techniques necessary to successfully create original projects in the clay medium. Through contractual agreement with the instructor, students continue to explore personal expression using the medium of clay.
Prerequisites: Take ART 285

ART 288. Studio. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides the opportunity for advanced self-determined work beyond the limits of regular studio course sequences. Emphasis is placed on creative self-expression and in-depth exploration of techniques and materials. Upon completion, students should be able to create original projects specific to media, materials, and techniques. Through contractual agreement with the instructor, students will continue to explore personal expressions in their chosen media.

Astronomy (AST)

AST 111. Descriptive Astronomy. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces an overall view of modern astronomy. Topics include an overview of the solar system, the sun, stars, galaxies, and the larger universe. Upon completion, students should be able to demonstrate an understanding of the universe around them.
Corequisites: Take AST 111A

AST 111A. Descriptive Astronomy Lab. 1.0 Credit. Class-0.0. Lab-2.0. Work-0.0
The course is a laboratory to accompany AST 111. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 111 and which provide practical experience. Upon completion, students should be able to demonstrate an understanding of the universe around them. Corequisites: Take AST 111

AST 151. General Astronomy I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the science of modern astronomy with a concentration on the solar system. Emphasis is placed on the history and physics of astronomy and an introduction to the solar system, including the planets, comets, and meteors. Upon completion, students should be able to demonstrate a general understanding of the solar system.

AST 151A. General Astronomy I Lab. 1.0 Credit. Class-0.0. Lab-2.0. Work-0.0
The course is a laboratory to accompany AST 151. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 151 and which provide practical experience. Upon completion, students should be able to demonstrate a general understanding of the solar system. Corequisites: Take AST 151
Automation & Robotics (ATR)

ATR 112. Introduction to Automation. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the basic principles of automated systems and describes the tasks that technicians perform on the job. Topics include the history, development, and current applications of robots and automated systems including their configuration, operation, components, and controls. Upon completion, students should be able to understand the basic concepts of automation and robotic systems.

ATR 211. Robot Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides the operational characteristics of robots and programming in their respective languages. Topics include robot programming, teach pendants, PLC integration, operator interfaces, the interaction of external sensors, machine vision, network systems, and other related devices. Upon completion, students should be able to program and demonstrate the operation of various robots.
Prerequisites: Take ATR 112 or ELN 260

Automotive (AUT)

AUT 113. Automotive Servicing I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course is a lab used as an alternative to co-op placement. Emphasis is placed on shop operations, troubleshooting, testing, adjusting, repairing, and replacing components using appropriate test equipment and service information. Upon completion, students should be able to perform a variety of automotive repairs using proper service procedures and to operate appropriate equipment.
Prerequisites: Take AUT 141 AUT 151 AUT 161 AUT 171 with a minimum grade of C

AUT 114. Safety and Emissions. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the laws, procedures, and specifications needed to perform a North Carolina State Safety and Emissions inspection. Topics include brake, steering and suspension, lighting, horn, windshield wiper, tire, mirrors, and emission control devices inspection. Upon completion, students should be able to perform complete and thorough North Carolina State Safety and Emissions inspections.

AUT 114A. Safety and Emissions Lab. 1.0 Credit. Class-0.0. Lab-2.0. Work-0.0
This course is an optional lab that allows students to enhance their understanding of North Carolina State Emissions Inspection failures. Topics include evaporative, positive crankcase ventilation, exhaust gas recirculation and exhaust emissions systems operation, including catalytic converter failure diagnosis. Upon completion, students should be able to employ diagnostic strategies to repair vehicle emissions failures resulting from North Carolina State Emissions inspection.
Corequisites: Take AUT 114

AUT 116. Engine Repair. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the theory, construction, inspection, diagnosis, and repair of internal combustion engines and related systems. Topics include fundamental operating principles of engines and diagnosis, inspection, adjustment, and repair of automotive engines using appropriate service information. Upon completion, students should be able to perform basic diagnosis, measurement and repair of automotive engines using appropriate tools, equipment, procedures, and service information.

AUT 116A. Engine Repair Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include diagnosis, inspection, adjustment, and repair of automotive engines using appropriate service information. Upon completion, students should be able to perform basic diagnosis, measurement and repair of automotive engines using appropriate tools, equipment, procedures, and service information.
Corequisites: Take AUT 116

AUT 141. Suspension & Steering Systems. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers principles of operation, types, and diagnosis/repair of suspension and steering systems to include steering geometry. Topics include manual and power steering systems and standard and electronically controlled suspension and steering systems. Upon completion, students should be able to service and repair steering and suspension components, check and adjust alignment angles, repair tires, and balance wheels.

AUT 141A. Suspension & Steering Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include manual and power steering systems and standard and electronically controlled suspension and steering systems. Upon completion, students should be able to service and repair steering and suspension components, check and adjust alignment angles, repair tires, and balance wheels.
Corequisites: Take AUT 141

AUT 151. Brake Systems. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers principles of operation and types, diagnosis, service, and repair of brake systems. Topics include drum and disc brakes involving hydraulic, vacuum boost, hydra-boost, electrically powered boost, and anti-lock and parking brake systems. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems.

AUT 151A. Brakes Systems Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include drum and disc brakes involving hydraulic, vacuum-boost, hydra-boost, electrically powered boost, and anti-lock, parking brake systems and emerging brake systems technologies. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems.
Corequisites: Take AUT 151

AUT 163. Advanced Automotive Electricity. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers electronic theory, wiring diagrams, test equipment, and diagnosis, repair, and replacement of electronic, lighting, gauges, horn, wiper, accessories, and body modules. Topics include networking and module communication, circuit construction, wiring diagrams, circuit testing, and troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair wiring, lighting, gauges, accessories, modules, and electronic concerns.
Prerequisites: Take TRN 120
AUT 181. Engine Performance 1. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the introduction, theory of operation, and basic diagnostic procedures required to restore engine performance to vehicles equipped with complex engine control systems. Topics include an overview of engine operation, ignition components and systems, fuel delivery, injection components and systems and emission control devices. Upon completion, students should be able to describe operation and diagnose/repair basic ignition, fuel and emission related driveability problems using appropriate test equipment and service information.

AUT 183. Engine Performance 2. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers study of the electronic engine control systems, the diagnostic process used to locate engine performance concerns, and procedures used to restore normal operation. Topics will include currently used fuels and fuel systems, exhaust gas analysis, emission control components and systems, OBD II (on-board diagnostics) and inter-related electrical/electronic systems. Upon completion, students should be able to diagnose and repair complex engine performance concerns using appropriate test equipment and service information.
Prerequisites: Take AUT 181

AUT 212. Auto Shop Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the principles of management essential to decision-making, communication, authority, and leadership. Topics include shop supervision, shop organization, customer relations, cost effectiveness and work place ethics. Upon completion, students should be able to describe basic automotive shop operation from a management standpoint.

AUT 213. Automotive Servicing 2. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a lab used as an alternative to co-op placement. Emphasis is placed on shop operations, troubleshooting, testing, adjusting, repairing, and replacing components using appropriate test equipment and service information. Upon completion, students should be able to perform a variety of automotive repairs using proper service procedures and to operate appropriate equipment.
Prerequisites: Take AUT 141 AUT 151 AUT 161 AUT 171 AUT 181 AUT 163 with a minimum grade of C

AUT 221. Automatic Transmissions/Transaxles. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers operation, diagnosis, service, and repair of automatic transmissions/transaxles. Topics include hydraulic, pneumatic, mechanical, and electrical/electronic operation of automatic drive trains and the use of appropriate service tools and equipment. Upon completion, students should be able to explain operational theory, diagnose and repair automatic drive trains.

AUT 221A. Automatic Transmissions/Transaxles Lab. 1.0 Credit.
Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include hydraulic, pneumatic, mechanical, and electrical/electronic operation of automatic drive trains and the use of appropriate service tools and equipment. Upon completion, students should be able to diagnose and repair automatic drive trains.
Corequisites: Take AUT 221

AUT 231. Manual Transmissions/Transaxles/Drive Trains. 3.0 Credits.
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the operation, diagnosis, and repair of manual transmissions/transaxles, clutches, drive shafts, axles, and final drives. Topics include theory of torque, power flow, and manual drive train servicing and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to explain operational theory, diagnose and repair manual drive trains.

AUT 231A. Manual Transmissions/Transaxles/Drive Trains Lab. 1.0 Credit.
Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is an optional lab for the program that needs to meet NATEF hour standards but does not have a co-op component in the program. Topics include manual drive train diagnosis, service and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to diagnose and repair manual drive trains.
Corequisites: Take AUT 231

Automotive Body Repair (AUB)

AUB 111. Painting & Refinishing I. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the proper procedures for using automotive refinishing equipment and materials in surface preparation and application. Topics include federal, state, and local regulations, personal safety, refinishing equipment and materials, surface preparation, masking, application techniques, and other related topics. Upon completion, students should be able to identify and use proper equipment and materials in refinishing following accepted industry standards.

AUB 112. Painting & Refinishing II. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers advanced painting techniques and technologies with an emphasis on identifying problems encountered by the refinishing technician. Topics include materials application, color matching, correction of refinishing problems, and other related topics. Upon completion, students should be able to perform spot, panel, and overall refinishing repairs and identify and correct refinish problems.
Prerequisites: Take AUB 111

AUB 114. Special Finishes. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces multistage finishes, custom painting, and protective coatings. Topics include base coats, advanced intermediate coats, clear coats, and other related topics. Upon completion, students should be able to identify and apply specialized finishes based on accepted industry standards.
Prerequisites: Take AUB 111

AUB 121. Non-Structural Damage I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces safety, tools, and the basic fundamentals of body repair. Topics include shop safety, damage analysis, tools and equipment, repair techniques, materials selection, materials usage, and other related topics. Upon completion, students should be able to identify and repair minor direct and indirect damage including removal/reparing/replacing of body panels to accepted standards.
AUB 122. Non-Structural Damage II. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers safety, tools, and advanced body repair. Topics include shop safety, damage analysis, tools and equipment, advanced repair techniques, materials selection, materials usage, movable glass, and other related topics. Upon completion, students should be able to identify and repair or replace direct and indirect damage to accepted standards including movable glass and hardware.

AUB 131. Structural Damage I. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces safety, equipment, structural damage analysis, and damage repairs. Topics include shop safety, design and construction, structural analysis and measurement, equipment, structural glass, repair techniques, and other related topics. Upon completion, students should be able to analyze and perform repairs to a vehicle which has received light/ moderate structural damage.

AUB 132. Structural Damage II. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides an in-depth study of structural damage analysis and repairs to vehicles that have received moderate to heavy structural damage. Topics include shop safety, structural analysis and measurement, equipment, structural glass, advanced repair techniques, structural component replacement and alignment, and other related topics. Upon completion, students should be able to analyze and perform repairs according to industry standards. Prerequisites: Take AUB 131

AUB 136. Plastics & Adhesives. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers safety, plastic and adhesive identification, and the various repair methods of automotive plastic components. Topics include safety, identification, preparation, material selection, and the various repair procedures including refinishing. Upon completion, students should be able to identify, remove, repair, and/or replace automotive plastic components in accordance with industry standards.

AUB 141. Mechanical & Electrical Components I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the basic principles of automotive mechanical and electrical components. Topics include personal and environmental safety and suspension and steering, electrical, brake, heating and air-conditioning, cooling, drive train, and restraint systems. Upon completion, students should be able to identify system components and perform basic system diagnostic checks and/or repairs according to industry standards.

AUB 162. Autobody Estimating. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a comprehensive study of autobody estimating. Topics include collision damage analysis, industry regulations, flat-rate and estimated time, and collision estimating manuals. Upon completion, students should be able to prepare and interpret a damage report.

Baking and Pastry Arts (BPA)

BPA 130. European Cakes and Tortes. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the production of a wide variety of classical and modern cakes suitable for restaurants, retail shops and large-scale production. Emphasis is placed on classic cakes using the methods of mixing, filling, glazing and icing. Upon completion, students should be able to prepare, assemble, and decorate gelatin-based and layered tortes and cakes such as Bavarian, Dobos, and Sachert. Prerequisites: Take all: CUL 110 and CUL 160

BPA 150. Artisan & Specialty Bread. 4.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides an advanced study in the art and craft of bread making. Topics include pertinent formulas and techniques associated with naturally leavened loaves, hearth breads, focaccia, flat breads, and other breads utilizing a variety of grains. Upon completion, students should be able to prepare artisan and specialty breads that meet or exceed the expectations of restaurant and retail publics. Prerequisites: Take all: CUL 110 and CUL 160

BPA 165. Hot and Cold Desserts. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers the principles and techniques of frozen desserts, soufflés, cobblers, crisps, and strudel dough products. Topics include bombe, parfait, baked Alaska, ice cream, sorbets, sherbets and granities; hand-stretched strudel products, crepes, and hot/cold soufflés. Upon completion, students should be able to prepare and plate hot and cold desserts with suitable sauces and garnishes. Prerequisites: Take all: CUL 110 and CUL 160

BPA 210. Cake Design and Decorating. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers advanced concepts in the design and decoration of wedding cakes and other specialty cakes. Topics include baking, filling, and assembling cakes; cake design; finishing techniques utilizing gum paste, fondant, and royal icing; and advanced piping skills. Upon completion, students should be able to design, create, finish and evaluate the quality of wedding and specialty cakes. Prerequisites: Take all: CUL 110 and CUL 160

BPA 220. Confection Artistry. 4.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the principles and techniques of decorative sugar work and confectionary candy. Topics include nougat, marzipan modeling, pastillage and cocoa painting, confection candy and a variety of sugar techniques including blown, spun, poured and pulled. Upon completion, students should be able to prepare edible centerpieces and confections to enhance dessert buffets and plate presentations. Prerequisites: Take all: CUL 110 and CUL 160

BPA 230. Chocolate Artistry. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides a study in the art and craft of chocolate. Topics include chocolate tempering, piping, and molding; decorative work associated with cakes and centerpieces; and the candy production techniques of filling, enrobing and dipping. Upon completion, students should be able to properly evaluate tempered chocolate and produce a variety of chocolate candies and decorative elements for garnishing desserts. Prerequisites: Take all: CUL 110 and CUL 160
BPA 230A. Chocolate Artistry Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a laboratory experience for enhancing student skills in the art and craft of chocolate. Emphasis is placed on chocolate tempering, piping, and molding; decorative work associated with cakes and centerpieces; and candy production techniques of filling, enrobing and dipping. Upon completion, students should be able to demonstrate a basic proficiency in the preparation of decorative chocolate centerpieces, garnishes and candies.
Prerequisites: Take All: CUL 110 and CUL 160
Corequisites: Take BPA 230

BPA 240. Plated Desserts. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides a study in the elements and principles of design as they relate to plated desserts. Topics include plate composition, portioning, flavor pairings, textures, temperatures, eye appeal, balance, color harmony and plate decorating/painting techniques such as stenciling and chocolate striping. Upon completion, students should be able to demonstrate competence in combining a variety of dessert components enhanced with plate decorating techniques.
Prerequisites: Take All: CUL 110 and CUL 160

BPA 250. Dessert and Bread Production. 5.0 Credits. Class-1.0. Clinical-0.0. Lab-8.0. Work-0.0
This course is designed to merge artistry and innovation with the practical baking and pastry techniques utilized in a production setting. Emphasis is placed on quantity bread and roll-in dough production, plated and platter presentations, seasonal/theme product utilization and cost effectiveness. Upon completion, students should be able to plan, prepare and evaluate breads and desserts within a commercial environment and determine production costs and selling prices.
Prerequisites: Take BPA 150

BPA 260. Pastry and Baking Marketing. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to cover the marketing concepts and merchandising trends utilized in bakery and pastry operations. Emphasis is placed on menu planning, pricing products/strategies, resale and wholesale distribution methods, legal implications, and advertising techniques. Upon completion, students should be able to create a marketing plan that will serve as a basis for a capstone experience.
Prerequisites: Take All: BPA 150 and BPA 210
Corequisites: Take BPA 250

Banking and Finance (BAF)

BAF 121. Economics for Bankers. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to provide bankers with an introduction to the fundamental principles of economics. Emphasis is placed on the basics of economics theory, macroeconomics, and examples of the application of economics to banking. Upon completion, students should be able to interpret economic indicators, relate basic principles of economic theory, describe inflation, and compare and contrast economic systems.
Prerequisites: Take DMA 050 MAT 080 MAT 121 MAT 122 MAT 167 MAT 171 MAT 172 MAT 223 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 with a minimum grade of C
Take RED 090 EFL 112 ENG 090 ENG 095 ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

Biology (BIO)

BIO 110. Principles of Biology. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a survey of fundamental biological principles for non-science majors. Emphasis is placed on basic chemistry, cell biology, metabolism, genetics, evolution, ecology, diversity, and other related topics. Upon completion, students should be able to demonstrate increased knowledge and better understanding of biology as it applies to everyday life.

BIO 111. General Biology I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the principles and concepts of biology. Emphasis is placed on basic biological chemistry, molecular and cellular biology, metabolism and energy transformation, genetics, evolution, and other related topics. Upon completion, students should be able to demonstrate understanding of life at the molecular and cellular levels.

BIO 112. General Biology II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is a continuation of BIO 111. Emphasis is placed on organisms, evolution, biodiversity, plant and animal systems, ecology, and other related topics. Upon completion, students should be able to demonstrate comprehension of life at the organismal and ecological levels.
Prerequisites: Take BIO 111

BIO 120. Introductory Botany. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides an introduction to the classification, relationships, structure, and function of plants. Topics include reproduction and development of seed and non-seed plants, levels of organization, form and function of systems, and a survey of major taxa. Upon completion, students should be able to demonstrate comprehension of plant form and function, including selected taxa of both seed and non-seed plants.
Prerequisites: Take One: BIO 110 or BIO 111

BIO 130. Introductory Zoology. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides an introduction to the classification, relationships, structure, and function of major animal phyla. Emphasis is placed on levels of organization, reproduction and development, comparative systems, and a survey of selected phyla. Upon completion, students should be able to demonstrate comprehension of animal form and function including comparative systems of selected groups.
Prerequisites: Take One: BIO 110 or BIO 111

BIO 140. Environmental Biology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces environmental processes and the influence of human activities upon them. Topics include ecological concepts, population growth, natural resources, and a focus on current environmental problems from scientific, social, political, and economic perspectives. Upon completion, students should be able to demonstrate an understanding of environmental interrelationships and of contemporary environmental issues.

BIO 140A. Environmental Biology Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a laboratory component to complement BIO 140. Emphasis is placed on laboratory and field experience. Upon completion, students should be able to demonstrate a practical understanding of environmental interrelationships and of contemporary environmental issues.
Corequisites: Take BIO 140
BIO 150. Genetics in Human Affairs. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course describes the importance of genetics in everyday life. Topics include the role of genetics in human development, birth defects, cancer and chemical exposure, and current issues including genetic engineering and fertilization methods. Upon completion, students should be able to understand the relationship of genetics to society today and its possible influence on our future.
Prerequisites: Take One: BIO 110 or BIO 111

BIO 155. Nutrition. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the biochemistry of foods and nutrients with consideration of the physiological effects of specialized diets for specific biological needs. Topics include cultural, religious, and economic factors that influence a person’s acceptance of food, as well as nutrient requirements of the various life stages. Upon completion, students should be able to identify the functions and sources of nutrients, the mechanisms of digestion, and the nutritional requirements of all age groups.

BIO 161. Introduction to Human Biology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a basic survey of human biology. Emphasis is placed on the basic structure and function of body systems and the medical terminology used to describe normal and pathological states. Upon completion, students should be able to demonstrate an understanding of normal anatomy and physiology and the appropriate use of medical terminology.

BIO 163. Basic Anatomy & Physiology. 5.0 Credits. Class-4.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a basic study of the structure and function of the human body. Topics include a basic study of the body systems as well as an introduction to homeostasis, cells, tissues, nutrition, acid-base balance, and electrolytes. Upon completion, students should be able to demonstrate a basic understanding of the fundamental principles of anatomy and physiology and their interrelationships.

BIO 168. Anatomy and Physiology I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a comprehensive study of the anatomy and physiology of the human body. Topics include body organization, homeostasis, cytology, histology, and the integumentary, skeletal, muscular, and nervous systems and special senses. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take ENG 111 with a minimum grade of C
• Take ENG 112 with a minimum grade of C
• Take ENG 113 with a minimum grade of C
• Take ENG 114 with a minimum grade of C

BIO 169. Anatomy and Physiology II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a continuation of the comprehensive study of the anatomy and physiology of the human body. Topics include the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems as well as metabolism, nutrition, acid-base balance, and fluid and electrolyte balance. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.
Prerequisites: Take BIO 168

BIO 175. General Microbiology. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers principles of microbiology with emphasis on microorganisms and human disease. Topics include an overview of microbiology and aspects of medical microbiology, identification and control of pathogens, disease transmission, host resistance, and immunity. Upon completion, students should be able to demonstrate knowledge of microorganisms and the disease process as well as aseptic and sterile techniques.
Prerequisites: Take One: BIO 110, BIO 111, BIO 163, BIO 165, or BIO 168

BIO 275. Microbiology. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers principles of microbiology and the impact these organisms have on man and the environment. Topics include the various groups of microorganisms, their structure, physiology, genetics, microbial pathogenicity, infectious diseases, immunology, and selected practical applications. Upon completion, students should be able to demonstrate knowledge and skills including microscopy, aseptic technique, staining, culture methods, and identification of microorganisms.
Prerequisites: Take One: BIO 110, BIO 111, BIO 163, BIO 165, or BIO 168

Blueprint Reading (BPR)

BPR 130. Print Reading-Construction. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the interpretation of prints and specifications that are associated with design and construction projects. Topics include interpretation of documents for foundations, floor plans, elevations, and related topics. Upon completion, students should be able to read and interpret construction prints and documents.

Business (BUS)

BUS 110. Introduction to Business. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a survey of the business world. Topics include the basic principles and practices of contemporary business. Upon completion, students should be able to demonstrate an understanding of business concepts as a foundation for studying other business subjects.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take ENG 111 with a minimum grade of C
BUS 112. SIFE Business Development. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides students with opportunities for practical application of concepts taught in business, marketing, and economics courses. Emphasis is placed on free markets in a global economy, how entrepreneurs succeed, personal financial success skills, and business ethics. Upon completion, students should be able to demonstrate knowledge in business, marketing, and economics and display creative problem-solving, public speaking, leadership, and public relations skills.
Prerequisites: Take BUS 110

BUS 115. Business Law I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the ethics and legal framework of business. Emphasis is placed on contracts, negotiable instruments, Uniform Commercial Code, and the working of the court systems. Upon completion, students should be able to apply ethical issues and laws covered to selected business decision-making situations.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 with a minimum grade of C

BUS 116. Business Law II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course continues the study of ethics and business law. Emphasis is placed on bailments, sales, risk-bearing, forms of business ownership, and copyrights. Upon completion, students should be able to apply ethical issues and laws covered to selected business decision-making situations.
Prerequisites: Take BUS 115

BUS 121. Business Math. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers fundamental mathematical operations and their application to business problems. Topics include payroll, pricing, interest and discount, commission, taxes, and other pertinent uses of mathematics in the field of business. Upon completion, students should be able to apply mathematical concepts to business.
Prerequisites:
- Take MAT 080 or DMA 050 with a minimum grade of C
- Take DRE 098 or ENG 111 with a minimum grade of C

BUS 125. Personal Finance. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a study of individual and family financial decisions. Emphasis is placed on building useful skills in buying, managing finances, increasing resources, and coping with current economic conditions. Upon completion, students should be able to develop a personal financial plan.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 111 with a minimum grade of C

BUS 135. Principles of Supervision. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the basic responsibilities and duties of the supervisor and his/her relationship to higher-level supervisors, subordinates, and associates. Emphasis is placed on effective utilization of the work force and understanding the role of the supervisor. Upon completion, students should be able to apply supervisory principles in the workplace.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

BUS 137. Principles of Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to be an overview of the major functions of management. Emphasis is placed on planning, organizing, controlling, directing, and communicating. Upon completion, students should be able to work as contributing members of a team utilizing these functions of management.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

BUS 139. Entrepreneurship I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an introduction to the principles of entrepreneurship. Topics include self-analysis of entrepreneur readiness, the role of entrepreneur in economic development, legal problems, organizational structure, sources of financing, budgeting, and cash flow. Upon completion, students should have an understanding of the entrepreneurial process and issues faced by entrepreneurs.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
BUS 152. Human Relations. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the concepts of effective human interaction in the business work environment. Topics include effective communication techniques, motivation, ego states, stress, and conflict. Upon completion, students should be able to explain the importance of human relations, apply motivational techniques, and implement strategies for resolving work-related conflicts.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

BUS 153. Human Resource Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the functions of personnel/human resource management within an organization. Topics include equal opportunity and the legal environment, recruitment and selection, performance appraisal, employee development, compensation planning, and employee relations. Upon completion, students should be able to anticipate and resolve human resource concerns.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

BUS 217. Employment Law and Regulations. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the principle laws and regulations affecting public and private organizations and their employees or prospective employees. Topics include fair employment practices, EEO, affirmative action, and employee rights and protections. Upon completion, students should be able to anticipate and resolve human resource concerns.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

BUS 225. Business Finance. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an overview of business financial management. Emphasis is placed on financial statement analysis, time value of money, management of cash flow, risk and return, and sources of financing. Upon completion, students should be able to interpret and apply the principles of financial management.
Prerequisites: Take ACC 120

BUS 228. Business Statistics. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the use of statistical methods and tools in evaluating research data for business applications. Emphasis is placed on basic probability, measures of spread and dispersion, central tendency, sampling, regression analysis, and inductive inference. Upon completion, students should be able to apply statistical problem solving to business.
BUS 230. Small Business Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the challenges of entrepreneurship including the startup and operation of a small business. Topics include market research techniques, feasibility studies, site analysis, financing alternatives, and managerial decision making. Upon completion, students should be able to develop a small business plan.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

BUS 234. Training and Development. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers developing, conducting, and evaluating employee training with attention to adult learning principles. Emphasis is placed on conducting a needs assessment, using various instructional approaches, designing the learning environment, and locating learning resources. Upon completion, students should be able to design, conduct, and evaluate a training program.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
BUS 240. Business Ethics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces contemporary and controversial ethical issues that face the business community. Topics include moral reasoning, moral dilemmas, law and morality, equity, justice and fairness, ethical standards, and moral development. Upon completion, students should be able to demonstrate an understanding of their moral responsibilities and obligations as members of the workforce and society.
Prerequisites:
- Take BUS 110 with a minimum grade of C
- Take ENG 090 RED 090 ENG 095 ENG 111 or DRE 098

BUS 253. Leadership and Management Skills. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course includes a study of the qualities, behaviors, and personal styles exhibited by leaders. Emphasis is placed on coaching, counseling, team building, and employee involvement. Upon completion, students should be able to identify and exhibit the behaviors needed for organizational effectiveness.

BUS 255. Organizational Behavior in Business. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the impact of different management practices and leadership styles on worker satisfaction and morale, organizational effectiveness, productivity, and profitability. Topics include a discussion of formal and informal organizations, group dynamics, motivation, and managing conflict and change. Upon completion, students should be able to analyze different types of interpersonal situations and determine an appropriate course of action.
Prerequisites: Take BUS 110 with a minimum grade of C

BUS 256. Recruiting, Selection & Personnel Planning. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the basic principles involved in managing the employment process. Topics include personnel planning, recruiting, interviewing and screening techniques, maintaining employee records; and voluntary and involuntary separations. Upon completion, students should be able to acquire and retain employees who match position requirements and fulfill organizational objectives. This course is a unique concentration requirement of the human resources management concentration in the business administration program.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take RED 090 ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

BUS 258. Compensation and Benefits. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to study the basic concepts of pay and its role in rewarding performance. Topics include wage and salary surveys, job analysis, job evaluation techniques, benefits, and pay-for-performance programs. Upon completion, students should be able to develop and manage a basic compensation system to attract, motivate, and retain employees. This course is a unique concentration requirement of the human resources management concentration in the business administration program.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take RED 090 ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

BUS 259. HRM Applications. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides students in the Human Resource Management concentration the opportunity to reinforce their learning experiences from preceding HRM courses. Emphasis is placed on application of day-to-day HRM functions by completing in-basket exercises and through simulations. Upon completion, students should be able to determine the appropriate actions called for by typical events that affect the status of people at work. This course is a unique concentration requirement of the human resources management concentration in the business administration program.
Prerequisites: Take All: BUS 217, BUS 234, BUS 256, and BUS 258

Cardiovascular Tech (Invasive) (ICT)

ICT 114. Intro Cardiovascular Tech. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides information related to the profession and practice of Cardiovascular Technology. Emphasis is placed on the overview of medical-legal and ethical aspects of healthcare and cardiovascular imaging modalities. Upon completion, students should have an understanding of the field of Cardiovascular Technology, cardiovascular imaging modalities, and medical-legal/ethical issues.
Corequisites: Take NCT 113 and ICT 134

ICT 134. Cv Anatomy & Physiology. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides information related to cardiovascular anatomy and physiology. Emphasis is placed on the hemodynamics of pathophysiologic disease states, embryology and the diagnosis and treatment of cardiovascular diseases. Upon completion, students should be able describe normal and abnormal cardiovascular diseases, associated hemodynamic findings, and treatment options.
Corequisites: Take ICT 114 and NCT 113
ICT 136. Cardiac Cath I. 5.0 Credits. Class-3.0. Clinical-3.0. Lab-2.0. Work-0.0
This course provides an introduction to diagnostic techniques utilized in the cardiac catheterization lab. Emphasis will be placed on cardiovascular angiographic procedures and assessment, x-ray theory and safety, pharmacology and development of cath lab skills. Upon completion, students should be able to identify cardiovascular anatomy through angiographic assessment, identify basic cardiovascular drugs and demonstrate basic cath lab skills.
Prerequisites: Take All: ICT 114, ICT 134, and NCT 113
Corequisites: Take NCT 133 and NCT 143

ICT 214. Cardiac Cath II. 8.0 Credits. Class-3.0. Clinical-12.0. Lab-2.0. Work-0.0
This course provides advanced study of diagnostic and interventional techniques utilized in the cardiac catheterization lab. Emphasis is placed on analysis of hemodynamics, calculations and protocols, and instrumentation utilized in interventional procedures. Upon completion, students should be able to demonstrate competency in analyzing of hemodynamics data, apply concepts of interventional procedures and increased competence in clinical skills.
Prerequisites: Take All: ICT 136, NCT 133, and NCT 143

ICT 234. Cardiac Cath III. 12.0 Credits. Class-2.0. Clinical-30.0. Lab-0.0. Work-0.0
This course will provide continued opportunity for clinical experience for the student by utilizing a full time clinical internship. Emphasis is placed on supervised participation in the cardiac catheterization lab. Upon completion, students should be able to describe cardiac catheterization techniques and demonstrate entry level skills.
Prerequisites: Take ICT 214

ICT 244. Peripheral Vascular Catheterization. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an introduction to diagnostic and interventional techniques used in the treatment and management of peripheral vascular disease. Emphasis is placed on peripheral vascular anatomy, diagnostic and interventional instrumentation, procedural techniques and applications related to peripheral vascular disease. Upon completion, students should be able to describe peripheral vascular anatomy and discuss protocols, applications and instrumentation used in peripheral vascular diagnostic and interventional procedures.
Prerequisites: Take All: ICT 136, NCT 133, and NCT 143
Corequisites: Take ICT 214

ICT 254. Introduction to Cardiac Electrophysiology. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces concepts unique to diagnostic and interventional cardiac electrophysiology. Topics include electrophysiology protocols and instrumentation, cardiac ablation, single and dual chamber pacemaker insertion, defibrillator insertion and cardiac resynchronization therapy. Upon completion, students should be able to discuss protocols and instrumentation, cardiac ablation, cardiac pacing defibrillation, and cardiac resynchronization therapy.
Prerequisites: Take All: ICT 214 and ICT 244
Corequisites: Take ICT 234

Cardiovascular Tech Non-Invasive (NCT)

NCT 113. Electrocardiography. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the principles of electrocardiography, ECG rhythm recognition, methods of arrhythmia intervention and cardiac pacemaker therapy. Topics include arrhythmia detection, cardiac function, axis determination, AV block, fascicular block, arrhythmia detection, pacemaker technologies and ECG analysis. Upon completion, students should be able to describe electrical and mechanical cardiac function, pacemaker therapy, detect a variety of arrhythmias and acquire and analyze electrocardiograms.
Corequisites: Take ICT 114 and ICT 134

NCT 133. Cardiovascular Ultrasound Principles. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the principles of ultrasound applications and instrumentation of cardiovascular imaging procedures. Emphasis is placed on the physical principles of cardiovascular imaging as a diagnostic tool, instrumentation and applicable effects, and biosafety issues. Upon completion, students should be able to discuss applications of ultrasound imaging, understand instrumentation applications and improve quality imaging while maintaining bioeffects standards.
Prerequisites: Take All: ICT 114, ICT 134, and NCT 113
Corequisites: Take ICT 136 and NCT 143

NCT 143. Echocardiography I. 5.0 Credits. Class-3.0. Clinical-3.0. Lab-3.0. Work-0.0
This course introduces echocardiographic procedures, imaging modalities and their applications in the diagnosis of cardiovascular disease. Emphasis is placed on the diagnostic capabilities of non-invasive procedures in relation to clinical presentations of cardiovascular diseases and development of basic imaging skills. Upon completion, students should be able to perform basic echocardiographic examination and describe the diagnostic information obtained by noninvasive procedures.
Prerequisites: Take All: ICT 114, ICT 134, and NCT 113
Corequisites: Take ICT 136 and NCT 143

NCT 251. Echocardiography II. 7.0 Credits. Class-2.0. Clinical-12.0. Lab-2.0. Work-0.0
This course provides an advanced study of echocardiographic applications and techniques utilized in the diagnosis of acquired cardiovascular diseases. Emphasis is placed on the correlation of echocardiographic findings with the disease state and the ability to relate these findings with the clinical presentation. Upon completion, students should be able to utilize skills necessary to perform an echocardiogram, with recognition of normal and abnormal pathology.
Prerequisites: Take All: ICT 136, NCT 133, and NCT 143
Corequisites: Take NCT 253

NCT 253. Hemodynamic Echo Principles. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an introduction to the hemodynamic approach in performing an echocardiogram to detect cardiovascular heart disease. Emphasis is placed on the applications of hemodynamic calculations in valvular heart disease and development of quality standard practices for quality patient care outcomes. Upon completion, students should be able to perform hemodynamic calculations on an echocardiogram.
Prerequisites: Take All: ICT 136, NCT 133, and NCT 143
Corequisites: Take NCT 251
NCT 273. Echocardiography III. 14.0 Credits. Class-3.0. Clinical-30.0. Lab-2.0. Work-0.0
This course provides expanded techniques and concepts required for a comprehensive echocardiographic procedure. Emphasis is placed on advanced qualitative and quantitative calculations by utilizing various imaging modalities in the evaluation of acquired heart disease. Upon completion, students should be able to perform a comprehensive diagnostic echocardiographic examination with relative hemodynamic and quantitative calculations.
Prerequisites: Take All: NCT 251 and NCT 253

Carpentry (CAR)

CAR 110. Introduction to Carpentry. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the student to the carpentry trade. Topics include duties of a carpenter, hand and power tools, building materials, construction methods, and safety. Upon completion, students should be able to identify hand and power tools, common building materials, and basic construction methods.

CAR 111. Carpentry I. 8.0 Credits. Class-3.0. Clinical-0.0. Lab-15.0. Work-0.0
This course introduces the theory and construction methods associated with the building industry, including framing, materials, tools, and equipment. Topics include safety, hand/power tool use, site preparation, measurement and layout, footings and foundations, construction framing, and other related topics. Upon completion, students should be able to safely lay out and perform basic framing skills with supervision.

CAR 114. Residential Building Codes. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers building codes and the requirements of state and local construction regulations. Emphasis is placed on the minimum requirements of the North Carolina building codes related to residential structures. Upon completion, students should be able to determine if a structure is in compliance with North Carolina building codes.

CAR 120. Commercial Carpentry I. 6.0 Credits. Class-2.0. Clinical-0.0. Lab-12.0. Work-0.0
This course introduces the theory and construction methods associated with general construction, including framing, materials, tools, and equipment. Topics include safety, hand/power tool use, blueprints, rigging, construction framing, windows, exterior doors, and other related topics. Upon completion, students should be able to safely demonstrate basic general carpentry skills with supervision.

CAR 125. Commercial Carpentry II. 6.0 Credits. Class-2.0. Clinical-0.0. Lab-12.0. Work-0.0
This course covers the advanced theory and construction methods associated with the building industry including concrete framing, reinforcing, and placement. Topics include safety, hand/power tool use, blueprints, concrete construction methods, light equipment operation, and other related topics. Upon completion, students should be able to safely demonstrate concrete construction skills with supervision.
Prerequisites: Take CAR 120

CAR 135. Commercial Carpentry IV. 6.0 Credits. Class-2.0. Clinical-0.0. Lab-12.0. Work-0.0
This course covers more advanced construction practices and procedures, as well as management concepts. Topics include safety, hand/power tool use, stairs, walls, floors, welding, metal building assembly, management and supervision, measurement and layout, and other related topics. Upon completion, students should be able to demonstrate skills in advanced construction procedures and processes with supervision.
Prerequisites: Take CAR 120

CAR 150. Concrete Construction. 5.0 Credits. Class-2.0. Clinical-0.0. Lab-9.0. Work-0.0
This course covers methods of erecting forms and placing concrete. Topics include safety, hand/power tool use, blueprints, rigging, form construction, reinforcement, and placement. Upon completion, students should be able to demonstrate skills in concrete construction procedures and processes with supervision.

Chemistry (CHM)

CHM 115. Concepts in Chemistry. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces basic chemical concepts and their applications to daily life for non-science majors. Topics include air pollution, global warming, energy, world of polymers, water and its importance to a technological society, food, drugs, and nuclear chemistry. Upon completion, students should be able to discuss, apply, and appreciate the impact of chemistry on modern society.

CHM 115A. Concepts in Chemistry Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-1.0. Work-0.0
This course is a laboratory for CHM 115. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 115. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical concepts presented in CHM 115.
Corequisites: Take CHM 115

CHM 121. Foundations of Chemistry. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed for those who have no previous high school chemistry or a grade of C or less in high school chemistry. Topics include matter, structure of the atom, nomenclature, chemical equations, bonding and reactions; mathematical topics include measurements, scientific notation, and stoichiometry. Upon completion, students should be able to demonstrate an understanding of chemical concepts and an ability to solve related problems in subsequent chemistry courses.
Prerequisites: Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 060 DMA 070 DMA 080
Corequisites: Take CHM 121A

CHM 121A. Foundations of Chemistry Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a laboratory for CHM 121. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 121. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 121.
Corequisites: Take CHM 121
CHM 130. General, Organic, & Biochemistry. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a survey of basic facts and principles of general, organic, and biochemistry. Topics include measurement, molecular structure, nuclear chemistry, solutions, acid-base chemistry, gas laws, and the structure, properties, and reactions of major organic and biological groups. Upon completion, students should be able to demonstrate an understanding of fundamental chemical concepts. Recommended for certain Allied Health programs.
Prerequisites: Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 060 DMA 070 DMA 080
Corequisites: Take CHM 130A

CHM 130A. General, Organic, & Biochemistry Lab. 1.0 Credit.
Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a laboratory for CHM 130. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 130. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 130. Recommended for certain Allied Health programs.
Corequisites: Take CHM 130

CHM 131. Introduction to Chemistry. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the fundamental concepts of inorganic chemistry. Topics include measurement, matter and energy, atomic and molecular structure, nuclear chemistry, stoichiometry, chemical formulas and reactions, chemical bonding, gas laws, solutions, and acids and bases. Upon completion, students should be able to demonstrate a basic understanding of chemistry as it applies to other fields.
Prerequisites: Complete one of the following options:
- Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 060 DMA 070 DMA 080
- Take CHM 121
Corequisites: Take CHM 131A

CHM 131A. Introduction to Chemistry Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is a laboratory to accompany CHM 131. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 131. Upon completion, students should be able to demonstrate an understanding of chemical concepts as needed to pursue further study in chemistry and related professional fields.
Corequisites: Take CHM 131

CHM 132. Organic and Biochemistry. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a survey of major functional classes of compounds in organic and biochemistry. Topics include structure, properties, and reactions of the major organic and biological molecules and basic principles of metabolism. Upon completion, students should be able to demonstrate an understanding of fundamental chemical concepts needed to pursue studies in related professional fields.
Prerequisites: Take one set:
- CHM 131 and CHM 131A
- CHM 151

CHM 151. General Chemistry I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers fundamental principles and laws of chemistry. Topics include measurement, atomic and molecular structure, periodicity, chemical reactions, chemical bonding, stoichiometry, thermochemistry, gas laws, and solutions. Upon completion, students should be able to demonstrate an understanding of fundamental chemical laws and concepts as needed in CHM 152.
Prerequisites: Complete one of the following options:
- Take MAT 161 MAT 171 or MAT 175 with a minimum grade of C
- Take DMA 010 DMA 020 DMA 030 DMA 040 DMA 050 DMA 060 DMA 070 DMA 080
- Take CHM 121

CHM 152. General Chemistry II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a continuation of the study of the fundamental principles and laws of chemistry. Topics include kinetics, equilibrium, ion and redox equations, acid-base theory, electrochemistry, thermodynamics, introduction to nuclear and organic chemistry, and complex ions. Upon completion, students should be able to demonstrate an understanding of chemical concepts as needed in pursuit of further study in chemistry and related professional fields.
Prerequisites: Take CHM 151

CHM 251. Organic Chemistry I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of hydrocarbons, alkyl halides, alcohols, and ethers; further topics include isomerization, stereochemistry, and spectroscopy. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts of covered organic topics as needed in CHM 252.
Prerequisites: Take CHM 152

CHM 252. Organic Chemistry II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides continuation of the systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of aromatics, aldehydes, ketones, carboxylic acids and derivatives, amines and heterocyclics; multi-step synthesis will be emphasized. Upon completion, students should be able to demonstrate an understanding of organic concepts as needed to pursue further study in chemistry and related professional fields.
Prerequisites: Take CHM 251

Civil Engineering (CIV)

CIV 111. Soils and Foundations. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course presents an overview of soil as a construction material using both analysis and testing procedures. Topics include index properties, classification, stress analysis, compressibility, compaction, dewatering, excavation, stabilization, settlement, and foundations. Upon completion, students should be able to perform basic soil tests and analyze engineering properties of soil.
Prerequisites: TAKE 1 COURSE FROM EGR 250 EGR 251 MEC 210
CIV 125. Civil/Surveying CAD. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces civil/surveying computer-aided drafting (CAD) software. Topics include drawing, editing, and dimensioning commands; plotting; and other related civil/surveying topics. Upon completion, students should be able to produce civil/surveying drawings using CAD software.
Prerequisites: Take CEG 151

CIV 220. Basic Structural Concepts. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the historical perspective of structures as well as types, materials, common elements, and mechanical principles of structures. Topics include basic structure shapes, advantages and disadvantages of standard building materials, application of structural concepts, and other related topics. Upon completion, students should be able to demonstrate an understanding of basic structural concepts.
Prerequisites: Take One: EGR 250, EGR 251, or MEC 210

CIV 221. Steel and Timber Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the basic elements of steel and timber structures. Topics include strength of materials applications, the analysis and design of steel and timber beams, columns, and connections and concepts of structural detailing. Upon completion, students should be able to analyze, design, and draw simple plans using Computer Aided Drafting and Design software (CADD).
Prerequisites: Take One: EGR 250, EGR 251, or MEC 210

CIV 222. Reinforced Concrete. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the basic elements of reinforced concrete structures. Topics include analysis and design of reinforced concrete beams, slabs, columns, footings, and retaining walls. Upon completion, students should be able to analyze and design components of a structure using reinforced concrete and draw simple plans using Computer Aided Drafting and Design software (CADD). This course introduces the basic elements of reinforced concrete and masonry structures. Topics include analysis and design of reinforced concrete beams. Slabs, columns, footings, and retaining walls, load bearing masonry walls, and ACI manuals and codes. Upon completion, students should be able to analyze and design components of a structure using reinforced concrete and masonry elements and utilize appropriate ACI publications.
Prerequisites: Take One: EGR 250, EGR 251, or MEC 210

CIV 230. Construction Estimating. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers quantity take-offs of labor, materials, and equipment and calculation of direct and overhead costs for a construction project. Topics include the interpretation of working drawings and specifications, types of contracts and estimates, building codes, bidding techniques and procedures, and estimating software. Upon completion, students should be able to prepare a detailed cost estimate and bid documents for a construction project.
Prerequisites: Take One: ARC 111, CIS 110, CIS 111, or EGR 115

CIV 250. Civil Engineering Technology Project. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course includes an integrated team approach to civil engineering technology projects. Emphasis is placed on project proposal, site selection, analysis/design of structures, construction material selection, time and cost estimating, planning, and management of a project. Upon completion, students should be able to apply team concepts, prepare estimates, submit bid proposals, and manage projects.

Civil Engineering and Geomatic (CEG)

CEG 111. Introduction to GIS and GNSS. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the methods and techniques used in the Geographic Information Systems (GIS) and Global Navigation Satellite Systems (GNSS) professions. Emphasis is placed on data collection and mapping using GIS software. Upon completion, students should be able to use GNSS technologies to collect field data and create GIS maps.

CEG 115. Intro to Tech & Sustainability. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces basic skills, sustainability concepts and career fields for technicians. Topics include career options, technical vocabulary, dimensional analysis, measurement systems, engineering graphics, professional ethics, and related topics. Upon completion, students should be able to identify drawing elements and create sketches, perform basic engineering computations and identify measures of sustainable development.

CEG 151. Cad for Engineering Technology. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces computer-aided drafting (CAD) software. Topics include file and data management, drawing, editing, dimensioning commands, plotting, and related topics. Upon completion, students should be able to create and plot basic drawings and maps using CAD software.

CEG 210. Construction Materials & Methods. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the behavior and properties of Portland cement, asphaltic concretes, and other construction materials, including construction methods and equipment. Topics include cementing agents, aggregates, water and admixture materials with their proportions, production, placement, consolidation, curing; and their inspection. Upon completion, students should be able to proportion Portland concrete mixes to attain predetermined strengths, perform standard control tests on Portland cement concrete, identify inspection criteria for concretes, identify construction equipment and applications.
Prerequisites: Take EGR 250

CEG 211. Hydrology & Erosion Control. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces basic engineering principles and characteristics of hydrology, erosion and sediment control. Topics include stormwater runoff, gravity pipe flow, open channel flow, low impact development (LID), erosion control devices and practices. Upon completion, students should be able to analyze and design gravitational drainage structures, identify LID and erosion control elements, and prepare a stormwater drainage plan.
Prerequisites: Complete one of the following options:
• MAT 121
• MAT 171
• DMA 060, DMA 070, and DMA 080
CEG 212. Introduction to Environmental Technology. 3.0 Credits.
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces basic engineering principles of hydraulics, and water and wastewater technologies. Topics include fluid statics, fluid dynamics, flow measurement, the collection, treatment, and distribution of water and wastewater. Upon completion, students should be able to identify water and wastewater system elements, describe water and wastewater system processes and perform basic hydraulics and treatment computations.
Prerequisites: Take One: EGR 250, EGR 251, or MEC 210

CEG 230. Subdivision Planning & Design. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers the planning and design concepts related to subdivisions including analysis of development standards, engineering, and the creation of CAD drawings. Topics include applicable codes, lot creation, roadway system layout, stormwater drainage, low impact development (LID) concepts, and related topics. Upon completion, students should be able to prepare a set of subdivision plans.
Prerequisites: Take One Course from Each Set: SET 1: CEG 151, DFT 151, or EGR 120 SET 2: CEG 211 SET 3: SRV 111 or CIV 215

CEG 235. Project Management and Estimating. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers planning and estimating practices which are applicable to the civil engineering and related construction industries. Emphasis is placed on construction project planning and management, material take-offs labor and equipment requirements in accordance with industry formats, and other economic topics. Upon completion, students should be able to accurately complete material take-offs, prepare cost estimates, and prepare construction schedules.
Prerequisites: Take One: CEG 115, CIS 110, CIS 111, EGR 115, or EGR 125

Communication (COM)

COM 110. Introduction to Communication. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of the basic concepts of communication and the skills necessary to communicate in various contexts. Emphasis is placed on communication theories and techniques used in interpersonal group, public, intercultural, and mass communication situations. Upon completion, students should be able to demonstrate an understanding of the principles and skills needed to become effective in communicating outside one’s primary culture.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C
• Take ENG 112 with a minimum grade of C
• Take ENG 113 with a minimum grade of C
• Take ENG 114 with a minimum grade of C

COM 111. Voice and Diction I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides guided practice in the proper production of speech. Emphasis is placed on improving speech, including breathing, articulation, pronunciation, and other vocal variables. Upon completion, students should be able to demonstrate effective natural speech in various contexts. Students will analyze regional and international speech differences and standards.

COM 120. Intro to Interpersonal Communication. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the practices and principles of interpersonal communication in both dyadic and group settings. Emphasis is placed on the communication process, perception, listening, self-disclosure, speech apprehension, ethics, nonverbal communication, conflict, power, and dysfunctional communication relationships. Upon completion, students should be able to demonstrate interpersonal communication skills, apply basic principles of group discussion, and manage conflict in interpersonal communication situations.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C
• Take ENG 112 with a minimum grade of C
• Take ENG 113 with a minimum grade of C
• Take ENG 114 with a minimum grade of C

COM 130. Nonverbal Communication. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the contemporary study of nonverbal communication in daily life. Topics include haptics, kinesics, proxemics, facial displays, and appearance. Upon completion, students should be able to analyze/interpret nonverbal communication and demonstrate greater awareness of their own nonverbal communication habits.
Prerequisites: Take One: COM 110 or COM 120

COM 140. Introduction to Intercultural Communication. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces techniques of cultural research, definitions, functions, characteristics, and impacts of cultural differences in public address. Emphasis is placed on how diverse backgrounds influence the communication act and how cultural perceptions and experiences determine how one sends and receives messages. Upon completion, students should be able to demonstrate an understanding of the principles and skills needed to become effective in communicating outside one’s primary culture.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C
**Computer Engineering Technolog (CET)**

**COM 150. Introduction to Mass Communication. 3.0 Credits.**
Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces print and electronic media and the new information technologies in terms of communication theory and as economic, political, and social institutions. Topics include the nature, history, functions, and responsibilities of mass communication industries in a global environment and their role and impact in American society. Upon completion, students should be able to demonstrate awareness of the pervasive nature of mass media and how media operate in an advanced post-industrial society. Prerequisites: Take ENG 111

**COM 231. Public Speaking. 3.0 Credits.**
Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides instruction and experience in preparation and delivery of speeches within a public setting and group discussion. Emphasis is placed on research, preparation, delivery, and evaluation of informative, persuasive, and special occasion public speaking. Upon completion, students should be able to prepare and deliver well-organized speeches and participate in group discussion with appropriate audiovisual support.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 with a minimum grade of C
- Take ENG 112 with a minimum grade of C
- Take ENG 113 with a minimum grade of C
- Take ENG 114 with a minimum grade of C

**CTS 112. Windows (TM). 2.0 Credits.**
Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course includes the fundamentals of the Windows(TM) software. Topics include graphical user interface, icons, directories, file management, accessories, and other applications. Upon completion, students should be able to use Windows(TM) software in an office environment.

**CTS 115. Information Systems Business Concepts. 3.0 Credits.**
Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
The course introduces the role of IT in managing business processes and the need for business process and IT alignment. Emphasis is placed on industry need for understanding business challenges and developing/managing information systems to contribute to the decision making process based on these challenges. Upon completion, students should be able to demonstrate knowledge of the 'hybrid business manager' and the potential offered by new technology and systems.
Prerequisites: Take RED 090 EFL 112 ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

**CTS 118. Is Professional Communications. 2.0 Credits.**
Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course prepares the information systems professional to communicate with corporate personnel from management to end-users. Topics include information systems cost justification tools, awareness of personal hierarchy of needs, addressing these needs, and discussing technical issues with non-technical personnel. Upon completion, students should be able to communicate information systems issues to technical and non-technical personnel.

**CTS 120. Hardware/Software Support. 3.0 Credits.**
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the basic hardware of a personal computer, including installation, operations and interactions with software. Topics include component identification, memory-system, peripheral installation and configuration, preventive maintenance, hardware diagnostics/repair, installation and optimization of system software, commercial programs, system configuration, and device-drivers. Upon completion, students should be able to select appropriate computer equipment and software, upgrade/maintain existing equipment and software, and troubleshoot/repair non-functioning personal computers.

**CTS 130. Spreadsheet. 3.0 Credits.**
Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces basic spreadsheet design and development. Topics include writing formulas, using functions, enhancing spreadsheets, creating charts, and printing. Upon completion, students should be able to design and print basic spreadsheets and charts.
Prerequisites: Take One: CIS 110, CIS 111, or OST 137

**CTS 230. Advanced Spreadsheet. 3.0 Credits.**
Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers advanced spreadsheet design and development. Topics include advanced functions and statistics, charting, macros, databases, and linking. Upon completion, students should be able to demonstrate competence in designing complex spreadsheets.
Prerequisites: Take CTS 130
CTS 240. Project Management. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces computerized project management software. Topics include identifying critical paths, cost management, and problem solving. Upon completion, students should be able to plan a complete project and project time and costs accurately.
Prerequisites: Take One: CIS 110 or CIS 111

Computer Science (CSC)

CSC 119. Programming Orientation. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides students with an opportunity to develop the knowledge and skills required to succeed in the programming program. Emphasis is placed on introducing students to the tools and resources available to them in programming. Upon completion, students should be able to demonstrate knowledge of programming tools, resources, and services available.

CSC 120. Computing Fundamentals I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides the essential foundation for the discipline of computing and a program of study in computer science, including the role of the professional. Topics include algorithm design, data abstraction, searching and sorting algorithms, and procedural programming techniques. Upon completion, students should be able to solve problems, develop algorithms, specify data types, perform sorts and searches, and use an operating system.
Prerequisites: Complete one of the following options:
- DMA 010, DMA 020, DMA 030, DMA 040, and DMA 050
- MAT 121
- MAT 171

CSC 130. Computing Fundamentals II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides in-depth coverage of the discipline of computing and the role of the professional. Topics include software design methodologies, analysis of algorithm and data structures, searching and sorting algorithms, and file organization methods. Upon completion, students should be able to use software design methodologies and choice of data structures and understand social/ethical responsibilities of the computing professional.
Prerequisites: Take CSC 120

CSC 133. C Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces computer programming using the C programming language with structured programming principles. Topics include input/ output operations, iteration, arithmetic operations, arrays, pointers, filters, and other related topics. Upon completion, students should be able to design, code, test and debug at a beginning level.

CSC 134. C++ Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces computer programming using the C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level.
Prerequisites: Take DRE 098 or ENG 111 with a minimum grade of C

CSC 139. Visual BASIC Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces computer programming using the Visual BASIC programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level.

CSC 141. Visual C++ Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces computer programming using the Visual C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, test, debug, and implement objects using the appropriate environment at a beginning level.
Prerequisites: Take RED 090 EFL 112 ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

CSC 151. JAVA Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces computer programming using the JAVA programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion students should be able to design, code, test, debug JAVA language programs.
Prerequisites: Take ENG 111 or DRE 098 with a minimum grade of C
Take CSC 130 CSC 134 or CSC 143 with a minimum grade of C

CSC 152. SAS. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the fundamentals of SAS programming. Emphasis is placed on learning basic SAS commands and statements for solving a variety of data processing applications. Upon completion, students should be able to use SAS data and procedure steps to create SAS data sets, do statistical analysis, and general customized reports.
Prerequisites: Take ENG 111 or DRE 098 with a minimum grade of C
Take CIS 115 CSC 119 CSC 120 CSC 134 CSC 139 CSC 143 CSC 151 or CSC 153 with a minimum grade of C

CSC 153. C# Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces computer programming using the C# programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment at the beginning level.
Prerequisites: Take DRE 098 or ENG 111 with a minimum grade of C
Take CSC 143 with a minimum grade of C
CSC 251. Advanced JAVA Programming. 3.0 Credits.  
Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0  
This course is a continuation of CSC 141 using the JAVA programming language with object-oriented programming principles. Emphasis is placed on advanced arrays/tables, file management/processing techniques, data structures, sub-programs, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design, code, test, debug and document programming solutions.  
Prerequisites: Take CSC 233

CSC 233. Advanced C Programming. 3.0 Credits.  
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course is a continuation of CSC 133 using the C programming language with structured programming principles. Emphasis is placed on advanced arrays/tables, file management/processing techniques, data structures, sub-programs, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design, code, test, debug and document programming solutions.  
Prerequisites: Take CSC 193

CSC 210. Cloud and Storage Concepts. 3.0 Credits.  
Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0  
This course introduces cloud computing and storage concepts. Emphasis is placed on cloud terminology, virtualization, storage networking and access control. Upon completion, students should be able to perform tasks related to installation, configuration and management of cloud storage systems.  
Prerequisites: Take CSC 253

CSC 241. Advanced Visual C++ Programming. 3.0 Credits.  
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course is a continuation of CSC 141 using the Visual C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment.  
Prerequisites: Take CSC 251

CSC 240. Virtualization Administration I. 3.0 Credits.  
Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0  
This course covers datacenter virtualization concepts. Topics include data storage, virtual network configuration, virtual machine and virtual application deployment. Upon completion, students should be able to perform tasks related to virtual machine and hypervisor installation and configuration.  
Prerequisites: Take CSC 241

CSC 253. Advanced C# Programming. 3.0 Credits.  
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course is a continuation of CSC 153 using the C# programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment.  
Prerequisites: Take CSC 193

CSC 193. Selected Topics in Information Systems. 3.0 Credits.  
Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0  
This course introduces selected topics in information systems. Emphasis is placed on advanced arrays/tables, file management/processing techniques, data structures, sub-programs, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design, code, test, debug and document programming solutions.  
Prerequisites: Take CSC 253

CSC 234. Advanced C++ Programming. 3.0 Credits.  
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course is a continuation of CSC 134 using the C++ programming language with standard programming principles. Emphasis is placed on advanced arrays/tables, file management/processing techniques, data structures, sub-programs, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design, code, test, debug and document programming solutions.  
Prerequisites: Take CSC 233

CTI 110. Web, Programming, and Database Foundation. 3.0 Credits.  
Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course covers the introduction of the tools and resources available to students in programming, mark-up language and services on the Internet. Topics include standard mark-up language Internet services, creating web pages, using search engines, file transfer programs; and database design and creation with DBMS products. Upon completion students should be able to demonstrate knowledge of programming tools, deploy a web-site with mark-up tools, and create a simple database table.  
Prerequisites: Take CSC 100
Construction (CST)

CST 111. Construction I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers standard and alternative building methods to include wall framing. Topics include safety and footings, foundations, floor framing systems, and wall framing systems commonly used in the construction industry. Upon completion, students should be able to safely erect all framing necessary to begin roof framing.

CST 131. OSHA/Safety/Certification. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the concepts of work site safety. Topics include OSHA regulations, tool safety, and certifications which relate to the construction industry. Upon completion, students should be able to identify and maintain a safe working environment based on OSHA regulations and maintain proper records and certifications.

CST 150. Building Science. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces concepts and techniques for the design and interaction of the mechanical systems of high performance buildings. Topics include building envelope, heating, ventilation and air conditioning (HVAC), indoor air quality, lighting, plumbing and electrical. Upon completion, students should be able to understand building systems interaction and performance.

CST 213. Soils & Site Work. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers site conditions and soil types and their physical properties. Topics include site preparation, access, mechanical analysis, classification of soils, and hydrostatics of groundwater. Upon completion, students should be able to adequately prepare a building site according to plans and specifications.
Prerequisites: Take One: MAT 121 or MAT 171

CST 241. Planning/Estimating I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the procedures involved in planning and estimating a construction/building project. Topics include performing quantity take-offs of materials necessary for a building project. Upon completion, students should be able to accurately complete a take-off of materials and equipment needs involved in a construction project.
Prerequisites: Take One: BPR 130, MAT 121, or MAT 171

CST 242. Planning/Estimating II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers planning and estimating practices which are applicable to commercial construction. Emphasis is placed on planning and developing take-offs of materials, labor, and equipment in accordance with industry formats. Upon completion, students should be able to accurately complete take-offs and planning time lines necessary to complete a commercial structure.
Prerequisites: CST 241

Construction Management (CMT)

CMT 120. Codes and Inspections. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers building codes and the code inspections process used in the design and construction of residential and commercial buildings. Emphasis is placed on commercial, residential, and accessibility (ADA) building codes. Upon completion, students should understand the building code inspections process and apply building code principals and requirements to construction projects.

CMT 210. Construction Management Fundamentals. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the student to the fundamentals of effective supervision emphasizing professionalism through knowledge and applied skills. Topics include safety, planning and scheduling, contracts, problem-solving, communications, conflict resolution, recruitment, employment laws and regulations, leadership, motivation, teamwork, discipline, setting objectives, and training. Upon completion, students should be able to demonstrate the basic skills necessary to be successful as a supervisor in the construction industry.

CMT 212. Total Safety Performance. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the importance of managing safety and productivity equally by encouraging people to take individual responsibility for safety and health in the workplace. Topics include safety management, controlling construction hazards, communicating and enforcing policies, OSHA compliance, personal responsibility and accountability, safety planning, training, and personal protective equipment. Upon completion, the student should be able to properly supervise safety at a construction jobsite and qualify for OSHA Training Certification.
Corequisites: Take CMT 210

CMT 214. Planning and Scheduling. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the need for and the process of planning construction projects, as well as the mechanics and vocabulary of project scheduling. Topics include project preplanning, scheduling formats, planning for production, short interval planning, schedule updating and revising, and computer-based planning and scheduling. Upon completion, the student should be able to understand the need for planning and scheduling, the language and logic of scheduling, and use of planning skills.
Prerequisites: Take All: CMT 210 and BPR 130

CMT 216. Costs and Productivity. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the relationships between time, work completed, work-hours spent, schedule duration, equipment hours, and materials used. Topics include production rates, productivity unit rates, work method improvements, and overall total project cost control. Upon completion, the student should be able to demonstrate an understanding of how costs may be controlled and productivity improved on a construction project.
Prerequisites: Take CMT 210
CMT 218. Human Relations Issues. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides instruction on human relations issues as they relate to construction project supervision. Topics include relationships, human behavior, project staffing issues, teamwork, effective communication networks, laws and regulations, and identifying and responding to conflict, crisis, and discipline. Upon completion, the student will demonstrate an understanding of the importance of human relations in the success of a construction project. 
Prerequisites: Take CMT 210

Cosmetology (COS)

COS 111. Cosmetology Concepts I. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting. 
Corequisites: Take COS 112

COS 112. Salon I. 8.0 Credits. Class-0.0. Clinical-0.0. Lab-24.0. Work-0.0
This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services.
Corequisites: Take COS 111

COS 113. Cosmetology Concepts II. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, chemistry, manicuring, chemical restructuring, and hair coloring. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.
Corequisites: Take COS 114

COS 114. Salon II. 8.0 Credits. Class-0.0. Clinical-0.0. Lab-24.0. Work-0.0
This course provides experience in a simulated salon setting. Topics include basic skin care, manicuring, nail application, scalp treatments, shampooing, rinsing, hair color, design, haircutting, chemical restructuring, pressing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.
Corequisites: Take COS 113

COS 115. Cosmetology Concepts III. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, salon management, salesmanship, skin care, electricity/light therapy, wigs, thermal hair styling, lash and brow tinting, superfluous hair removal, and other related topics. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.
Corequisites: Take COS 116

COS 116. Salon III. 4.0 Credits. Class-0.0. Clinical-0.0. Lab-12.0. Work-0.0
This course provides comprehensive experience in a simulated salon setting. Emphasis is placed on intermediate-level of skin care, manicuring, scalp treatments, shampooing, hair color, design, haircutting, chemical restructuring, pressing, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.
Corequisites: Take COS 115

COS 117. Cosmetology Concepts IV. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers advanced cosmetology concepts. Topics include chemistry and hair structure, advanced cutting and design, and an overview of all cosmetology concepts in preparation for the licensing examination. Upon completion, students should be able to demonstrate an understanding of these cosmetology concepts and meet program completion requirements.
Corequisites: Take COS 118

COS 118. Salon IV. 7.0 Credits. Class-0.0. Clinical-0.0. Lab-21.0. Work-0.0
This course provides advanced experience in a simulated salon setting. Emphasis is placed on efficient and competent delivery of all salon services in preparation for the licensing examination and employment. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology Licensing Examination and meet entry-level employment requirements.
Corequisites: Take COS 117

COS 223. Contemp Hair Coloring. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers basic color concepts, hair coloring problems, and application techniques. Topics include color theory, terminology, contemporary techniques, product knowledge, and other related topics. Upon completion, students should be able to identify a clients color needs and safely and competently perform color applications and correct problems.
Prerequisites: Take All: COS 111 and COS 112

COS 240. Contemporary Design. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers methods and techniques for contemporary designs. Emphasis is placed on contemporary designs and other related topics. Upon completion, students should be able to demonstrate and apply techniques associated with contemporary design.
Prerequisites: Take All: COS 111 and COS 112

COS 271. Instructor Concepts I. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the basic cosmetology instructional concepts. Topics include orientation, theories of education, unit planning, daily lesson planning, laboratory management, student assessment, record keeping, and other related topics. Upon completion, students should be able to identify theories of education, develop lesson plans, demonstrate supervisory techniques, and assess student performance in a classroom setting.
Corequisites: Take COS 272
COS 272. Instructor Practicum I. 7.0 Credits. Class-0.0. Clinical-0.0. Lab-21.0. Work-0.0
This course covers supervisory and instructional skills for teaching entry-level cosmetology students in a laboratory setting. Topics include demonstrations of services, supervision, and entry-level student assessment. Upon completion, students should be able to demonstrate salon services and instruct and objectively assess the entry-level student. Corequisites: Take COS 271

COS 273. Instructor Concepts II. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers advanced cosmetology instructional concepts. Topics include practical demonstrations, lesson planning, lecture techniques, development and administration of assessment tools, record keeping, and other related topics. Upon completion, students should be able to develop lesson plans, demonstrate supervision techniques, assess student performance in a classroom setting, and keep accurate records. Prerequisites: Take All: COS 271 and COS 272
Corequisites: Take COS 274

COS 274. Instructor Practicum II. 7.0 Credits. Class-0.0. Clinical-0.0. Lab-21.0. Work-0.0
This course is designed to develop supervisory and instructional skills for teaching advanced cosmetology students in a laboratory setting. Topics include practical demonstrations, supervision, and advanced student assessment. Upon completion, students should be able to demonstrate competence in the areas covered by the Instructor Licensing Examination and meet program completion requirements. Prerequisites: Take All: COS 271 and COS 272
Corequisites: Take COS 274

Criminal Justice (CJC)

CJC 100. Basic Law Enforcement Training. 19.0 Credits. Class-9.0. Clinical-0.0. Lab-30.0. Work-0.0
This course covers the basic skills and knowledge needed for entry-level employment as a law enforcement officer in North Carolina. Topics are divided into general units of study: legal, patrol duties, law enforcement communications, investigations, practical application and sheriff-specific. Upon successful completion, the student will be able to demonstrate competence in the topics and areas required for the state comprehensive certification examination.

CJC 100AB. Basic Law Enforcement Training. 15.0 Credits. Class-6.0. Clinical-0.0. Lab-27.0. Work-0.0
This course covers the basic skills and knowledge needed for entry-level employment as a law enforcement officer in North Carolina. Topics are divided into general units of study: legal, patrol duties, law enforcement communications, investigations, practical application and sheriff-specific. Upon successful completion, the student will be able to demonstrate competence in the topics and areas required for the state comprehensive certification examination. This is a certificate-level course.

CJC 100BB. Basic Law Enforcement Training. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the basic skills and knowledge needed for entry-level employment as a law enforcement officer in North Carolina. Topics are divided into general units of study: legal, patrol duties, law enforcement communications, investigations, practical application and sheriff-specific. Upon successful completion, the student will be able to demonstrate competence in the topics and areas required for the state comprehensive certification examination. This is a certificate-level course. THE TOPICS OF CJC-100BB ONLY INCLUDES THE LEGAL SECTION OF CJC-100.

CJC 111. Introduction to Criminal Justice. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the components and processes of the criminal justice system. Topics include history, structure, functions, and philosophy of the criminal justice system and their relationship to life in our society. Upon completion, students should be able to define and describe the major system components and their interrelationships and evaluate career options.

CJC 112. Criminology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces deviant behavior as it relates to criminal activity. Topics include theories of crime causation; statistical analysis of criminal behavior; past, present, and future social control initiatives; and other related topics. Upon completion, students should be able to explain and discuss various theories of crime causation and societal response.

CJC 113. Juvenile Justice. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the juvenile justice system and related juvenile issues. Topics include an overview of the juvenile justice system, treatment and prevention programs, special areas and laws unique to juveniles, and other related topics. Upon completion, students should be able to identify/discuss juvenile court structure/procedures, function and jurisdiction of juvenile agencies, processing/detention of juveniles, and case disposition.

CJC 114. Investigative Photography. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the operation of digital photographic equipment and its application to criminal justice. Topics include the use of digital cameras, storage of digital images, the retrieval of digital images and preparation of digital images as evidence. Upon completion, students should be able to demonstrate and explain the role and use of digital photography, image storage and retrieval in criminal investigations.

CJC 120. Interviews/Interrogations. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers basic and special techniques employed in criminal justice interviews and interrogations. Emphasis is placed on the interview/interrogation process, including interpretation of verbal and physical behavior and legal perspectives. Upon completion, students should be able to conduct interviews/interrogations in a legal, efficient, and professional manner and obtain the truth from suspects, witnesses, and victims.

CJC 121. Law Enforcement Operations. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces fundamental law enforcement operations. Topics include the contemporary evolution of law enforcement operations and related issues. Upon completion, students should be able to explain theories, practices, and issues related to law enforcement operations.

CJC 122. Community Policing. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the historical, philosophical, and practical dimensions of community policing. Emphasis is placed on the empowerment of police and the community to find solutions to problems by forming partnerships. Upon completion, students should be able to define community policing, describe how community policing strategies solve problems, and compare community policing to traditional policing.
CJC 131. Criminal Law. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the history/evolution/principles and contemporary applications of criminal law. Topics include sources of substantive law, classification of crimes, parties to crime, elements of crimes, matters of criminal responsibility, and other related topics. Upon completion, students should be able to discuss the sources of law and identify, interpret, and apply the appropriate statutes/elements.

CJC 132. Court Procedure & Evidence. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers judicial structure/process/procedure from incident to disposition, kinds and degrees of evidence, and the rules governing admissibility of evidence in court. Topics include consideration of state and federal courts, arrest, search and seizure laws, exclusionary and statutory rules of evidence, and other related issues. Upon completion, students should be able to identify and discuss procedures necessary to establish a lawful arrest/search, proper judicial procedures, and the admissibility of evidence.

CJC 141. Corrections. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the history, major philosophies, components, and current practices and problems of the field of corrections. Topics include historical evolution, functions of the various components, alternatives to incarceration, treatment programs, inmate control, and other related topics. Upon completion, students should be able to explain the various components, processes, and functions of the correctional system.

CJC 151. Introduction to Loss Prevention. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the concepts and methods related to commercial and private security systems. Topics include the historical, philosophical, and legal basis of security, with emphasis on security surveys, risk analysis, and associated functions. Upon completion, students should be able to demonstrate and understand security systems, risk management, and the laws relative to loss prevention.

CJC 160. Terrorism: Underlying Issues. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course identifies the fundamental reasons why America is a target for terrorists, covering various domestic/international terrorist groups and ideologies from a historical aspect. Emphasis is placed upon recognition of terrorist crime scene; weapons of mass destruction; chemical, biological, and nuclear terrorism; and planning considerations involving threat assessments. Upon completion, students should be able to identify and discuss the methods used in terrorists’ activities and complete a threat assessment for terrorists’ incidents.

CJC 161. Introduction to Homeland Security. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the historical, organizational and practical aspects of Homeland Security. Topics include a historic overview, definitions and concepts, organizational structure, communications, technology, mitigation, prevention and preparedness, response and recovery, and the future of Homeland Security. Upon completion, students should be able to explain essential characteristics of terrorism and Homeland Security, and define roles, functions and interdependency between agencies.

CJC 162. Intelligence Analysis and Security Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course examines intelligence analysis and its relationship to the security management of terrorist attacks and other threats to national security of the United States. Topics include a historic overview, definitions and concepts, intelligence evolution-politization-operations-strategies, surveillance, analysis perspectives, covert action, and ethics. Upon completion, students should be able to outline intelligence policies, evaluate source information, implement intelligence techniques and analysis, identify threats, and apply ethical behaviors.

CJC 163. Transportation and Border Security. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an in-depth view of modern border and transportation security including the technologies used for detecting potential threats from terrorists and weapons. Topics include an overview of security challenges, detection devices and equipment, transportation systems, facilities, threats and counter-measures, and security procedures, policies and agencies. Upon completion, students should be able to describe border security, the technologies used to enforce it, and the considerations and strategies of border security agencies.

CJC 170. Critical Incident Mgmt for Public Safety. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course prepares the student to specialize in the direct response, operations, and management of critical incidents. Emphasis is placed upon the theoretical and applied models to understand and manage disasters, terrorism, and school/work place violence. Upon completion, the student should be able to identify and discuss managerial techniques legal issues, and response procedures to critical incidents.

CJC 211. Counseling. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the basic elements of counseling and specific techniques applicable to the criminal justice setting. Topics include observation, listening, recording, interviewing, and problem exploration necessary to form effective helping relationships. Upon completion, students should be able to discuss and demonstrate the basic techniques of counseling.

CJC 212. Ethics & Community Relations. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers ethical considerations and accepted standards applicable to criminal justice organizations and professionals. Topics include ethical systems; social change, values, and norms; cultural diversity; citizen involvement in criminal justice issues; and other related topics. Upon completion, students should be able to apply ethical considerations to the decision-making process in identifiable criminal justice situations.

CJC 213. Substance Abuse. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a study of substance abuse in our society. Topics include the history and classifications of drug abuse and the social, physical, and psychological impact of drug abuse. Upon completion, students should be able to identify various types of drugs, their effects on human behavior and society, and treatment modalities.

CJC 214. Victimology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the study of victims. Emphasis is placed on roles/characteristics of victims, victim interaction with the criminal justice system and society, current victim assistance programs, and other related topics. Upon completion, students should be able to discuss and identity victims, the uniqueness of victims’ roles, and current victim assistance programs.
CJC 215. Organization & Administration. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the components and functions of organization and administration as it applies to the agencies of the criminal justice system. Topics include operations/functions of organizations; recruiting, training, and retention of personnel; funding and budgeting; communications; span of control and discretion; and other related topics. Upon completion, students should be able to identify and discuss the basic components and functions of a criminal justice organization and its administrative operations.

CJC 221. Investigative Principles. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the theories and fundamentals of the investigative process. Topics include crime scene/incident processing, information gathering techniques, collection/preservation of evidence, preparation of appropriate reports, court presentations, and other related topics. Upon completion, students should be able to identify, explain, and demonstrate the techniques of the investigative process, report preparation, and courtroom presentation.

CJC 222. Criminalistics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the functions of the forensic laboratory and its relationship to successful criminal investigations and prosecutions. Topics include advanced crime scene processing, investigative techniques, current forensic technologies, and other related topics. Upon completion, students should be able to identify and collect relevant evidence at simulated crime scenes and request appropriate laboratory analysis of submitted evidence.

CJC 223. Organized Crime. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the evolution of traditional and non-traditional organized crime and its effect on society and the criminal justice system. Topics include identifying individuals and groups involved in organized crime, areas of criminal activity, legal and political responses to organized crime, and other related topics. Upon completion, students should be able to identify the groups and activities involved in organized crime and the responses of the criminal justice system.

CJC 225. Crisis Intervention. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces critical incident intervention and management techniques as they apply to operational criminal justice practitioners. Emphasis is placed on the victim/offender situation as well as job-related high stress, dangerous, or problem-solving citizen contacts. Upon completion, students should be able to provide insightful analysis of emotional, violent, drug-induced, and other critical and/or stressful incidents that require field analysis and/or resolution.

CJC 231. Constitutional Law. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
The course covers the impact of the Constitution of the United States and its amendments on the criminal justice system. Topics include the structure of the Constitution and its amendments, court decisions pertinent to contemporary criminal justice issues, and other related topics. Upon completion, students should be able to identify/discuss the basic structure of the United States Constitution and the rights/procedures as interpreted by the courts.

CJC 232. Civil Liability. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers liability issues for the criminal justice professional. Topics include civil rights violations, tort liability, employment issues, and other related topics. Upon completion, students should be able to explain civil trial procedures and discuss contemporary liability issues.

CJC 233. Correctional Law. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces statutory/case law pertinent to correctional concepts, facilities, and related practices. Topics include examination of major legal issues encompassing incarceration, probation, parole, restitution, pardon, restoration of rights, and other related topics. Upon completion, students should be able to identify/discuss legal issues which directly affect correctional systems and personnel.

CJC 241. Community-Based Corrections. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers programs for convicted offenders that are used both as alternatives to incarceration and in post-incarceration situations. Topics include offenders, diversion, house arrest, restitution, community service, probation and parole, including both public and private participation, and other related topics. Upon completion, students should be able to identify/discuss the various programs from the perspective of the criminal justice professional, the offender, and the community.

CJC 255. Issues in Criminal Justice Application. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to exhibit interpersonal and technical skills required for application of criminal justice concepts in contemporary practical situations. Emphasis is placed on critical thinking and integration of theory and practical skills components. Upon completion, students should be able to demonstrate the knowledge required of any entry-level law enforcement officer.
Prerequisites: Take All: CJC 111, CJC 221, and CJC 231

Culinary (CUL)

CUL 110. Sanitation and Safety. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the basic principles of sanitation and safety relative to the hospitality industry. Topics include personal hygiene, sanitation and safety regulations, use and care of equipment, the principles of food-borne illness, and other related topics. Upon completion, students should be able to demonstrate an understanding of the content necessary for successful completion of a nationally recognized food/safety/sanitation exam.
Prerequisites:
• Take ENG 090 RED 090 with a minimum grade of C
• Take DMA 010 DMA 020 DMA 030
Corequisites: Take CUL 111 and CUL 112

CUL 111. Success in Hospitality Studies. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an orientation to the resources available and academic skills necessary to achieve success in a hospitality program. Emphasis is placed on technical and interpersonal skills, study skills, ethics, professionalism and time management as they relate to a hospitality field. Upon completion, students should be able to manage their learning experiences to successfully meet their educational goals.
Corequisites: Take CUL 110 and CUL 112
CUL 112. Nutrition for Foodservice. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the principles of nutrition and its relationship to the foodservice industry. Topics include personal nutrition fundamentals, weight management, exercise, nutritional adaptation/analysis of recipes/menus, healthy cooking techniques and marketing nutrition in a foodservice operation. Upon completion, students should be able to apply basic nutritional concepts to food preparation and selection.

CUL 130. Menu Design. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces menu design and its relationship to foodservice operations. Topics include layout, marketing, concept development, dietary concerns, product utilization, target consumers and trends. Upon completion, students should be able to design, create and produce menus for a variety of foodservice settings.
Prerequisites: Take CUL 111 with a minimum grade of C

CUL 135. Food and Beverage Service. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to cover the practical skills and knowledge necessary for effective food and beverage service in a variety of settings. Topics include greeting/service of guests, dining room set-up, profitability, menu sales and merchandising, service styles and reservations. Upon completion, students should be able to demonstrate competence in human relations and the skills required in the service of foods and beverages.
Corequisites: Take CUL 135A

CUL 135A. Food and Beverage Service Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a laboratory experience for enhancing student skills in effective food and beverage service. Emphasis is placed on practical experiences including greeting/service of guests, dining room set-up, profitability, menu sales and merchandising, service styles and reservations. Upon completion, students should be able to demonstrate practical applications of human relations and the skills required in the service of foods and beverages. This course is a laboratory to accompany CUL 135. Emphasis is placed on practical experiences that enhance the materials presented in CUL 135. Upon completion, students should be able to demonstrate practical applications of skills required in the service of foods and beverages.
Corequisites: Take CUL 135

CUL 140. Culinary Skills I. 5.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the fundamental concepts, skills and techniques in basic cooking, and moist, dry and combination heat. Emphasis is placed on practical applications of human relations and the skills required in the service of foods and beverages. This course is a laboratory to accompany CUL 135. Emphasis is placed on practical experiences that enhance the materials presented in CUL 135. Upon completion, students should be able to exhibit the basic cooking skills used in the foodservice industry. Guest service may be a course component.
Prerequisites: Take MAT 110 MAT 121 MAT 122 MAT 152 MAT 167 MAT 171 MAT 172 MAT 223 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 Minimum grade C
Corequisites: Take CUL 140A

CUL 140A. Culinary Skills I Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides laboratory experience for enhancing student skills in the fundamental concepts, skills and techniques in basic cookery, and moist, dry and combination heat. Emphasis is placed on practical experiences including recipe conversion, measurements, terminology, classical knife cuts, safe food/equipment handling, flavorings/seasonings, stocks/sauces/soups, and related topics. Upon completion, students should be able to demonstrate competency in the basic cooking skills used in the foodservice industry.
Corequisites: Take CUL 110 and CUL 140

CUL 142. Fundamentals of Food. 5.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the student to the basic principles of cooking, baking and kitchen operations. Topics include preparation methods for protein, starch, vegetable/fruit identification/selection, storage; breakfast cookery, breads, sweet dough/pastries, basic fabrication, knife skills, and mise en place. Upon completion, students should be able to execute efficiently a broad range of basic cooking/baking skills as they apply to different stations in foodservice operations.
Corequisites: Take CUL 110

CUL 150. Food Science. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the chemical and physical changes in foods that occur with cooking, handling, and processing. Emphasis is placed on practical application of heat transfer and its effect on color/flavor/texture, emulsification, protein coagulation, leavening agents, viscosity, and gel formation. Upon completion, students should be able to demonstrate an understanding of these principles as they apply to food preparation in an experimental setting.

CUL 160. Baking I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers basic ingredients, techniques, weights and measures, baking terminology and formula calculations. Topics include yeast/chemically leavened products, laminated doughs, pastry dough batter, pies/tarts, meringue, custard, cakes and cookies, icings, glazes and basic sauces. Upon completion, students should be able to demonstrate proper scaling and measurement techniques, and prepare and evaluate a variety of bakery products.
Corequisites: Take CUL 160A

CUL 160A. Baking I Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a laboratory experience for enhancing student skills in basic baking. Emphasis is placed on the practical experiences of yeast/chemically leavened products, laminated/pastry dough, batter, pies/tarts, meringue, custard, cakes and cookies, icings, glazes and basic sauces. Upon completion, students should be able to demonstrate a basic proficiency in bakeshop applications.
Corequisites: Take CUL 160 and CUL 110

CUL 170. Garde Manger I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces basic cold food preparation techniques and pantry production. Topics include salads, sandwiches, appetizers, dressings, basic garnishes, cheeses, cold sauces, and related food items. Upon completion, students should be able to present a cold food display and exhibit an understanding of the cold kitchen and its related terminology.
Corequisites: Take CUL 170A
CUL 170A. Garde Manger I Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a laboratory experience for enhancing student skills in basic cold food preparation techniques and pantry production. Emphasis is placed on the practical experiences that include salads, sandwiches, appetizers, dressings, basic garnishes, cheeses, cold sauces, and related food items. Upon completion, students should be able to demonstrate proficiency in the design of a cold food display.
Corequisites: Take CUL 170 and CUL 110

CUL 240. Culinary Skills II. 5.0 Credits. Class-1.0. Clinical-0.0. Lab-8.0. Work-0.0
This course is designed to further students' knowledge of the fundamental concepts, skills, and techniques involved in basic cookery. Emphasis is placed on meat identification/fabrication, butchery and cooking techniques/methods; appropriate vegetable/starch accompaniments; compound sauces; plate presentation; breakfast cookery; and quantity food preparation. Upon completion, students should be able to plan, execute, and successfully serve entrees with complementary side items. Guest service may be a course component.
Prerequisites: Take All: CUL 110 and CUL 140
Corequisites: Take CUL 240A

CUL 240A. Culinary Skills II Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a laboratory experience for furthering students' knowledge of the fundamental concepts, skills, and techniques involved in basic cookery. Emphasis is placed on practical applications of meat identification/fabrication; butchery and cooking techniques/methods; appropriate vegetable/starch accompaniments; compound sauces; plate presentation; breakfast cookery; and food preparation. Upon completion, students should be able to demonstrate a basic proficiency in the preparation of entrees and accompaniments.
Prerequisites: Take All: CUL 110 and CUL 140
Corequisites: Take CUL 240

CUL 245. Contemporary Cuisines. 5.0 Credits. Class-1.0. Clinical-0.0. Lab-8.0. Work-0.0
This course introduces students to current culinary trends which include a variety of preparation methods. Topics include practical experiences with classical desserts, frozen desserts, cake and torte production, decorating and icings/glazes, dessert plating and presentation. Upon completion, students should be able to design, set up, and evaluate a catering/event display to include a cold buffet with appropriate showpieces.
Prerequisites: Take All: CUL 110, CUL 140, and CUL 170
Corequisites: Take CUL 245A

CUL 245A. Contemporary Cuisines Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a laboratory experience for enhancing student skills with current culinary trends including a variety of preparation methods. Emphasis is placed on current and developing trends such as adaptation of native/regional ingredients and preparation methods into contemporary cuisines. Upon completion, students should be able to demonstrate knowledge of a variety of contemporary cuisines.
Prerequisites: Take All: CUL 110 and CUL 140
Corequisites: Take CUL 245

CUL 260. Baking II. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is designed to further students' knowledge in ingredients, weights and measures, baking terminology and formula calculation. Topics include classical desserts, frozen desserts, cake and torte production, decorating and icings/glazes, dessert plating and presentation. Upon completion, students should be able to perform cake-decorating techniques, produce pastry showpieces, and prepare and plate assorted pastries.
Prerequisites: Take All: CUL 110 and CUL 160
Corequisites: Take CUL 260A

CUL 260A. Baking II Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a laboratory experience for enhancing student skills in classical desserts, laminated pastry dough, cake and torte decorating. Topics include practical experiences with classical desserts, frozen desserts, cake and torte production, decorating and icings/glazes, dessert plating and presentation. Upon completion, students should be able to perform cake-decorating techniques, produce pastry showpieces, and prepare and plate assorted pastries.
Prerequisites: Take All: CUL 110 and CUL 160
Corequisites: Take CUL 260

CUL 270. Garde Manger II. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is designed to further students' knowledge in basic cold food preparation techniques and pantry production. Topics include p?t?s, terrines, galantines, decorative garnishing skills, carving, charcuterie, smoking, canap?s, hors d'oeuvres, and related food items. Upon completion, students should be able to design, set up, and evaluate a catering/event display to include a cold buffet with appropriate showpieces.
Prerequisites: Take All: CUL 110, CUL 140, and CUL 170
Corequisites: Take CUL 270A

CUL 270A. Garde Manger II Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a laboratory experience for enhancing student skills in basic cold food preparation techniques and pantry production. Emphasis is placed on practical experiences with p?t?s, terrines, galantines, decorative garnishing skills, carving, charcuterie, smoking, canap?s, hors d'oeuvres, and related food items. Upon completion, students should be able to demonstrate proficiency in the design/technical applications of advanced garde manger work including classical cold buffets incorporating appropriate showpieces.
Prerequisites: Take All: CUL 110, CUL 140, and CUL 170
Corequisites: Take CUL 270

CUL 273. Career Development. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces students to career planning/management practices that serve as a foundation for success in the hospitality industry. Emphasis is placed on self assessment, goal/career pathway development and employment strategies such as r?sum? preparation, interviewing techniques, and developing/utilizing the portfolio as a credential. Upon completion, students should be able to develop a career path leading to an effective job search.
Cyber Crime Technology (CCT)

CUL 285. Competition Fundamentals. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides practical experience in planning, techniques, and procedures required for culinary competitions and exhibitions. Emphasis is placed on competition strategies including menu planning, teamwork, plate design, flavor profiles, recipe development, nutrition, advanced knife/culinary skills, professionalism, and portfolio development. Upon completion, students should be able to apply competition/exhibition skills and standards in the competition arena and professional kitchen.
Prerequisites: Take One: CUL 110, CUL 110A, CUL 140, or CUL 160

CCT 231. Technology Crimes & Law. 3.0 Credits. Class-2.0.
This course introduces students to penetration testing, network vulnerabilities, and hacking. Topics include an overview of traditional network security, system hardening, and known weaknesses. Upon completion, students should be able to evaluate weaknesses of traditional and wireless network for the purpose of incident response, reconstruction, and forensic investigation.
Prerequisites: Take NET 110

CCT 250. Network Vulnerabilities I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces students to penetration testing, network vulnerabilities, and hacking. Topics include an overview of traditional network security, system hardening, and known weaknesses. Upon completion, students should be able to evaluate weaknesses of traditional and wireless network for the purpose of incident response, reconstruction, and forensic investigation.
Prerequisites: Take NET 110

CCT 289. Capstone Project. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides experience in cyber crime investigations or technology security audits in either the public or private domain. Emphasis is placed on student involvement with businesses or agencies dealing with technology security issues or computer crime activities. Upon completion, students should be able to successfully analyze, retrieve erased evidence and testify in mock proceedings against these criminal entrepreneurs.
Prerequisites: Take One: CCT 231 or CCT 220

Cytotechnology (CYT)

CYT 210. Intro to Clinical Cyto. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of the fundamentals of cell biology, basic histology, and pathology of tumors as they relate to clinical cytology. Topics include basic sciences, as well as inflammatory processes, morphology and classification of microorganisms, and basic clinical cytological terminology. Upon completion, students should be able to discuss the basic histological and pathological concepts common to the diagnostic cytology of all body systems.
Corequisites: Take CYT 212, CYT 214, CYT 216 and CYT 222

CYT 212. Intro to Cyto Techniques. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
The course covers care and use of the light microscope and histological and cytological specimen preparation techniques and equipment. Topics include laboratory safety, chemical hygiene, universal precautions, and fundamentals of staining and fixation. Upon completion, students should be able to discuss and demonstrate the care and use of the microscope and discuss basic concepts of staining and fixation.
Corequisites: Take CYT 210, CYT 212, CYT 214, CYT 216 and CYT 222

CYT 214. Gynecological Cytology. 14.0 Credits. Class-8.0. Clinical-0.0. Lab-12.0. Work-0.0
This course covers gynecological cytology, including normal anatomy, physiology, histology, cytology, malignancies, and treatment modalities. Topics include hormonal cytology, microorganisms and their manifestations, precursor lesions, and carcinomas. Upon completion, students should be able to demonstrate competence in cytological criteria and gynecological cytology.
Corequisites: Take CYT 210, CYT 212, CYT 216 and CYT 222

CYT 216. Clin & Diag Interp I. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers cytological criteria for representative cytological and histological specimens. Emphasis is placed on the cytology and histology of the female reproductive system. Upon completion, students should be able to demonstrate competence in the application of cytological criteria for gynecological cytology.
Corequisites: Take CYT 210, CYT 212, CYT 214 and CYT 222
CYT 220. Non-Gynecological Cytology. 12.0 Credits. Class-8.0. Clinical-0.0. Lab-8.0. Work-0.0
This course covers non-gynecological cytology and fine needle aspiration biopsy of all body sites. Topics include the anatomy, histology, pathology, and cytopathology of the respiratory system, alimentary canal, body cavities, urinary tract, and breast and aspiration cytology. Upon completion, students should be able to demonstrate competence in the use of cytological criteria as applied to non-gynecological cytology.
Prerequisites: Take CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222
Corequisites: Take CYT 224, CYT 226, CYT 236 and CYT 238

CYT 222. Cytopreparation Technique. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the fundamental principles of cytopreparation for histological and cytological specimens. Emphasis is placed on techniques related to cytopreparation. Upon completion, students should be able to demonstrate competence in the various cytopreparation methods.
Corequisites: Take CYT 210, CYT 212, CYT 214 and CYT 216

CYT 224. Gynecological Cytology Clinical Practicum I. 4.0 Credits. Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0
This course provides supervised clinical experience in gynecological cytological procedures. Emphasis is placed on cytological diagnosis by routine screening methods. Upon completion, students should be able to demonstrate mastery of all diagnostic skills with a minimum competence of 80%.
Prerequisites: Take All: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222
Corequisites: Take CYT 220, CYT 226, CYT 236 and CYT 238

CYT 226. Clinical & Diagnostic Interpretation II. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers cytological criteria for representative cytological and histological specimens. Emphasis is placed on the cytology and histology of all areas of non-gynecological cytology and fine needle aspiration biopsy. Upon completion, students should be able to demonstrate competence in the use of cytological criteria for non-gynecological cytology and fine needle aspiration biopsy.
Prerequisites: Take All: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222
Corequisites: Take CYT 220, CYT 224, CYT 236 and CYT 238

CYT 230. Non-Gynecological Cytology Clinical Practicum. 2.0 Credits. Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0
This course provides supervised clinical experience in non-gynecological cytological procedures. Emphasis is placed on differential diagnosis in non-gynecological cytology. Upon completion, students should be able to demonstrate mastery of all diagnostic skills with a minimum competence of 80%.
Prerequisites: Take All: CYT 220, CYT 224, CYT 226, CYT 236, and CYT 238
Corequisites: Take CYT 232 and CYT 234

CYT 232. Clinical Cytology Practicum. 1.0 Credit. Class-0.0. Clinical-3.0. Lab-0.0. Work-0.0
This course provides supervised clinical experience in a variety of clinical settings. Emphasis is placed on teamwork in the clinical setting with utilization of cytodiagnostic and cytopreparation skills. Upon completion, students should be able to function effectively as an entry-level cytotechnologist.
Prerequisites: Take All: CYT 220, CYT 224, CYT 226, CYT 236, and CYT 238
Corequisites: Take CYT 230 and CYT 234

CYT 234. Gynecological Cytology Clinical Practicum II. 3.0 Credits. Class-0.0. Clinical-9.0. Lab-0.0. Work-0.0
This course provides supervised clinical experience in gynecological cytological procedures. Emphasis is placed on the development of solid working criteria in routine cytology screening. Upon completion, students should be able to demonstrate mastery of all diagnostic skills with a minimum competence of 80%.
Prerequisites: Take All: CYT 220, CYT 224, CYT 226, CYT 236, and CYT 238
Corequisites: Take CYT 230 and CYT 232

CYT 236. Cytology Literature Review. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the development of a scientific, cytology-oriented research paper. Emphasis is placed on the development and presentation of a research proposal utilizing scientific methods, literature reviews, and interpretation of data. Upon completion, students should be able to prepare a scientific research paper based on the scientific method.
Prerequisites: Take All: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222
Corequisites: Take CYT 220, CYT 224, CYT 226 and CYT 238

CYT 238. Cyt Professional Issues. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the essentials of laboratory organization and management, the fundamentals of laboratory accreditation, and basic principles and applications of immunocytochemistry. Emphasis is placed on discussions of articles from current cytology journals with applications to the practice of cytopathology.
Prerequisites: Take All: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222
Corequisites: Take CYT 220, CYT 224, CYT 226 and CYT 236

Dance (DAN)

DAN 110. Dance Appreciation. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course for non-dance majors surveys diverse dance forms and the religious and cultural values that shape them. Topics include dances from Europe, Africa, Asia, and America. Upon completion, students should be able to demonstrate an understanding of the diverse forms and values that dance embraces.

DAN 124. Jazz Dance I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is the second in a series and provides an expansion of elementary/intermediate level jazz dance. Emphasis is placed on "Cool Jazz," theatrical jazz styles, and extended sequences of movement (routines). Upon completion, students should be able to demonstrate moderate mastery of elementary/intermediate-level jazz dance and be able to perform routines.
Prerequisites: Take DAN 124
DAN 130. Ballet I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the elementary elements of ballet technique. Emphasis is placed on simple positions, body placement, classroom discipline, and the Dalcroze method of counting music. Upon completion, students should be able to recognize the names and rhythms of basic steps and be able to perform those movements at barre and in center.

DAN 131. Ballet II. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is the second in a series of ballet technique. Emphasis is placed on motor skill development, elementary allegro steps, and body positions. Upon completion, students should be able to exhibit moderate technical skill in elementary ballet.

DAN 132. Intermediate Ballet I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the intermediate elements of ballet technique. Emphasis is placed on intermediate steps, memory of set patterns, and progress in skills, especially turns and allegros. Upon completion, students should be able to exhibit significant progress in intermediate ballet technique and the ability to memorize extended combinations of steps.
Prerequisites: Take DAN 131

DAN 133. Intermediate Ballet II. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is the second in a series of intermediate ballet technique. Emphasis is placed on progress in intermediate skills, memory and execution of steps, especially Grande Allegro. Upon completion, students should be able to exhibit significant achievement in intermediate ballet technique and the ability to quickly learn and retain combinations.
Prerequisites: Take DAN 132

DAN 134. Ballet Pointe Work. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides the fundamentals of pointe work. Emphasis is placed on relevé, piqués (pose), body placement, and foot strengthening. Upon completion, students should be able to execute simple ballet steps on pointe at the barre and in center.
Corequisites: Take DAN 132 and DAN 133

DAN 140. Modern Dance I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the elementary elements of modern dance technique. Emphasis is placed on floor, barre, and center floor exercises. Upon completion, students should be able to exhibit a basic understanding and skill in performing elementary modern dance technique.

DAN 141. Modern Dance II. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is the second in a series of elementary modern dance technique. Emphasis is placed on motor skill development and simple combinations in center floor. Upon completion, students should be able to exhibit moderate technical skill in elementary modern dance technique.

DAN 142. Intermediate Modern Dance I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces intermediate modern dance technique. Emphasis is placed on kinesthesis (body energy) and intermediate movements including turns, spirals, and jumps. Upon completion, students should be able to demonstrate significant progress in intermediate technique and extended movement sequences.
Prerequisites: Take DAN 141

DAN 143. Intermediate Modern Dance II. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is the second in a series of intermediate modern dance technique. Emphasis is placed on progress in intermediate skills, musical phrasing, and introduction to selections of modern dance repertoire. Upon completion, students should be able to demonstrate significant achievement in intermediate technique and to begin to practice selections of its repertoire.
Prerequisites: Take DAN 142

DAN 211. Dance History I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an in-depth study of world dance from pre-history to 1800. Emphasis is placed on examining the dance and dancers of diverse cultures including Africa, Asia, and Europe. Upon completion, students should be able to analyze the common need to dance and the forms, religions, and cultural values it embodies.

DAN 212. Dance History II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an in-depth study of world dance from 1800 to the present. Emphasis is placed on Western theatrical dance (ballet, modern dance, tap, and jazz) and the personalities that shaped it. Upon completion, students should be able to analyze culturally diverse dance forms and their cross-pollenation which have produced the "pan world dance of today."

DAN 221. Advanced Modern Dance I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the advanced elements of modern dance technique. Emphasis is placed on advanced movements, mastery of technical skills, and spatial divisions. Upon completion, students should be able to demonstrate significant progress in the execution of all movements and to demonstrate a sense of quality in them.
Prerequisites: Take DAN 143

DAN 222. Advanced Modern Dance II. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is the second in a series of advanced modern dance technique. Emphasis is placed on mastery and quality of technical skills and execution of complicated movement variations in extended sequence. Upon completion, students should be able to demonstrate significant achievement in modern dance skills and the ability to perform modern dance repertoire.
Prerequisites: Take DAN 221

DAN 225. Choreography I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the fundamental techniques of modern dance choreography. Emphasis is placed on improvisation and development of movement phrases. Upon completion, students should be able to create simple movements, improvise upon them, and develop longer movement phrases to create short dances.
Prerequisites: Take DAN 140

DAN 226. Choreography II. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the elements of dance (time, space, form) and structural forms as used to choreograph. Emphasis is placed on the use of design, dynamics, rhythm, motivation, and musical forms to create dances. Upon completion, students should be able to utilize the elements of time, space, and form and form manipulation to choreograph and rehearse a group dance.
Prerequisites: Take DAN 140
DAN 236. Advanced Ballet I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the advanced elements of ballet technique. Emphasis is placed on refinement of all technical skills, learning advanced movements, pointe (female) and big jumps (male). Upon completion, students should be able to exhibit significant progress in the execution of all movements and to demonstrate a sense of quality in them.
Prerequisites: Take DAN 133

DAN 237. Advanced Ballet II. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is the second in a series of advanced ballet technique. Emphasis is placed on mastery of all skills, refinement of movements, pointe (female) and big jumps (male). Upon completion, students should be able to demonstrate significant achievement in all ballet skills and the ability to perform ballet repertoire.
Prerequisites: Take DAN 236

DAN 262. Dance Performance. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course includes audition, casting, rehearsal, and video performance of a new ballet. Emphasis is placed on universal rehearsal techniques, improvement of dance techniques, teamwork, and performance of new choreography. Upon completion, students should be able to demonstrate through video performance a basic knowledge of the creation of a new ballet.

DAN 264. Dance Production. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-9.0. Work-0.0
This course covers creation, rehearsal, and performance, before a live audience, of a new or reconstructed work by faculty, guest artist, or repertory. Emphasis is placed on movement, memory skills, role development, accepted professional behavior, and ability to project the choreographer's intent. Upon completion, students should be able to demonstrate through performance a basic knowledge of the artistic and technical aspects of performing before a live audience.

Database Management Technology (DBA)

DBA 110. Database Concepts. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces database design and creation using a DBMS product. Emphasis is placed on data dictionaries, normalization, data integrity, data modeling, and creation of simple tables, queries, reports, and forms. Upon completion, students should be able to design and implement normalized database structures by creating simple database tables, queries, reports, and forms.

DBA 112. Database Utilization. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces basic database functions and uses. Emphasis is placed on database manipulation with queries, reports, forms, and some table creation. Upon completion, students should be able to enter and manipulate data from the end user mode.
Prerequisites: Take One: CIS 110, CIS 111, or OST 137

DBA 115. Database Applications. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course applies concepts learned in DBA 110 to a specific DBMS. Topics include manipulating multiple tables, advanced queries, screens and reports, linking, and command files. Upon completion, students should be able to create multiple table systems that demonstrate updates, screens, and reports representative of industry requirements.
Prerequisites: Take DBA 110

DBA 200. Oracle Database Programming I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers database administration issues and distributed database concepts. Topics include database administrator (DBA) goals and functions, backup and recovery, standards and procedures, training, and database security and performance evaluations. Upon completion, students should be able to produce functional DBA documentation and administer a database.

DBA 220. Oracle Database Programming II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to enhance programming skills developed in DBA 120. Topics include application development with GUI front-ends and embedded programming. Upon completion, students should be able to develop an Oracle DBMS application which includes a GUI front-end and report generation.
Prerequisites: Take DBA 120

DBA 221. SQL Server Database Programming II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to enhance programming skills developed in DBA 120. Topics include application development with GUI front-ends and embedded programming. Upon completion, students should be able to develop a SQL Server DBMS application which includes a GUI front-end and report generation.
Prerequisites: Take DBA 120

DBA 285. Data Warehousing and Mining. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces data warehousing and data mining techniques. Emphasis is placed on data warehouse design, data transference, data cleansing, retrieval algorithms, and mining techniques. Upon completion, students should be able to create, populate, and mine a data warehouse.
Prerequisites: Take NOS 130

Dental (DEN)

DEN 100. Basic Orofacial Anatomy. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a basic introduction to the structures of the head, neck, and oral cavity. Topics include tooth morphology, head and neck anatomy, histology, and embryology. Upon completion, students should be able to demonstrate knowledge of normal structures and development and how they relate to the practice of dental assisting.
Prerequisites: Take BIO 163

Central Piedmont Community College
DEN 101. Preclinical Procedures. 7.0 Credits. Class-4.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides instruction in procedures for the clinical dental assistant as specified by the North Carolina Dental Practice Act. Emphasis is placed on orientation to the profession, infection control techniques, instruments, related expanded functions, and diagnostic, operative, and specialty procedures. Upon completion, students should be able to demonstrate proficiency in clinical dental assisting procedures. Prerequisites: Take ENG 111 COM 231 with a minimum grade of C
Take DEN 100 DEN 102 DEN 103 DEN 105 DEN 111 DEN 112
Corequisites: Take DEN 104
DEN 102. Dental Materials. 5.0 Credits. Class-3.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides instruction in identification, properties, evaluation of quality, principles, and procedures related to manipulation and storage of operative and specialty dental materials. Emphasis is placed on the understanding and safe application of materials used in the dental office and laboratory. Upon completion, students should be able to demonstrate proficiency in the laboratory and clinical application of routinely used dental materials. Prerequisites: Take DEN 100 DEN 111 Minimum grade C
DEN 103. Dental Sciences. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a study of oral pathology, pharmacology, and dental office emergencies. Topics include oral pathological conditions, dental therapeutics, and management of emergency situations. Upon completion, students should be able to recognize abnormal oral conditions, identify classifications, describe actions and effects of commonly prescribed drugs, and respond to medical emergencies.
DEN 104. Dental Health Education. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the study of preventive dentistry to prepare dental assisting students for the role of dental health educator. Topics include etiology of dental diseases, preventive procedures, and patient education theory and practice. Upon completion, students should be able to demonstrate proficiency in patient counseling and oral health instruction in private practice or public health settings. Prerequisites: Take DEN 111 DEN 112 DEN 100 Minimum grade C
Corequisites: Take DEN 101;
DEN 105. Practice Management. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a study of principles and procedures related to management of the dental practice. Emphasis is placed on maintaining clinical and financial records, patient scheduling, and supply and inventory control. Upon completion, students should be able to demonstrate fundamental skills in dental practice management.
DEN 106. Clinical Practice I. 5.0 Credits. Class-1.0. Clinical-12.0. Lab-0.0. Work-0.0
This course is designed to provide experience assisting in a clinical setting. Emphasis is placed on the application of principles and procedures of four-handed dentistry and laboratory and clinical support functions. Upon completion, students should be able to utilize classroom theory and laboratory and clinical skills in a dental setting. Prerequisites: Take DEN 101
DEN 107. Clinical Practice II. 5.0 Credits. Class-1.0. Clinical-12.0. Lab-0.0. Work-0.0
This course is designed to increase the level of proficiency in assisting in a clinical setting. Emphasis is placed on the application of principles and procedures of four-handed dentistry and laboratory and clinical support functions. Upon completion, students should be able to combine theoretical and ethical principles necessary to perform entry-level skills including functions delegable to a DA II. Prerequisites: Take DEN 106
DEN 110. Orofacial Anatomy. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the structures of the head, neck, and oral cavity. Topics include tooth morphology, head and neck anatomy, histology, and embryology. Upon completion, students should be able to relate the identification of normal structures and development to the practice of dental assisting and dental hygiene.
DEN 111. Infection/Hazard Control. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the infection and hazard control procedures necessary for the safe practice of dentistry. Topics include microbiology, practical infection control, sterilization and monitoring, chemical disinfectants, aseptic technique, infectious diseases, OSHA standards, and applicable North Carolina laws. Upon completion, students should be able to understand infectious diseases, disease transmission, infection control procedures, biohazard management, OSHA standards, and applicable North Carolina laws.
DEN 112. Dental Radiography. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a comprehensive view of the principles and procedures of radiology as they apply to dentistry. Topics include techniques in exposing, processing, and evaluating radiographs, as well as radiation safety, quality assurance, and legal issues. Upon completion, students should be able to demonstrate proficiency in the production of diagnostically acceptable radiographs using appropriate safety precautions. Prerequisites: Take DEN 100 DEN 105 DEN 111
DEN 120. Dental Hygiene Preclinical Lecture. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces preoperative and clinical dental hygiene concepts. Emphasis is placed on the assessment phase of patient care as well as the theory of basic dental hygiene instrumentation. Upon completion, students should be able to collect and evaluate patient data at a basic level and demonstrate knowledge of dental hygiene instrumentation. Corequisites: Take DEN 121
DEN 121. Dental Hygiene Preclinical Lab. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides the opportunity to perform clinical dental hygiene procedures discussed in DEN 120. Emphasis is placed on clinical skills in patient assessment and instrumentation techniques. Upon completion, students should be able to demonstrate the ability to perform specific preclinical procedures. Corequisites: Take DEN 120
DEN 123. Nutrition/Dental Health. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces basic principles of nutrition with emphasis on nutritional requirements and their application to individual patient needs. Topics include the study of the food pyramid, nutrient functions, Recommended Daily Allowances, and related psychological principles. Upon completion, students should be able to recommend and counsel individuals on their food intake as related to their dental health.

DEN 124. Periodontology. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an in-depth study of the periodontium, periodontal pathology, periodontal monitoring, and the principles of periodontal therapy. Topics include periodontal anatomy and a study of the etiology, classification, and treatment modalities of periodontal diseases. Upon completion, students should be able to describe, compare, and contrast techniques involved in periodontal/maintenance therapy, as well as patient care management.
Prerequisites: Take DEN 110

DEN 125. Dental Office Emergencies. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a study of the management of dental office emergencies. Topics include methods of prevention, necessary equipment/drugs, medicolegal considerations, recognition and effective initial management of a variety of emergencies. Upon completion, the student should be able to recognize, assess and manage various dental office emergencies and activate advanced medical support when indicated.

DEN 130. Dental Hygiene Theory I. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a continuation of the didactic dental hygiene concepts necessary for providing an oral prophylaxis. Topics include deposits/removal, instrument sharpening, patient education, fluorides, planning for dental hygiene treatment, charting, and clinical records and procedures. Upon completion, students should be able to demonstrate knowledge needed to complete a thorough oral prophylaxis.
Prerequisites: Take DEN 120
Corequisites: Take DEN 131

DEN 131. Dental Hygiene Clinic I. 3.0 Credits. Class-0.0. Clinical-9.0. Lab-0.0. Work-0.0
This course continues skill development in providing an oral prophylaxis. Emphasis is placed on treatment of the recall patients with gingivitis or light deposits. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment.
Prerequisites: Take DEN 121
Corequisites: Take DEN 130

DEN 140. Dental Hygiene Theory II. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a continuation of the development, theory, and practice of patient care. Topics include modification of treatment for special needs patients, advanced radiographic interpretation, and ergonomics. Upon completion, students should be able to differentiate necessary treatment modifications, effective ergonomic principles, and radiographic abnormalities.
Prerequisites: Take DEN 130
Corequisites: Take DEN 141

DEN 141. Dental Hygiene Clinic II. 2.0 Credits. Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0
This course continues skill development in providing an oral prophylaxis. Emphasis is placed on treatment of patients with early periodontal disease and subgingival deposits. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment.
Prerequisites: Take DEN 131
Corequisites: Take DEN 140

DEN 220. Dental Hygiene Theory III. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a continuation in developing the theories and practices of patient care. Topics include periodontal debridement, pain control, subgingival irrigation, air polishing, and case presentations. Upon completion, students should be able to demonstrate knowledge of methods of treatment and management of periodontally compromised patients.
Prerequisites: Take DEN 140
Corequisites: Take DEN 221

DEN 221. Dental Hygiene Clinic III. 4.0 Credits. Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0
This course continues skill development in providing an oral prophylaxis. Emphasis is placed on treatment of patients with moderate to advanced periodontal involvement and moderate deposits. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment.
Prerequisites: Take DEN 141
Corequisites: Take DEN 220

DEN 222. General & Oral Pathology. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a general knowledge of oral pathological manifestations associated with selected systemic and oral diseases. Topics include developmental and degenerative diseases, selected microbial diseases, specific and nonspecific immune and inflammatory responses with emphasis on recognizing abnormalities. Upon completion, students should be able to differentiate between normal and abnormal tissues and refer unusual findings to the dentist for diagnosis.
Prerequisites: Take One: BIO 163, BIO 165, or BIO 168

DEN 223. Dental Pharmacology. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides basic drug terminology, general principles of drug actions, dosages, routes of administration, adverse reactions, and basic principles of anesthesiology. Emphasis is placed on knowledge of drugs in overall understanding of patient histories and health status. Upon completion, students should be able to recognize that each patient's general health or drug usage may require modification of the treatment procedures.
Prerequisites: Take DEN 125 with a minimum grade of C
Corequisites: Take One: BIO 163, BIO 165, or BIO 168

DEN 224. Materials and Procedures. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the physical properties of materials and related procedures used in dentistry. Topics include restorative and preventive materials, fabrication of casts and appliances, and chairside functions of the dental hygienist. Upon completion, students should be able to demonstrate proficiency in the laboratory and/or clinical application of routinely used dental materials and chairside functions.
Prerequisites: Take DEN 111
DEN 230. Dental Hygiene Theory IV. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to increase knowledge of the profession. Emphasis is placed on dental specialties and completion of a case presentation. Upon completion, students should be able to demonstrate knowledge of various disciplines of dentistry and principles of case presentations.
Prerequisites: Take DEN 220
Corequisites: Take DEN 231

DEN 231. Dental Hygiene Clinic IV. 4.0 Credits. Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0
This course continues skill development in providing an oral prophylaxis. Emphasis is placed on periodontal maintenance and on treating patients with moderate to advanced/refractory periodontal disease. Upon completion, students should be able to assess these patients’ needs and complete the necessary dental hygiene treatment.
Prerequisites: Take DEN 221
Corequisites: Take DEN 230

DEN 232. Community Dental Health. 3.0 Credits. Class-2.0. Clinical-3.0. Lab-0.0. Work-0.0
This course provides a study of the principles and methods used in assessing, planning, implementing, and evaluating community dental health programs. Topics include epidemiology, research methodology, biostatistics, preventive dental care, dental health education, program planning, and financing and utilization of dental services. Upon completion, students should be able to assess, plan, implement, and evaluate a community dental health program.
Prerequisites: Take DEN 123 DEN 130 DEN 131 with a minimum grade of C

DEN 233. Professional Development. 2.0 Credits. Class-2.0.
Clinical-0.0. Lab-0.0. Work-0.0
This course includes professional development, ethics, and jurisprudence with applications to practice management. Topics include conflict management, state laws, resumes, interviews, and legal liabilities as health care professionals. Upon completion, students should be able to demonstrate the ability to practice dental hygiene within established ethical standards and state laws.

Design: Creative (DES)

DES 110. Architectural Graphics. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces basic drafting skills and techniques. Emphasis is placed on the use of drafting equipment, lettering, dimensioning, elevations, sections, construction details, and design standards as related to interior design. Upon completion, students should be able to complete construction documents skillfully utilizing principles of drafting.

DES 112. Building and Construction Systems. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of the residential construction process for the interior designer. Emphasis is placed on providing the fundamental knowledge needed by the designer in residential construction basics and methods, including electrical and lighting, plumbing, sustainability, mechanical and ventilation, and the building envelope. Upon completion, students should be able to demonstrate effective communication required for effective collaboration with architects, engineers, and building contractors.
Prerequisites: Take DES 110 or ARC 111

DES 115. Color Theory. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the element of color as a major design factor. Emphasis is placed on the physical, psychological, and other implications of color in design. Upon completion, students should be able to demonstrate knowledge of color and its effects on the human environment.

DES 120. CAD for Interior Design. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces basic computer-aided design and drafting skills and techniques within interior design applications. Emphasis is placed on the most common computer commands used in architectural drafting and design to draw, edit, manipulate layers, and create templates. Upon completion, students should be able to use specific computer applications to complete drawings and plot/print.
Prerequisites: Take DES 110 or ARC 111
Take DES 110

DES 121. CAD for Interior Design/Advanced. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides advanced techniques in drafting on the computer and the applications of computer-aided design for various projects. Emphasis is placed on specific exercises that integrate and reinforce the presentation topics into a scaled drawing. Upon completion, students should be able to draw, transfer, and plot assigned floorplans in an efficient and accurate manner using the computer equipment and software provided.
Prerequisites: Take DES 120

DES 125. Graphic Presentation I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces graphic presentation techniques for communicating ideas. Topics include drawing, perspective drawing, and wet and dry media. Upon completion, students should be able to produce a pictorial presentation.

DES 135. Principles and Elements of Design I. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the basic concepts and terminology of design as they relate to the design profession. Topics include line, pattern, space, mass, shape, texture, color, unity, variety, rhythm, emphasis, balance, proportion, scale, and function. Upon completion, students should be able to demonstrate an understanding of the principles covered through hands-on application.

DES 210. Business Practices for Interior Design. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces contemporary business practices for interior design. Topics include employment skills, business formations, professional associations, preparation of professional contracts and correspondence, and means of compensation. Upon completion, students should be able to describe the basic business formations and professional associations and compose effective letters and contracts.
Prerequisites: Take DES 220
DES 220. Prin of Interior Design. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers the basic principles of design as they relate specifically to interior design, furniture arrangement, wall composition, color, furnishings, collages, and illustration. Emphasis is placed on spatial relationships, craftsmanship, and visual presentation techniques. Upon completion, students should be able to arrange furnishings in rooms for various purposes, select furnishings and colors, and illustrate ideas graphically.
Prerequisites: Complete one of the following options:
• DES 135 and ARC 111
• DES 110
• DFT 115

DES 225. Textiles/Fabrics. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course includes the study of woven and non-woven fabrics for interiors. Topics include characteristics of fibers, yarns, weaving, felting, and knitting; processing of leather; and adorning and finishing of interior fabrics. Upon completion, students should be able to recognize and use correct terminology for upholstery, window treatments, and rugs/carpets with regard to flammability, performance, and durability.

DES 230. Residential Design I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course includes principles of interior design for various residential design solutions. Emphasis is placed on visual presentation and selection of appropriate styles to meet specifications. Upon completion, students should be able to complete scaled floorplans, elevations, specifications, color schemes and fabrics, and finishes and furniture selection.
Prerequisites: Take DES 220 ARC 120

DES 231. Residential Design II. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides advanced projects with a client profile that utilizes the skills developed in DES 230. Emphasis is placed on a total concept and the presentation of appropriate and creative design solutions. Upon completion, students should be able to complete detailed floorplans, space planning, furniture plan, specifications, program schedules, finishes, and detailed window treatments.
Prerequisites: Take DES 230

DES 235. Products. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an overview of interior finishing materials and the selection of quality upholstery and case goods. Topics include hard and resilient floor coverings; wall coverings and finishes; ceilings, moldings, and furniture construction techniques; and other interior components. Upon completion, students should be able to recognize and use correct terminology, select appropriate materials for interior surfaces, and choose furniture based on sound construction.
Prerequisites: Take DES 135

DES 240. Commercial/Contract Design I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces commercial/contract design including retail, office, institutional, restaurant, and hospitality design. Emphasis is placed on ADA requirements, building codes and standards, space planning, and selection of appropriate materials for non-residential interiors. Upon completion, students should be able to analyze and design introductory non-residential projects using graphic presentation concepts.
Prerequisites: Take DES 220

DES 241. Commercial/Contract Design II. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides an in-depth study of non-residential design exploring more comprehensive design solutions such as health care facilities, furniture gallery design, and large office complexes. Emphasis is placed on design of commercial interiors and suitability of materials to meet ADA requirements, codes, and standards. Upon completion, students should be able to design non-residential spaces meeting ADA requirements and select furniture, materials, fabrics, and accessories meeting codes and flammability standards.
Prerequisites: Take DES 240

DES 242. Kitchen and Bath Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the fundamentals of kitchen and bath design. Emphasis is placed on the principles and elements of kitchen and bath design, analysis of client needs, specifying products, and drafting design solutions. Upon completion, students should be able to produce basic kitchen and bath design utilizing standards established by the National Kitchen and Bath Association (NKBA).
Prerequisites: Take One: ARC 111, DES 110, or DFT 115

DES 245. History of Interiors and Furnishings I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers interiors, exteriors, and furnishings from ancient Egypt through French Neo-Classicism. Emphasis is placed on vocabulary, chronology, and style recognition. Upon completion, students should be able to classify and date interior and exterior architecture and furnishings and be conversant with pertinent vocabulary.

DES 255. History of American Homes. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of American architectural styles from Medieval frame dwellings through the International style. Emphasis is placed on vocabulary, characteristics of architectural styles, and chronology as well as research of a historic home. Upon completion, students should be able to identify and use correct terminology regarding the history of American homes.

DES 265. Lighting/Interior Design. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces theory and contemporary concepts in lighting. Topics include light levels, light quality, lamps and fixtures, and their use in interior design. Upon completion, students should be able to determine light levels and requirements based on national standards and select luminaries for specific light qualities.
Prerequisites: Take ARC 111 ARC 133

DES 275. Furniture Design & Construction. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces contemporary furniture design and construction techniques used in custom and handmade furniture building. Topics include design and manufacturing processes and materials selection for handmade and production, case goods, and upholstery manufacturing. Upon completion, students should be able to design and describe manufacturing processes used in both case goods and upholstered furniture manufacturing.
Prerequisites: Take ARC 120 DES 220
DES 280. Codes & Standards/Interior Design. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces institutional and residential building codes as they relate to interior design. Topics include state and federal codes and standards related to physically disadvantaged access, fire codes, space allocation codes, and bathroom facility codes. Upon completion, students should be able to research and interpret state and federal building codes. Prerequisites: Take ARC 111 ARC 133

**Developmental Disabilities (DDT)**

DDF 252. Advanced Solid Modeling. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces advanced solid modeling and design software. Topics include design principles, design constraints, work planes, view generation, and model sharing and rendering. Upon completion, students should be able to create advanced solid models. Prerequisites: Take One: DFT 153 or DFT 154

DDT 220. Program Planning Process. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the individual program planning process used in services for people with developmental disabilities. Topics include basic components and benefits of the process, the effect of values on outcomes, and group problem-solving methods. Upon completion, students should be able to demonstrate an understanding of effective group process in program planning and the individual roles of team members. This course is a unique concentration requirement of the developmental disabilities concentration in the human services technology program.

DDT 230. Supported Employment. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the concept of supported employment and the action steps needed to assist individuals with disabilities to participate in the world of work. Topics include a history of vocational services, supported employment values, organizational marketing, consumer assessment, job development, employment selection, job site training and long term supports. Upon completion, students should be able to develop a customer profile, a marketing plan, and assist individuals with disabilities to obtain and maintain employment.

DDT 240. Aging Lifelong Disability. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to address issues facing individuals with developmental disabilities who are aging. Emphasis is placed on techniques to develop coalitions between the aging network and service providers, health and wellness strategies, later life planning, and community inclusion. Upon completion, students should be able to identify formal and informal supports and strategies for community inclusion for adults aging with lifelong disabilities. Prerequisites: Take DDT 110

**Digital Media Technology (DME)**

DME 110. Introduction to Digital Media. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces students to key concepts, technologies, and issues related to digital media. Topics include emerging standards, key technologies and related design issues, terminology, media formats, career paths, and ethical issues. Upon completion, students should be able to demonstrate the various media formats that are used in digital media technology.

**Drafting (DFT)**

DFT 121. Introduction to GD&T. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces basic geometric dimensioning and tolerancing principles. Topics include symbols, annotation, theory, and applications. Upon completion, students should be able to interpret and apply basic geometric dimensioning and tolerancing principles to drawings. Prerequisites: Take DFT 111 DFT 3404 or EGR 120

DFT 151. CAD I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces CAD software as a drawing tool. Topics include drawing, editing, file management, and plotting. Upon completion, students should be able to produce and plot a CAD drawing.

DFT 152. CAD II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces extended CAD applications. Emphasis is placed upon intermediate applications of CAD skills. Upon completion, students should be able to use extended CAD applications to generate and manage drawings. Prerequisites: Take DFT 151 or DFT 151T

DFT 153. CAD III. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces advanced CAD applications. Emphasis is placed upon advanced applications of CAD skills. Upon completion, students should be able to use advanced CAD applications to generate and manage data. Prerequisites: Take DFT 152 or DFT 154
DFT 154. Intro to Solid Modeling. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is an introduction to basic three-dimensional solid modeling and design software. Topics include basic design, creation, editing, rendering and analysis of solid models, and creation of multiview drawings. Upon completion, students should be able to use design techniques to create, edit, render and generate a multiview drawing.

DFT 170. Engineering Graphics. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces basic engineering graphics skills and applications. Topics include sketching, selection and use of current methods and tools, and the use of engineering graphics applications. Upon completion, students should be able to demonstrate an understanding of basic engineering graphics principles and practices.

DRA 111. Theatre Appreciation. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a study of the art, craft, and business of the theatre. Emphasis is placed on the audience's appreciation of the work of the playwright, director, actor, designer, producer, and critic. Upon completion, students should be able to demonstrate a vocabulary of theatre terms and to recognize the contributions of various theatre artists.

DRA 112. Literature of the Theatre. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a survey of dramatic works from the classical Greek through the present. Emphasis is placed on the language of drama, critical theory, and background as well as on play reading and analysis. Upon completion, students should be able to articulate orally and in writing their appreciation and understanding of dramatic works.

DRA 120. Voice for Performance. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides guided practice in the proper production of speech for the theatre. Emphasis is placed on improving speech, including breathing, articulation, pronunciation, and other vocal variables. Upon completion, students should be able to demonstrate effective theatrical speech.

DRA 122. Oral Interpretation. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the dramatic study of literature through performance. Emphasis is placed on analysis and performance of poetry, drama, and prose fiction. Upon completion, students should be able to embody and discuss critically the speakers inherent in literature.

DRA 124. Readers Theatre. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a theoretical and applied introduction to the medium of readers theatre. Emphasis is placed on the group performance considerations posed by various genres of literature. Upon completion, students should be able to adapt and present a literary script following the conventions of readers theatre.

DRA 128. Children's Theatre. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the philosophy and practice involved in producing plays for young audiences. Topics include the selection of age-appropriate scripts and the special demands placed on directors, actors, designers, and educators in meeting the needs of young audiences. Upon completion, students should be able to present and critically discuss productions for children.

DRA 130. Acting I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides an applied study of the actor's craft. Topics include role analysis, training the voice, and body concentration, discipline, and self-evaluation. Upon completion, students should be able to explore their creativity in an acting ensemble.

DRA 131. Acting II. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides additional hands-on practice in the actor's craft. Emphasis is placed on further analysis, characterization, growth, and training for acting competence. Upon completion, students should be able to explore their creativity in an acting ensemble.

Prerequisites: Take DRA 130

DRA 135. Acting for the Camera I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides an applied study of the camera actor's craft. Topics include commercial, dramatic, and print performance styles. Upon completion, students should be able to explore their creativity in on-camera performance.

DRA 136. Acting for the Camera II. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides additional hands-on study of the camera actor's craft. Emphasis is placed on more advanced camera acting theories, auditioning techniques, daytime drama, feature film, and print advertisement performance styles. Upon completion, students should be able to explore their creativity in on-camera performance.

Prerequisites: Take DRA 135

DRA 140. Stagecraft I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the theory and basic construction of stage scenery and properties. Topics include stage carpentry, scene painting, stage electrics, properties, and backstage organization. Upon completion, students should be able to pursue vocational and avocational roles in technical theatre.

DRA 141. Stagecraft II. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides additional hands-on practice in the elements of stagecraft. Emphasis is placed on the design and implementation of the arts and crafts of technical theatre. Upon completion, students should be able to pursue vocational or avocational roles in technical theatre.

Prerequisites: Take DRA 140

DRA 142. Costuming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the techniques of costume construction and crafts processes. Emphasis is placed on learning costuming techniques, using equipment and materials, and finishing production-appropriate costumes. Upon completion, students should be able to demonstrate an understanding of pattern drafting, construction techniques, and costume fitting procedures.

DRA 145. Stage Make-Up. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the research, design, selection of materials, and application of stage make-up, prosthetics, wigs, and hairpieces. Emphasis is placed on the development of techniques, style, and presentation of the finished make-up. Upon completion, students should be able to create and apply make-up, prosthetics, and hairpieces.
**Economics (ECO)**

**ECO 151. Survey of Economics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course, for those who have not received credit for ECO 251 or 252, introduces basic concepts of micro- and macroeconomics. Topics include supply and demand, optimizing economic behavior, prices and wages, money, interest rates, banking system, unemployment, inflation, taxes, government spending, and international trade. Upon completion, students should be able to explain alternative solutions for economic problems faced by private and government sectors. Students needing advancement studies courses should complete those prior to taking this class.

Prerequisites: Take DMA 050 MAT 080 MAT 121 MAT 122 MAT 167 MAT 171 MAT 172 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 with a minimum grade of C Take DRE 098 or ENG 111 with a minimum grade of C

**ECO 251. Principles of Microeconomics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces economic analysis of individual, business, and industry in the market economy. Topics include the price mechanism, supply and demand, optimizing economic behavior, costs and revenue, market structures, factor markets, income distribution, market failure, and government intervention. Upon completion, students should be able to identify and evaluate consumer and business alternatives in order to efficiently achieve economic objectives. Students seeking to take this course to meet the college transfer Social/Behavioral Sciences requirement may also take ECO-252. (no ECO prerequisites).

Prerequisites: Take DMA 050 MAT 080 MAT 121 MAT 122 MAT 167 MAT 171 MAT 172 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 with a minimum grade of C Take DRE 098 or ENG 111 with a minimum grade of C

**ECO 252. Principles of Macroeconomics. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces economic analysis of aggregate employment, income, and prices. Topics include major schools of economic thought; aggregate supply and demand; economic measures, fluctuations, and growth; money and banking; stabilization techniques; and international trade. Upon completion, students should be able to evaluate national economic components, conditions, and alternatives for achieving socioeconomic goals. Students seeking to take this course to meet the college transfer Social/Behavioral Sciences requirement may also take ECO-251. (no ECO prerequisites).

Prerequisites: Take DMA 050 MAT 080 MAT 121 MAT 122 MAT 167 MAT 171 MAT 172 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 with a minimum grade of C Take DRE 098 or ENG 111 with a minimum grade of C

**Education (EDU)**

**EDU 119. Introduction to Early Childhood Education. 4.0 Credits.** Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the foundations of the education profession, the diverse educational settings for young children, professionalism and planning developmentally appropriate programs for all children. Topics include historical foundations, program types, career options, professionalism and creating inclusive environments and curriculum responsive to the needs of all children and families. Upon completion, students should be able to design career plans and develop schedules, environments and activity plans appropriate for all children.

**EDU 131. Child, Family, and Community. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the development of partnerships between culturally and linguistically diverse families, children, schools and communities. Emphasis is placed on developing skills and identifying benefits for establishing, supporting, and maintaining respectful, collaborative relationships between diverse families, programs/schools, and community agencies/resources. Upon completion, students should be able to explain appropriate relationships between families, educators, and professionals that enhance development and educational experiences of all children.

Corequisites: Take DRE 097
EDU 144. Child Development I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course includes the theories of child development, needs, milestones, and factors that influence development, from conception through approximately 36 months. Emphasis is placed on developmental sequences in physical/motor, emotional/social, cognitive, and language domains and the impact of multiple influences on development and learning. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain environmental factors that impact development, and identify strategies for enhancing development.
Corequisites: Take DRE 097

EDU 145. Child Development II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course includes the theories of child development, needs, milestones, and factors that influence development, from preschool through middle childhood. Emphasis is placed on developmental sequences in physical/motor, emotional/social, cognitive, and language domains and the impact of multiple influences on development and learning. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain environmental factors that impact development, and identify strategies for enhancing development.
Prerequisites: Take EDU 144
Corequisites: Take DRE 097

EDU 146. Child Guidance. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces principles and practical techniques including the design of learning environments for providing developmentally appropriate guidance for all children, including those at risk. Emphasis is placed on observation skills, cultural influences, underlying causes of behavior, appropriate expectations, development of self control and the role of communication and guidance. Upon completion, students should be able to demonstrate direct/indirect strategies for preventing problem behaviors, teaching appropriate/acceptable behaviors, negotiation, setting limits and recognizing at risk behaviors.
Corequisites: Take DRE 097

EDU 151. Creative Activities. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers planning, creation and adaptation of developmentally supportive learning environments with attention to curriculum, interactions, teaching practices and learning materials. Emphasis is placed on creating and adapting integrated, meaningful, challenging and engaging developmentally supportive learning experiences in art, music, movement and dramatics for all children. Upon completion, students should be able to create, adapt, implement and evaluate developmentally supportive learning materials, experiences and environments.
Corequisites: Take EDU 151A;

EDU 151A. Creative Activities Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a laboratory component to complement EDU 151. Emphasis is placed on practical experiences that enhance concepts introduced in the classroom. Upon completion, students should be able to demonstrate a practical understanding of the development and implementation of appropriate creative activities.
Corequisites: Take EDU 151 and DRE 097

EDU 153. Health, Safety and Nutrition. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers promoting and maintaining the health and well-being of all children. Topics include health and nutritional guidelines, common childhood illnesses, maintaining safe and healthy learning environments, recognition and reporting of abuse and neglect and state regulations. Upon completion, students should be able to demonstrate knowledge of health, safety, and nutritional needs, safe learning environments, and adhere to state regulations.
Corequisites: Take DRE 097

EDU 154. Social/Emotion/Behavior Development. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the emotional/social development of children and the causes, expressions, prevention and management of challenging behaviors in all children. Emphasis is placed on caregiver/family/child relationships, positive emotional/social environments, developmental concerns, risk factors, and intervention strategies. Upon completion, students should be able to identify factors influencing emotional/social development, utilizing screening measures, and designing positive behavioral supports.
Prerequisites: Complete one of the following options:
• EDU 144 and EDU 145
• PSY 244 and PSY 245
Corequisites: Take DRE 097

EDU 158. Healthy Lifestyles-Youth. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers planning, creation and adaptation of developmentally supportive learning environments with attention to curriculum, interactions, teaching practices and learning materials. Emphasis is placed on creating and adapting integrated, meaningful, challenging and engaging developmentally supportive learning experiences in art, music, movement and dramatics for all children. Upon completion, students should be able to create, adapt, implement and evaluate developmentally supportive learning materials, experiences and environments.
Corequisites: Take EDU 151A;

EDU 163. Classroom Management and Instruction. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers management and instructional techniques with school-age populations. Topics include classroom management and organization, teaching strategies, individual student differences and learning styles, and developmentally appropriate classroom guidance techniques. Upon completion, students should be able to utilize developmentally appropriate behavior management and instructional strategies that enhance the teaching/learning process and promote students' academic success.
Corequisites: Take DRE 097
EDU 184. Early Childhood Introductory Practicum. 2.0 Credits.  
Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course introduces students to early childhood settings and applying skills in a three star (minimum) or NAECY accredited or equivalent, quality early childhood environment. Emphasis is placed on observing children and assisting in the implementation of developmentally appropriate activities/environments for all children; and modeling reflective/professional practices. Upon completion, students should be able to demonstrate developmentally appropriate interactions with children and ethical/professional behaviors as indicated by assignments and onsite faculty visits.  
Prerequisites: Take EDU 119 EDU 144 EDU 146  
Take EDU 119  
Corequisites: Take DRE 097

EDU 188. Issues in Early Childhood Education. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course covers topics and issues in early childhood education. Emphasis is placed on current advocacy issues, emerging technology, professional growth experiences, and other related topics. Upon completion, students should be able to list, discuss, and explain current topics and issues in early childhood education.  
Corequisites: Take DRE 097

EDU 221. Children With Exceptionalities. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course introduces children with exceptionalities, their families, support services, inclusive/diverse settings, and educational/family plans based on the foundations of child development. Emphasis is placed on the characteristics of exceptionalities, observation and assessment of children, strategies for adapting the learning environment, and identification of community resources. Upon completion, students should be able to recognize diverse abilities, describe the referral process, and depict collaboration with families/professionals to plan/implement, and promote best practice.  
Prerequisites: Take EDU 119 EDU 144 EDU 145  
Take one set:  
• EDU 144, EDU 145  
• PSY 244 PSY 245  
Corequisites: Take DRE 098

EDU 234. Infants, Toddlers, & Twos. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course covers the unique needs and rapid changes that occur in the first three years of life and the inter-related factors that influence development. Emphasis is placed on recognizing and supporting developmental milestones through purposeful strategies, responsive care routines and identifying elements of quality, inclusive early care and education. Upon completion, students should be able to demonstrate respectful relationships that provide a foundation for healthy infant/toddler/twos development, plan/select activities/materials, and partner with diverse families.  
Prerequisites: Take EDU 119 EDU 144 EDU 145  
Take EDU 119  
Corequisites: Take DRE 098

EDU 235. School-Age Development and Programs. 3.0 Credits.  
Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course includes developmentally appropriate practices in group settings for school-age children. Emphasis is placed on principles of development, environmental planning, and positive guidance techniques. Upon completion, students should be able to discuss developmental principles for all children ages five to twelve and plan and implement developmentally-appropriate activities.  
Corequisites: Take DRE 098

EDU 243. Learning Theory. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course provides lateral entry teachers an introduction to learning theory, various styles of learning, and motivational factors involved in the learning process. Emphasis is placed on the development of cognitive skills using the eight types of intelligence and applying these to practical classroom situations. Upon completion, students should be able to describe theories and styles of learning and discuss the relationship between different types of intelligence to learning motivation.  
Corequisites: Take DRE 098

EDU 244. Human Growth and Development. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course introduces lateral entry teachers to theories and ages and stages related to human growth and development from birth through adolescence. Emphasis is placed on development through the stages of a child's life in the areas of physical, emotional, social, intellectual, and moral development. Upon completion, students should be able to identify and describe milestones of each stage in all areas of development and discuss factors that influence growth.  
Corequisites: Take DRE 098

EDU 245. Policies and Procedures. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course is designed to introduce new lateral entry teachers to the policies and procedures established by the local education agency. Topics include emergency situation procedures, acceptable discipline, chain of command, role of mentors, evaluation procedures, employment requirements, dress codes, and other policies and procedures. Upon completion, students should be able to explain the policies and procedures to students, parents, or others and discuss the purpose of each policy category.  
Corequisites: Take DRE 098

EDU 251. Exploration Activities. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course covers discovery experiences in science, math, and social studies. Emphasis is placed on developing concepts for each area and encouraging young children to explore, discover, and construct concepts. Upon completion, students should be able to discuss the discovery approach to teaching, explain major concepts in each area, and plan appropriate experiences for children.  
Prerequisites: Take EDU 119 EDU 144 EDU 151 EDU 151A  
Corequisites: Take EDU 251A

EDU 251A. Exploration Activities Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course provides a laboratory component to complement EDU 251. Emphasis is placed on practical experiences that enhance concepts introduced in the classroom. Upon completion, students should be able to demonstrate a practical understanding of the development and implementation of appropriate science, math, and social studies activities for children.  
Prerequisites: Take EDU 119 EDU 144 EDU 151 EDU 151A  
Corequisites: Take EDU 251 and DRE 098
EDU 259. Curriculum Planning. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to focus on curriculum planning for three to five year olds. Topics include philosophy, curriculum models, indoor and outdoor environments, scheduling, authentic assessment, and planning developmentally appropriate experiences. Upon completion, students should be able to evaluate children's development, critique curriculum, plan for individual and group needs, and assess and create quality environments.
Prerequisites: Take EDU 119 EDU 145 EDU 151 EDU 151A EDU 184 Take EDU 119
Corequisites: Take DRE 098

EDU 261. Early Childhood Administration I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces principles of basic programming and staffing, budgeting/financial management and marketing, and rules and regulations of diverse early childhood programs. Topics include program structure and philosophy, standards of NC child care programs, finance, funding resources, and staff and organizational management. Upon completion, students should be able to develop components of program/personnel handbooks, a program budget, and demonstrate knowledge of fundamental marketing strategies and NC standards.
Corequisites: Take EDU 119 and DRE 098

EDU 262. Early Childhood Administration II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course focuses on advocacy/leadership, public relations/community outreach and program quality/evaluation for diverse early childhood programs. Topics include program evaluation/accreditation, involvement in early childhood professional organizations, leadership/mentoring, family, volunteer and community involvement and early childhood advocacy. Upon completion, students should be able to define and evaluate all components of early childhood programs, develop strategies for advocacy and integrate community into programs.
Prerequisites: Take EDU 261
Corequisites: Take EDU 119 and DRE 098

EDU 263. School-Age Program Administration. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the methods and procedures for development and administration of school-age programs in the public or proprietary setting. Emphasis is placed on the construction and organization of the physical environment. Upon completion, students should be able to plan, develop and administer a quality school-age program.
Corequisites: Take DRE 098

EDU 271. Educational Technology. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the use of technology to enhance teaching and learning in all educational settings. Topics include technology concepts, instructional strategies, materials and adaptive technology for children with exceptionalities, facilitation of assessment/evaluation, and ethical issues surrounding the use of technology. Upon completion, students should be able to apply technology enhanced instructional strategies, use a variety of technology resources and demonstrate appropriate technology skills in educational environments.
Corequisites: Take DRE 098

EDU 280. Language and Literacy Experiences. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to expand students' understanding of children's language and literacy development and provides strategies for enhancing language/literacy experiences in an enriched environment. Topics include selection of diverse literature and interactive media, the integration of literacy concepts throughout the curriculum, appropriate observations/assessments and inclusive practices. Upon completion, students should be able to select, plan, implement and evaluate developmentally appropriate and diverse language/literacy experiences.
Prerequisites: Take EDU 119 EDU 144 EDU 151 EDU 151A EDU 184
Corequisites: Take DRE 098

EDU 280A. Literacy Experiences Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a laboratory component to complement EDU 280. Emphasis is placed on practical experiences that enhance concepts introduced in the classroom. Upon completion, students should be able to demonstrate a practical understanding of the development and implementation of appropriate early literacy experiences.
Prerequisites: Take EDU 119 EDU 144 EDU 151 EDU 151A EDU 184
Corequisites: Take EDU 280 and DRE 098

EDU 284. Early Childhood Capstone Practicum. 4.0 Credits. Class-1.0. Clinical-0.0. Lab-9.0. Work-0.0
This course is designed to allow students to apply skills in a three star (minimum) or NAECY accredited or equivalent, quality early childhood environment. Emphasis is placed on designing, implementing and evaluating developmentally appropriate activities and environments for all children; supporting/involving families; and modeling reflective and professional practices. Upon completion, students should be able to demonstrate developmentally appropriate plans/assessments, appropriate guidance techniques and ethical/professional behaviors as indicated by assignments and onsite faculty visits.
Prerequisites: Complete one of the following options:
• EDU 119, EDU 144, EDU 145, EDU 146, and EDU 151
• EDU 119, PSY 244, PSY 245, EDU 146, and EDU 151
• EDU 119, PSY 245, EDU 144, EDU 146, and EDU 151
• EDU 119, PSY 244, EDU 145, EDU 146, and EDU 151
Corequisites: Take DRE 098

Electric Utility Substation (EUS)

EUS 110. Introduction to Electric Utility Industry. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides the student with an overview of the electric (power) utility industry. Topics include electric utility regulation and its scope, regulatory agencies and codes, electrical safety, electric system overview, electric generation, electric transmission, and electric distribution. Upon completion, students should be able to understand the need for electric utilities, their structure, and regulatory requirements on electric utilities.
Electrical (ELC)

ELC 111. Introduction to Electricity. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the fundamental concepts of electricity and test equipment to non-electrical/electronics majors. Topics include basic DC and AC principles (voltage, resistance, current, impedance); components (resistors, inductors, and capacitors); power; and operation of test equipment. Upon completion, students should be able to construct and analyze simple DC and AC circuits using electrical test equipment.

ELC 112. DC/AC Electricity. 5.0 Credits. Class-3.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the fundamental concepts of and computations related to DC/AC electricity. Emphasis is placed on DC/AC circuits, components, operation of test equipment; and other related topics. Upon completion, students should be able to construct, verify, and analyze simple DC/AC circuits.

ELC 113. Residential Wiring. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the care/usage of tools and materials used in residential electrical installations and the requirements of the National Electrical Code. Topics include NEC, electrical safety, and electrical print reading; planning, layout; and installation of electrical distribution equipment; lighting; overcurrent protection; conductors; branch circuits; and conduits. Upon completion, students should be able to properly install conduits, wiring, and electrical distribution equipment associated with residential electrical installations.

ELC 114. Commercial Wiring. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides instruction in the application of electrical tools, materials, and test equipment associated with commercial electrical installations. Topics include the NEC; safety; electrical blueprints; planning, layout, and installation of equipment and conduits; and wiring devices such as panels and overcurrent devices. Upon completion, students should be able to properly install equipment and conduit associated with commercial electrical installations.

ELC 115. Industrial Wiring. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers layout, planning, and installation of wiring systems in industrial facilities. Emphasis is placed on industrial wiring methods and materials. Upon completion, students should be able to install industrial systems and equipment.

ELC 117. Motors and Controls. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the fundamental concepts of motors and motor controls. Topics include ladder diagrams, pilot devices, contactors, motor starters, motors, and other control devices. Upon completion, students should be able to properly select, connect, and troubleshoot motors and control circuits.

ELC 118. National Electrical Code. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the use of the current National Electrical Code. Topics include the NEC history, wiring methods, overcurrent protection, materials, and other related topics. Upon completion, students should be able to effectively use the NEC.

ELC 119. NEC Calculations. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers branch circuit, feeder, and service calculations. Emphasis is placed on sections of the National Electrical Code related to calculations. Upon completion, students should be able to use appropriate code sections to size wire, conduit, and overcurrent devices for branch circuits, feeders, and service.

ELC 121. Electrical Estimating. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the principles involved in estimating electrical projects. Topics include take-offs of materials and equipment, labor, overhead, and profit. Upon completion, students should be able to estimate simple electrical projects.

ELC 125. Diagrams and Schematics. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces computer software which can be used to solve electrical/electronics problems. Topics include electrical/electronics calculations and applications. Upon completion, students should be able to utilize a personal computer for electrical/electronics-related applications.

ELC 127. Software for Technicians. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the programmable logic controller (PLC) and its associated applications. Topics include ladder logic diagrams, input/output modules, power supplies, surge protection, selection/installation of controllers, and interfacing of controllers with equipment. Upon completion, students should be able to understand basic PLC systems and create simple programs.

ELC 131. Circuit Analysis I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces DC and AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC and AC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, verify, and analyze DC/AC circuits; and properly use test equipment.
ELC 133. Circuit Analysis II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers additional concepts of DC/AC electricity, the use of test equipment, and measurement techniques. Topics include the application of network theorems such as delta/wye transformations, Superposition Theorem, and other advanced circuit analysis principles. Upon completion, students should be able to construct and analyze DC/AC circuits used advanced circuit analysis theorems, circuit simulators, and test equipment.

ELC 135. Electrical Machines. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers magnetic circuits, transformers, DC/AC machines, and the three-phase circuit fundamentals including power factor. Topics include magnetic terms and calculations, transformer calculations based on primary or secondary equivalent circuits, and regulation and efficiency calculations. Upon completion, students should be able to perform regulation and efficiency calculations for DC/AC machine circuits.
Prerequisites: Take ELC 139 or ELC 131

ELC 136. Electrical Machines II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers DC/AC machine fundamentals including applications and control. Topics include control devices and induction single and polyphase AC motors, DC motors, stepper, and special purpose motors. Upon completion, students should be able to perform regulation and efficiency calculations and apply motor theory to practical control applications.
Prerequisites: Take ELC 135

ELC 138. DC Circuit Analysis. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces DC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, and analyze DC circuits; and properly use test equipment.

ELC 139. AC Circuit Analysis. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include AC voltages, circuit analysis laws and theorems, reactive components and circuits, transformers, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret AC circuit schematics; analyze and troubleshoot AC circuits; and properly use test equipment.
Prerequisites: Take ELC 138

ELC 220. Photovoltaic System Technology. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the concepts, tools, techniques, and materials needed to understand systems that convert solar energy into electricity with photovoltaic (pv) technologies. Topics include site analysis for system integration, building codes, and advances in photovoltaic technology. Upon completion, students should be able to demonstrate an understanding of the principles of photovoltaic technology and current applications.

ELC 221. Advanced Photovoltaic System Designs. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces specific elements in photovoltaic (pv) systems technologies including efficiency, modules, inverters, charge controllers, batteries, and system installation. Topics include National Electrical Code (NEC), electrical specifications, photovoltaic system components, array design and power integration requirements that combine to form a unified structure. Upon completion, students should be able to demonstrate an understanding of various photovoltaic designs and proper installation of NEC compliant solar electric power systems.
Prerequisites: Take ELC 220

ELC 222. Programmable Logic Controllers Applications. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers programming and applications of programmable logic controllers. Emphasis is placed on programming techniques, networking, specialty I/O modules, and system troubleshooting. Upon completion, students should be able to specify, implement, and maintain complex PLC controlled systems.

ELC 229. Applications Project. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides an individual and/or integrated team approach to a practical project as approved by the instructor. Topics include project selection and planning, implementation and testing, and a final presentation. Upon completion, students should be able to plan and implement an applications-oriented project.

ELC 230. Wind and Hydro Power Systems. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces concepts, designs, tools, techniques, and material requirements for systems that convert wind and water into usable energy. Topics include the analysis, measurement, and estimation of potential energy of wind and water systems. Upon completion, students should be able to demonstrate an understanding of the technologies associated with converting wind and water into a viable energy source.

ELC 231. Electric Power Systems. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the basic principles of electric power systems, including transmission lines, generator and transformer characteristics, and fault detection and correction. Emphasis is placed on line diagrams and per unit calculations for circuit performance analysis in regards to voltage regulation, power factor, and protection devices. Upon completion, students should be able to analyze simple distribution subsystems, calculate fault current, and compare different types and sizes of circuit protection devices.
Prerequisites: Take ELC 135
ELC 233. Energy Management. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers energy management principles and techniques typical of those found in industry and commercial facilities, including load control and peak demand reduction systems. Topics include load and peak demand calculations, load shedding, load balance and power factor, priority scheduling, remote sensing and control, and supplementary/alternative energy sources. Upon completion, students should be able to determine energy management parameters, calculate demand and energy use, propose energy management procedures, and implement alternative energy sources. Corequisites: Take ELC 139

ELC 234. Electrical System Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the principles of electrical design for commercial and industrial facilities. Topics include services, high and low power distribution, switchboards, panelboards, motor control centers, switchgear, overcurrent protection, and grounding. Upon completion, students should be able to design services, feeders, and branch circuits for typical commercial/industrial applications in accordance with the National Electrical Code.

ELC 1124. Electrical. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is reserved for a freshmen-level course from an institution of the UNC System, contracted to be provided for a community college. The college should enter the course prefix/number, title, distribution of hours, prerequisites, corequisites, and course description as it appears in the UNC institution catalog. Upon successful completion, students should have earned 3 hours of credit equivalent to the course offered at the UNC institution.

Electronic Commerce (ECM)

ECM 210. Introduction to E-Commerce. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the concepts and tools to implement electronic commerce via the Internet. Topics include application and server software selection, securing transactions, use and verification of credit cards, publishing of catalogs, and site administration. Upon completion, students should be able to setup a working e-commerce Internet web site. Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A with a minimum grade of C
• Take RED 090 EFL 111 or ENG 111 with a minimum grade of C

Electronics (ELN)

ELN 131. Analog Electronics I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the characteristics and applications of semiconductor devices and circuits. Emphasis is placed on analysis, selection, biasing, and applications. Upon completion, students should be able to construct, analyze, verify, and troubleshoot analog circuits using appropriate techniques and test equipment.

ELN 132. Analog Electronics II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers additional applications of analog electronic circuits with an emphasis on analog and mixed signal integrated circuits (IC). Topics include amplification, filtering, oscillation, voltage regulation, and other analog circuits. Upon completion, students should be able to construct, analyze, verify, and troubleshoot analog electronic circuits using appropriate techniques and test equipment.

ELN 133. Digital Electronics. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, medium scale integration (MSI) and large scale integration (LSI) circuits, analog to digital (AD) and digital to analog (DA) conversion, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment. Prerequisites: Take ELC 112 ELC 131 ELC 5400 ELC 5402 ELN 3515 ELC 138 or ELN 3514

ELN 150. Computer-Aided Drafting for Electronics. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces computer-aided drafting (CAD) with an emphasis on applications in the electronics field. Topics include electronics industry standards (symbols, schematic diagrams, layouts); drawing electronic circuit diagrams; and specialized electronic drafting practices and components such as resistors, capacitors, and ICs. Upon completion, students should be able to prepare electronic drawings with CAD software.

ELN 193. Selected Topics in Electronics. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

ELN 232. Introduction to Microprocessors. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces microprocessor architecture and microcomputer systems including memory and input/output interfacing. Topics include low-level language programming, bus architecture, I/O systems, memory systems, interrupts, and other related topics. Upon completion, students should be able to interpret, analyze, verify, and troubleshoot fundamental microprocessor circuits and programs using appropriate techniques and test equipment. Prerequisites: Take ELN 133E

ELN 233. Microprocessor Systems. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the application and design of microprocessor control systems. Topics include control and interfacing of systems using AD/DA, serial/parallel I/O, communication protocols, and other related applications. Upon completion, students should be able to design, construct, program, verify, analyze, and troubleshoot fundamental microprocessor interface and control circuits using related equipment. Prerequisites: Take ELN 232

ELN 237. Local Area Networks. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the fundamentals of local area networks and their operation. Topics include the characteristics of network topologies, system hardware, system configuration, installation and operation of the LAN. Upon completion, students should be able to install and maintain a local area network. Prerequisites: Take ELN 133E
EGR 212. Logic System Design I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a detailed study of PLC applications, with a focus on design of industrial controls using the PLC. Topics include PLC components, memory organization, math instructions, documentation, input/output devices, and applying PLCs in industrial control systems. Upon completion, students should be able to select and program a PLC system to perform a wide variety of industrial control functions.
Prerequisites: Take ELN 133E or ELC 111E

Engineering (EGR)

EGR 115. Intro to Technology. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the basic skills and career fields for technicians. Topics include career options, technical vocabulary, dimensional analysis, measurement systems, engineering graphics, calculator applications, professional ethics, safety practices, and other related topics. Upon completion, students should be able to demonstrate an understanding of the basic technologies, prepare drawings and sketches, and perform computations using a scientific calculator.
Corequisites: Take MAT 121

EGR 120. Engineering and Design Graphics. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the graphical tools for engineering and design communications. Emphasis is placed upon selecting the appropriate methods and tools and conveying ideas using sketches, orthographic views and projections, and computer graphics applications. Upon completion, students should be able to communicate essential features or two-dimensional and three-dimensional objects using the proper tools and methods.

EGR 125. Appl Software for Tech. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces personal computer software and teaches students how to customize the software for technical applications. Emphasis is placed on the use of common office applications software programs such as spreadsheets, word processing, graphics, and internet access. Upon completion, students should be able to demonstrate competency in using applications software to solve technical problems and communicate the results in text and graphical formats.

EGR 150. Intro to Engineering. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is an overview of the engineering profession. Topics include goal setting and career assessment, ethics, public safety, the engineering method and design process, written and oral communication, interpersonal skills and team building, and computer applications. Upon completion, students should be able to understand the engineering process, the engineering profession, and utilize college resources to meet their educational goals.

EGR 212. Logic System Design I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an introduction to digital circuits and analysis. Topics include Boolean Algebra; mixed logic; design of combinational circuits; introduction to sequential systems; and MSI building blocks. Upon completion, students should be able to analyze and design digital circuits and systems.
Prerequisites: Take All: MAT 271 and PHY 251

EGR 220. Engineering Statics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the concepts of engineering based on forces in equilibrium. Topics include concentrated forces, distributed forces, forces due to friction, and inertia as they apply to machines, structures, and systems. Upon completion, students should be able to solve problems which require the ability to analyze systems of forces in static equilibrium.
Prerequisites: Take PHY 251
Corequisites: Take MAT 272

EGR 250. Statics/Strength of Mater. 5.0 Credits. Class-4.0. Clinical-0.0. Lab-3.0. Work-0.0
This course includes vector analysis, equilibrium of force systems, friction, sectional properties, stress/strain, and deformation. Topics include resultants and components of forces, moments and couples, free-body diagrams, shear and moment diagrams, trusses, frames, beams, columns, connections, and combined stresses. Upon completion, students should be able to analyze simple structures.
Prerequisites: Take One: MAT 121 or MAT 171

English (ENG)

ENG 101. Applied Communications I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to enhance reading and writing skills for the workplace. Emphasis is placed on technical reading, job-related vocabulary, sentence writing, punctuation, and spelling. Upon completion, students should be able to identify main ideas with supporting details and produce mechanically correct short writings appropriate to the workplace. This is a diploma level course.

ENG 111. Writing and Inquiry. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to develop the ability to produce clear writing in a variety of genres and formats using a recursive process. Emphasis includes inquiry, analysis, effective use of rhetorical strategies, thesis development, audience awareness, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English.
Prerequisites: Complete one of the following options:
• ENG 090 and RED 090*
• ENG 095*
• DRE 098
• *These are archived courses which are no longer available for enrollment. They will be removed in Summer 2015.

ENG 112. Writing and Research in the Disciplines. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course, the second in a series of two, introduces research techniques, documentation styles, and writing strategies. Emphasis is placed on analyzing information and ideas and incorporating research findings into documented writing and research projects. Upon completion, students should be able to evaluate and synthesize information from primary and secondary sources using documentation appropriate to various disciplines.
Prerequisites: Take ENG 111 with a minimum grade of C
Take ENG 111
ENG 113. Literature-Based Research. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course, the second in a series of two, expands the concepts developed in ENG 111 by focusing on writing that involves literature-based research and documentation. Emphasis is placed on critical reading and thinking and the analysis and interpretation of prose, poetry, and drama: plot, characterization, theme, cultural context, etc. Upon completion, students should be able to construct mechanically-sound, documented essays and research papers that analyze and respond to literary works. This course will include the analysis of two of the following three genres: short stories, poetry, and drama. Prerequisites: Take ENG 111

ENG 114. Professional Research & Reporting. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course, the second in a series of two, is designed to teach professional communication skills. Emphasis is placed on research, listening, critical reading and thinking, analysis, interpretation, and design used in oral and written presentations. Upon completion, students should be able to work individually and collaboratively to produce well-designed business and professional written and oral presentations. Prerequisites: Take ENG 111

ENG 125. Creative Writing I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to provide students with the opportunity to practice the art of creative writing. Emphasis is placed on writing, fiction, poetry, and sketches. Upon completion, students should be able to craft and critique their own writing and critique the writing of others. The primary focus of this course is poetry and fiction although some time will be devoted to non-fiction. This course is a Writing Intensive Elective for UNCC. Prerequisites: Take ENG 111

ENG 126. Creative Writing II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed as a workshop approach for advancing imaginative and literary skills. Emphasis is placed on the discussion of style, techniques, and challenges for first publications. Upon completion, students should be able to submit a piece of their writing for publication. The main focus of this course will be on poetry and fiction; however, some attention will be devoted to creative non-fiction. This course is a Writing Intensive Elective for UNCC. Prerequisites: Take ENG 125

ENG 192. Selected Topics in English. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore areas of current interest in the specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

ENG 231. American Literature I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers selected works in American literature from its beginnings to 1865. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to analyze and interpret literary works in their historical and cultural contexts. Students seeking to take this course to meet the college transfer humanities requirement may also take ENG 232. (no ENG prerequisites) ENG 231 is an introduction to traditional and nontraditional writers, significant literary trends and movements, literary terminology, and a variety of critical approaches. Prerequisites: Take One: ENG 112, ENG 113, or ENG 114

ENG 232. American Literature II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers selected works in American literature from 1865 to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to analyze and interpret literary works in their historical and cultural contexts. Students seeking to take this course to meet the college transfer humanities requirement may also take ENG 231. (no ENG prerequisites) ENG 232 is an introduction to traditional and nontraditional writers, significant literary trends and movements, literary terminology, and a variety of critical approaches. Prerequisites: Take One: ENG 112, ENG 113, or ENG 114

ENG 241. British Literature I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers selected works in British literature from its beginnings to the Romantic Period. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. Prerequisites: Take One: ENG 112, ENG 113, or ENG 114

ENG 242. British Literature II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers selected works in British literature from the Romantic Period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. Prerequisites: Take One: ENG 112, ENG 113, or ENG 114

ENG 251. Western World Literature I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a survey of selected European works from the Classical period through the Renaissance. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works. Prerequisites: Take One: ENG 112, ENG 113, or ENG 114

ENG 252. Western World Literature II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a survey of selected European works from the Neoclassical period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works. Prerequisites: Take One: ENG 112, ENG 113, or ENG 114

ENG 253. The Bible As Literature. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the Hebrew Old Testament and the Christian New Testament as works of literary art. Emphasis is placed on the Bible's literary aspects including history, composition, structure, and cultural contexts. Upon completion, students should be able to identify and analyze selected books and passages using appropriate literary conventions. Prerequisites: Take One: ENG 112, ENG 113, or ENG 114
ENG 272. Southern Literature. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an analytical study of the works of several Southern authors. Emphasis is placed on the historical and cultural contexts, themes, aesthetic features of individual works, and biographical backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and discuss selected works. Prerequisites: Take One: ENG 112, ENG 113, or ENG 114

ENG 273. African-American Literature. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a survey of the development of African-American literature from its beginnings to the present. Emphasis is placed on historical and cultural context, themes, literary traditions, and backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and respond to selected texts. Prerequisites: Take One: ENG 112, ENG 113, or ENG 114

ENG 274. Literature by Women. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an analytical study of the works of several women authors. Emphasis is placed on the historical and cultural contexts, themes and aesthetic features of individual works, and biographical backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and discuss selected works. Prerequisites: Take One: ENG 112, ENG 113, or ENG 114

ENG 275. Science Fiction. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the relationships between science and literature through analysis of short stories and novels. Emphasis is placed on scientific discoveries that shaped Western culture and our changing view of the universe as reflected in science fiction literature. Upon completion, students should be able to trace major themes and ideas and illustrate relationships between science, world view, and science fiction literature. Prerequisites: Take One: ENG 112, ENG 113, or ENG 114

English As a Foreign Language (EFL)

EFL 111. English for Internationals I. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to prepare advanced non-native speakers of English for successful college-level writing. Emphasis is placed on developing and supporting academic and cultural themes, editing for grammatical correctness and clarity, and determining approaches for different audiences and purposes. Upon completion, students should be able to produce college-level essays in a variety of rhetorical formats. Prerequisites: Take All: EFL 084 and EFL 094 Corequisites: Take EFL 181

EFL 112. English for Internationals II. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to refine academic reading, listening, and speaking skills for advanced non-native speakers of English. Emphasis is placed on understanding and analyzing university-level texts on different cultural and academic topics and developing effective note-taking and presentation skills in various disciplines. Upon completion, students should be able to integrate information from academic lectures and readings and make academic presentations. Prerequisites: Take All: EFL 084 and EFL 074 Corequisites: Take EFL 182

EFL 181. EFL Lab 1. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to enhance the preparation of advanced non-native speakers of English for successful communication as required in college-level courses. Emphasis is placed on the writing and editing of compositions for grammatical accuracy and clarity through the use of supplementary learning media and materials. Upon completion, students should be able to converse and write in various organizational formats. Corequisites: Take EFL 111

EFL 182. EFL Lab 2. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to enhance reading and comprehension skills for advanced non-native speakers of English. Emphasis is placed on understanding academic texts and developing effective note-taking skills through the use of supplementary learning media and materials. Upon completion, students should be able to differentiate between main points, supporting and extraneous information, and take organized notes on lectures and texts. Corequisites: Take EFL 112

Entertainment Technologies (ENT)

ENT 211. Entertainment Promotion. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course examines the elements of marketing and promotion specifically applicable to the entertainment business. Topics include the creation of publicity materials, understanding the process of developing media relations, developing a press kit, and creating a publicity campaign. Upon completion, students should be able to create a marketing and promotion campaign.

Environmental Science (ENV)

ENV 110. Environmental Science. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers fundamental scientific principles and problems facing society today. Topics include population, natural resources, air and water pollution, and waste disposal problems. Upon completion, students should be able to demonstrate insight into the role the individual plays in shaping the environment.

ENV 110A. Environmental Science Laboratory. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a laboratory component to complement ENV 110. Emphasis is placed on laboratory and field experience. Upon completion, students should be able to demonstrate a practical understanding of environmental relationships and of contemporary environmental issues. Corequisites: Take ENV 110

ENV 120. Earth Science. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the fundamental principles of earth science that provide a foundation for continued study in environmental science. Emphasis is placed on the basic principles of geology, oceanography, meteorology, astronomy, and the development of inquiry about the natural world through observation. Upon completion, students should be able to demonstrate an understanding of the component areas of earth science. Prerequisites: Complete one of the following options:
- ENV 110
- BIO 140 and BIO 140A
ENV 218. Environmental Health. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the influence of environmental conditions on human health. Emphasis is placed on environmental contaminants and the major exposure routes of the human body. Upon completion, students should be able to examine segments of the environment, including air, water, and food, and determine how the conditions of these influence human health.

ENV 220. Applied Ecology. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the relationships between organisms and their environment and the interactions among organisms. Topics include environmental factors affecting aquatic and terrestrial systems, regulation and dynamics of populations, interactions among species, and the ecological viewpoint in modern land management. Upon completion, students should be able to demonstrate an understanding of the relationship between man and his environment and the ecological impact of human activities. Prerequisites: Take One Group:
- BIO 111 and ENV 110
- BIO 111, BIO 140, and BIO 140A

ENV 224. Land Resource Management. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers methods of properly managing land-based resources for maximum conservation and use. Emphasis is placed on the physical, biological, and ecological principles underlying sustainable use of soil, mineral, forest, and ground and surface water resources for current and future generations. Upon completion, students should be able to develop conservation plans for sustainable use of major land resources. Prerequisites: Complete one of the following options:
- ENV 110
- BIO 140 and BIO 140A
- ENV 120
- GEL 120
- PHS 130

ENV 226. Environmental Law. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers federal laws and acts concerning environmental quality standards and the use of resources, legal procedures for enforcing laws, and problems concerning enforcement. Emphasis is placed on environmental law basics, water quality laws, air quality laws, waste disposal laws, and biological resource protection laws. Upon completion, students should be able to demonstrate an understanding of federal/state environmental laws and their importance to the protection of environmental quality.

ENV 232. Site Assessment and Remediation. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the concepts and techniques utilized in the assessment and remediation of contaminated soils and groundwater. Emphasis is placed on hydrogeology, environmental sampling, and remediation practices. Upon completion, the student should be able to properly sample environmental medica, demonstrate a knowledge of groundwater dynamics, and discuss various remediation approaches. Prerequisites: Complete one of the following options:
- ENV 110
- BIO 140 and BIO 140A

ENV 242. Land Quality. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course examines the constituents of soils from a biological, physical and geochemical perspective. Topics include common components of soils, land quality regulations, sustainable agriculture and development, soil contamination and remediation, hydrogeology, and mining and dams. Upon completion, students should be able to demonstrate an understanding of the biological, chemical and geological factors affecting land quality. Prerequisites: Take ENV 120

Fire Protection (FIP)

FIP 120. Introduction to Fire Protection. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of the development, methods, systems and regulations that apply to the fire protection field. Topics include history, evolution, statistics, suppression, organizations, careers, curriculum, and related subjects. Upon completion, students should be able to demonstrate a broad understanding of the fire protection field.

FIP 124. Fire Prevention & Public Education. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces fire prevention concepts as they relate to community and industrial operations referenced in NFPA standard 101. Topics include the development and maintenance of fire prevention programs, educational programs, and inspection programs. Upon completion, students should be able to research, develop, and present a fire safety program to a citizens or industrial group.

FIP 128. Detection and Investigation. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers procedures for determining the origin and cause of accidental and incendiary fires referenced in NFPA standard 921. Topics include collection and preservation of evidence, detection and determination of accelerants, courtroom procedure and testimony, and documentation of the fire scene. Upon completion, students should be able to conduct a competent fire investigation and present those findings to appropriate officials or equivalent.

FIP 132. Building Construction. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the principles and practices referenced in NFPA standard 220 related to various types of building construction, including residential and commercial, as impacted by fire conditions. Topics include types of construction and related elements, fire resistive aspects of construction materials, building codes, collapse, and other related topics. Upon completion, students should be able to understand and recognize various types of construction and their positive or negative aspects as related to fire conditions.

FIP 136. Inspections and Codes. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the fundamentals of fire and building codes and procedures to conduct an inspection referenced in NFPA standard 1730. Topics include review of fire and building codes, writing inspection reports, identifying hazards, plan reviews, site sketches, and other related topics. Upon completion, students should be able to conduct a fire code compliance inspection and produce a written report.
FIP 140. Industrial Fire Protection. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers fire protection systems in industrial facilities referenced in NFPA standard 1. Topics include applicable health and safety standards, insurance carrier regulations, other regulatory agencies, hazards of local industries, fire brigade operation, and loss prevention programs. Upon completion, students should be able to plan and evaluation an industrial facility’s fire protection program.

FIP 146. Fire Protection Systems. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces various types of automatic sprinklers, standpipes, fire alarm systems, and fixed and portable extinguishing systems referenced in NFPA standard 25, including their operation, installation, and maintenance. Topics include wet and dry systems, testing and maintenance, water supply requirements, fire detection and alarm systems, including application, testing, and maintenance of Halon, carbon dioxide, dry chemical, and special extinguishing agents utilized in fixed and portable systems. Upon completion, students should be able to demonstrate a working knowledge of sprinkler and alarm systems, both fixed and portable, including appropriate application, operation, inspection, and maintenance requirements.

FIP 152. Fire Protection Law. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers fire protection law as referenced in NFPA standard 1. Topics include legal terms, contracts, liability, review of case histories, and other related topics. Upon completion, students should be able to discuss laws, codes, and ordinances as they relate to fire protection.

FIP 220. Fire Fighting Strategies. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides preparation for command of initial incident operations involving emergencies within both the public and private sector referenced in NFPA standards 1561, 1710, and 1720. Topics include incident management, fire-ground tactics and strategies, incident safety, and command/control of emergency operations. Upon completion, students should be able to describe the initial incident system as it relates to operations involving various emergencies in fire and non-fire situations.

FIP 221. Advanced Fire Fighting Strategies. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers command-level operations for multi-company/agency operations involving fire and non-fire emergencies. Topics include advanced use of the Incident Command System (ICS), advanced incident analysis, command-level fire operations, and control of both man made and natural major disasters. Upon completion, students should be able to describe proper and accepted systems for the mitigation of emergencies at the level of overall scene command.
Prerequisites: Take FIP 220

FIP 224. Fire Instructor I & II. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the knowledge, skills, and abilities needed to train others in fire service operations. Topics include planning, presenting, and evaluating lesson plans, learning styles, use of media, communication, and other related topics. Upon completion, students should be able to meet the requirements of the Fire Instructor I and II objectives from National Fire Protection Association (NFPA) 1041.

FIP 226. Fire Officer I & II. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the knowledge, skills, and requirements referenced in the National Fire Protection Association (NFPA) Standard 1021 for Fire Officer I and II training. Topics include officer roles and responsibilities, budgets, fire cause determination, inspections, education, leadership, management, public relations, and other requirements included in the NFPA standard. Upon completion, students should be able to demonstrate an understanding of relevant NFPA standards as required for state Fire Officer I and II certification.

FIP 228. Local Government Finance. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the theories and fundamentals of how and why fires start and spread, and how they are safely controlled referenced in NFPA standard 1001. Topics include components of fire, fire sources, fire behavior, properties of combustible solids, classification of hazards, and the use of fire extinguishing agents. Upon completion, students should be able to describe the properties of matter and dynamics of fire, identify fuel sources, and compare suppressants and extinguishment techniques.

FIP 230. Chemistry of Hazardous Materials I. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the evaluation of hazardous materials referenced in NFPA standard 1072. Topics include use of the periodic table, hydrocarbon derivatives, placards and labels, parameters of combustion, and spill and leak mitigation. Upon completion, students should be able to demonstrate knowledge of the chemical behavior of hazardous materials.

FIP 231. Chemistry of Hazardous Materials II. 5.0 Credits. Class-4.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers hazardous materials characterization, properties, location, handling and response guidelines, hazard survey principles, and other related topics referenced in NFPA standard 1072. Topics include radiation hazards, instruments, inspections, and detection of the presence of hazardous materials in industrial/commercial occupancies. Upon completion, students should be able to inspect chemical/radioactive sites and use on-site visits to gasoline and/or LPG storage facilities/chemical plants to develop a pre-plan.
Prerequisites: Take FIP 230

FIP 232. Hydraulics and Water Distribution. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the flow of fluids through fire hoses, nozzles, appliances, pumps, standpipes, water mains, and other devices referenced in NFPA standard 25. Emphasis is placed on supply and delivery systems, fire flow testing, hydraulic calculations, and other related topics. Upon completion, students should be able to perform hydraulic calculations, conduct water availability tests, and demonstrate knowledge of water distribution systems.
FIP 236. Emergency Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the four phases of emergency management: mitigation, preparedness, response, and recovery. Topics include organizing for emergency management, coordinating for community resources, public sector liability, and the roles of government agencies at all levels. Upon completion, students should be able to demonstrate an understanding of comprehensive emergency management and the integrated emergency management system.

FIP 240. Fire Service Supervision. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers supervisory skills and practices in the fire protection field. Topics include the supervisor's job, supervision skills, the changing work environment, managing change, organizing for results, discipline and grievances, and safety. Upon completion, students should be able to demonstrate an understanding of the roles and responsibilities of effective fire service supervision, meeting elements of NFPA 1021.

FIP 248. Fire Service Personnel Administration. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the basics of setting up and administering the personnel functions of fire protection organizations referenced in NFPA standard 1021. Emphasis is placed on human resource planning, classification and job analysis, equal opportunity employment, affirmative action, recruitment, retention, development, performance evaluation, and assessment centers. Upon completion, students should be able to demonstrate knowledge of the personnel function as it relates to managing fire protection.

FIP 256. Municipal Public Relations. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a general survey of municipal public relations and their effect on the governmental process referenced in NFPA standard 1035. Topics include principles of public relations, press releases, press conferences, public information officers, image surveys, and the effects of perceived service on fire protection delivery. Upon completion, students should be able to manage public relations functions of organizations which meet elements of NFPA 1021 for Fire Officer I and II.

FIP 276. Managing Fire Services. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of fire department administrative services referenced in NFPA standard 1021. Topics include finance, staffing, equipment, code enforcement, management information, specialized services, legal issues, planning, and other related topics. Upon completion, students should be able to understand the processes and apply fire department management and operations principles.

FIP 277. Fire and Social Behavior. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers fire-related aspects of human behavior, with an emphasis on research and a systems approach to human-behavior analysis. Topics include identification of populations and structures at high risk, evaluation of systems models, and use of computer models to predict human behavior during fires. Upon completion, students should be able to identify and anticipate human behavior in response to various residential, commercial, board-and-care facility, and wildland/rural fire events.

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French (FRE)

FRE 111. Elementary French I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the fundamental elements of the French language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written French and demonstrate cultural awareness.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C
Corequisites: Take FRE 181

FRE 112. Elementary French II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a continuation of FRE 111 focusing on the fundamental elements of the French language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written French and demonstrate further cultural awareness.
Prerequisites: Take FRE 111
Corequisites: Take FRE 182

FRE 181. French Lab 1. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to enhance acquisition of the fundamental elements of the French language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written French and demonstrate cultural awareness.
Corequisites: Take FRE 111

FRE 182. French Lab 2. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to enhance acquisition of the fundamental elements of the French language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written French and demonstrate cultural awareness.
Corequisites: Take FRE 111

FRE 211. Intermediate French I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a review and expansion of the essential skills of the French language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.
Prerequisites: Take FRE 112
Corequisites: Take FRE 281
GIS 120. Introduction to Geodesy. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the fundamental concepts behind map projections, datums, and coordinate systems. Topics include the theory of how the earth’s shape is defined and how geographic features are positioned using spherical coordinate systems. Upon completion, students should be able to demonstrate an understanding of the fundamentals of geodesy as it relates to the measurement and representation of the earth.

GIS 121. Georeferencing & Mapping. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces coordinate systems, fundamentals of surveying, and cartography. Topics include the theory, acquisition, and use of locational data using both continuous and discrete georeferencing methods. Upon completion, students should be able to identify appropriate coordinate systems for a situation and translate data into correct map form.
Corequisites: Take GIS 111

GIS 125. CAD for GIS. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the concepts of Computer Aided Drafting (CAD) as well as software that is used for building geographic data for a GIS. Emphasis is placed on the learning of basic commands used in building spatial data. Upon completion, the student will be able to operate within a CAD environment.
Corequisites: Take GIS 111

GIS 211. GIS/GPS Project. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides the opportunity to interact with a municipal, industrial, or service organization. Emphasis is placed on defining a question, gathering and analyzing pertinent data, and drawing conclusions leading to question resolution. Upon completion, students should be able to demonstrate their command of GIS/GPS applications for problem solving.
Prerequisites: Take GIS 111

GIS 215. GIS Data Models. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers interpreting and understanding of a variety data formats available in GIS. Topics include the similarities and differences between data models as well as how data is treated differently within each format, to include the conversion of data between different environments. Upon completion, students should be able to demonstrate an understanding of the fundamentals of GIS data storage and interoperability.
Prerequisites: Take GIS 111

GIS 221. Advanced Topics in GIS. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers technical aspects of GIS functions, algorithms, theory of geographical data structures, and error handling. Emphasis is placed on laboratory experiences requiring manipulation of tools, data, and macros. Upon completion, students should be able to construct a small Geographic Information System.
Prerequisites: Take GIS 111

GIS 222. Internet Mapping. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed as an introduction to multimedia, interactive, animated, and Web cartography. Topics include the principles of effective cartographic communication, and stressing the new and important roles digital cartography is coming to play in cyberspace. Upon completion, students should be able to demonstrate the ability to evaluate digital cartographic information and create effective internet maps.
Prerequisites: Take GIS 111
GIS 225. Advanced Methods in GIS. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course promotes the analytic and critical thinking that is required when conducting statistical analysis of geographic data. Emphasis is placed on understanding data at a descriptive level for the conducting of statistical analysis. Upon completion, students will be able to understand the unique characteristics of geo-referenced data.
Prerequisites: Take GIS 111

GIS 230. GIS Data Creation. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the fundamental concepts of primary GIS data creation. Topics include the collection of field data, digital conversion of existing hardcopy maps, and the construction of spatial data from known geodetic locations. Upon completion, students should be able to demonstrate an ability to collect, create, and process spatial data within a variety of environments.
Prerequisites: Take GIS 111

GIS 232. Spatial Databases. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers various stages of spatial database design and implementation, including conceptual models and query languages. Topics include spatial networks, spatial data mining, indexing, and query processing. Upon completion, students should be able to demonstrate a comprehensive knowledge of spatial databases management systems.
Prerequisites: Take GIS 111 GIS 121

GIS 235. Raster GIS. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course will provide students with the fundamentals of analyzing remotely sensed data. Emphasis is placed on digital image enhancement as a means to further data analysis. Upon completion, students will be able to accurately interpret and analyze remotely sensed data for use in a raster or vector GIS.
Prerequisites: Take All: GIS 111 and GIS 121

GIS 240. Air Photo Interpretation. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to introduce the student to remote sensing, photogrammetry and various components of land use mapping. Emphasis is placed on the art and science of aerial photo interpretation. Upon completion, students will be able to review, gather and analyze data from diverse forms of image maps.
Prerequisites: Take GIS 111

GIS 241. Cartographic Production. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the application of computerized cartography, to include the science and art of map design. Topics include the use of maps as an effective medium, efficient map layout and large-scale map production. Upon completion, students should be able to create a variety of map products for an audience or client.
Prerequisites: Take GIS 111 GIS 121

GIS 245. Introduction to Spatial Analysis. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to expose students to various components of spatial analysis. Emphasis is placed on modeling and decision making with the use of spatial data. Upon completion, students will be able to utilize statistical models in the process of spatial analysis.
Prerequisites: Take All: GIS 111 and GIS 121
Corequisites: Take GIS 225

GIS 246. Principles of Property Mapping. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers interpreting and understanding land records, updating parcel data, and utilizing the data for information retrieval and spatial analysis. Topics include the use and development of parcel information, parcel boundaries, and legal land descriptions. Upon completion, students should be able to demonstrate an understanding of the fundamentals of parcel mapping.
Prerequisites: Take GIS 111 GIS 121

GIS 249. Remote Sensing. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces remote sensing and presents an overview of the use of satellite imagery within the field of geospatial technology. Topics will include the principles of remote sensing, satellite platforms, and sensors. Upon completion, students should be able to demonstrate an understanding of data sources, uses, and analysis techniques of remote sensing.
Prerequisites: Complete one of the following options:
• GIS 111 and GIS 240
• GIS 111 and GIS 235

GIS 251. Computer Graphics/Mapping. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the various methods and techniques of assisted and generated images. Emphasis is placed upon knowledge of and use of draw and paint software, basic word processing, and map production. Upon completion, students should be able to produce and utilize computer generated images.

GIS 255. Advanced Spatial Analysis. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to combine the constituents of Geographic Information Science. Emphasis is placed on the acquisition, refinement and analysis of data from numerous sources. Upon completion, students will be able to extract tangible results gained from the manipulation of a diversified group of information resources.
Prerequisites: Take All: GIS 111 and GIS 121
Corequisites: Take GIS 225

GIS 259. Photogrammetry. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the history and advancements in photogrammetry. Topics will include photogrammetric techniques, aerial cameras, camera calibration, and stereoscopy. Upon completion, students will demonstrate an understanding of the methods and techniques used to gather photogrammetric data.
Prerequisites: Complete one of the following options:
• GIS 111 and GIS 240
• GIS 235

GIS 261. Programming in GIS. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
The course provides an understanding of how to customize GIS software applications by way of modified toolbars, menus, and buttons. Topics include the theory and implementation of the various scripting languages currently in use. Upon completion, students should be able to modify the appearance of interface elements, save interface customizations, and add custom functionality to a GIS application.
Prerequisites: Take GIS 111 GIS 161
Geography (GEO)

GEO 110. Introduction to Geography. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces map reading skills and the physical and cultural features of different areas of the earth. Topics include spatial association, the importance of location, physical characteristics of the earth, and the impact of humans on the environment. Upon completion, students should be able to demonstrate an ability to read a map and describe physical and cultural features of different regions.

GEO 111. World Regional Geography. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the regional concept which emphasizes the spatial association of people and their environment. Emphasis is placed on the physical, cultural, and economic systems that interact to produce the distinct regions of the earth. Upon completion, students should be able to describe variations in physical and cultural features of a region and demonstrate an understanding of their functional relationships. This course is intended as a behavioral and social sciences course.

GEO 131. Physical Geography I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the basic physical components that help shape the earth. Emphasis is placed on the geographic grid, cartography, weather, climate, biogeography, and soils. Upon completion, students should be able to identify these components and explain how they interact.

GEO 113. Historical Geography. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the geological history of the earth and its life forms. Emphasis is placed on the study of rock strata, fossil groups, and geological time. Upon completion, students should be able to identify major fossil groups and associated rock strata and approximate ages of geological formations.
Prerequisites: Take One: GEO 111 or GEO 120

GEO 120. Physical Geology. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a study of the structure and composition of the earth's crust. Emphasis is placed on weathering, erosional and depositional processes, mountain building forces, rocks and minerals, and structural changes. Upon completion, students should be able to explain the structure, composition, and formation of the earth's crust.

GEO 230. Environmental Geology. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides insights into geologic forces that cause environmental changes influencing man's activities. Emphasis is placed on natural hazards and disasters caused by geologic forces. Upon completion, students should be able to relate major hazards and disasters to the geologic forces responsible for their occurrence.
Prerequisites: Take One: GEO 111, GEO 120, or PHS 130

German (GER)

GER 111. Elementary German I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the fundamental elements of the German language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written German and demonstrate cultural awareness.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 with a minimum grade of C
Corequisites: Take GER 181

GER 112. Elementary German II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a continuation of GER 111 focusing on the fundamental elements of the German language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written German and demonstrate further cultural awareness.
Prerequisites: Take GER 111
Corequisites: Take GER 182

GER 181. German Lab 1. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to enhance acquisition of the fundamental elements of the German language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written German and demonstrate cultural awareness.

GER 182. German Lab 2. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to enhance acquisition of the fundamental elements of the German language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written German and demonstrate cultural awareness.

GER 211. Intermediate German I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a review and expansion of the essential skills of the German language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.
Prerequisites: Take GER 112
Corequisites: Take GER 281
GRA 110. Graphic Arts Orientation. 2.0 Credits.  Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the history, development, and commercial applications of the major printing processes. Topics include offset lithography, screen printing, intaglio, relief printing, and emerging technologies. Upon completion, students should be able to demonstrate an understanding of the major characteristics, advantages, and disadvantages of each process.
GRA 112. Graphics Problem Solving. 2.0 Credits.  Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers computations used in graphic arts production. Topics include measurement systems, ratios and scaling, and paper-cutting calculations. Upon completion, students should be able to apply mathematical skills to problem solving in graphic arts and imaging production.
GRA 121. Graphic Arts I. 4.0 Credits.  Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces terminology, tools and materials, procedures, and equipment used in graphic arts production. Topics include copy preparation and pre-press production relative to printing. Upon completion, students should be able to demonstrate an understanding of graphic arts production.
GRA 134. Computer Graphics III. 2.0 Credits.  Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers advanced design and layout concepts utilizing illustration, page layout, and imaging software in graphic arts. Emphasis is placed on enhancing and developing the skills that were introduced in GRA 151. Upon completion, students should be able to understand and use the computer as a fundamental design and production tool.
GRA 154. Computer Graphics IV. 2.0 Credits.  Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers advanced techniques using a variety of hardware and software applications to produce complex projects. Upon completion, students should be able to use electronic document production tools.
GRA 161. Computer Graphics Applications I. 1.0 Credit.  Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is designed to provide additional hands-on training using computer software and hardware for production and design in graphic arts. Emphasis is placed on utilizing various computer software and hardware to produce simple graphic arts projects. Upon completion, students should be able to use the computer as a graphic arts production tool.
Corequisites: Take GRA 151
GRA 162. Computer Graphics Applications II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is designed to provide additional hands-on training using computer software and hardware for production and design in graphic arts. Emphasis is placed on utilizing various computer software and hardware to produce advanced graphic arts projects. Upon completion, students should be able to effectively use the computer as a graphic arts production tool.
Corequisites: Take GRA 152

GRA 163. Computer Graphics Applications III. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is designed to provide additional hands-on training using computer software and hardware for production and design in graphic arts. Emphasis is placed on utilizing various computer software and hardware to produce advanced graphic arts projects. Upon completion, students should be able to effectively use the computer as a graphic arts production tool.
Corequisites: Take GRA 153

GRA 164. Computer Graphics Applications IV. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is designed to provide additional hands-on training using computer software and hardware for production and design in graphic arts. Emphasis is placed on utilizing various computer software and hardware to produce professional quality graphic arts projects. Upon completion, students should be able to effectively and efficiently use the computer as a graphic arts production tool.
Corequisites: Take GRA 154

GRA 221. Graphic Arts II. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is a continuation of GRA 121. Topics include multi-color image preparation, pre-press production, control of close/hairline register in image assembly and press operation, and post-press procedures. Upon completion, students should be able to demonstrate competence in all phases of graphic arts production.
Prerequisites: Take All: GRA 121 and GRA 151

GRA 222. Graphic Arts III. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is a continuation of GRA 221. Topics include advanced electronic pre-press, press operation, and post-press procedures. Upon completion, students should be able to demonstrate competence in all phases of advanced graphic arts production.
Prerequisites: Take All: GRA 221 and GRA 152

GRA 230. Substrates & Ink. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the manufacture, purchase, and use of printing substrates and inks in the graphic arts industry. Topics include the history, development, testing, purchasing, and use of ink, paper, and specialty substrates used in printing, as well as problems associated with each. Upon completion, students should be able to demonstrate an understanding of ink and substrate relationships in the design, planning, purchase, and production of a printed job.

GRA 245. Printing Sales/Service. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the operation of a sales, marketing, and service program for a printing company or printing supplier. Topics include marketing, prospecting, telephone sales, customer service, order entry, closing the sale, and answering objections. Upon completion, students should be able to understand the operation of sales and service in printing and printing supply organizations.

GRA 252. Imaging Techniques. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers electronic imaging and transfer of digital images through various media. Topics include analysis of electronic imaging, including uses, medium, outcome, storage, and display hardware and software. Upon completion, students should be able to demonstrate an understanding of electronic imaging techniques and purposes and complete related assignments.
Prerequisites: Take One: GRA 151 or GRD 151

GRA 255. Image Manipulation I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers applications associated with electronic image manipulation, including color correction, color separation, special effects, and image conversion. Topics include image-capturing hardware, image-processing software, and output options. Upon completion, students should be able to utilize hardware and software to acquire, manipulate, and output images to satisfy design and production.
Prerequisites: Take One: GRA 151 or GRD 151

GRA 256. Image Manipulation II. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers electronic color separation and its relationship to multicolor printing. Topics include color theory, separation, color matching, proofing, and output of process and spot color images. Upon completion, students should be able to use hardware and image processing software to produce color separations and proofs for various printing processes.
Prerequisites: Take GRA 255

GRA 257. Image Manipulation III. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is a continuation of GRA 256. Emphasis is placed on producing quality color separations through image manipulation, gray component replacement/undercolor removal, dot-gain compensation, and color correction. Upon completion, students should be able to use hardware and software to produce color separations that have been adjusted to meet tolerances of printing production equipment.
Prerequisites: Take All: GRA 153 and GRA 256

GRA 280. Printing Management. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers management and supervision in the printing industry. Topics include planning, organization, plant layout, scheduling, goal setting, business ethics, personnel policies, leadership and personal development, OSHA and environmental laws, and employment laws. Upon completion, students should be able to demonstrate an understanding of management and supervision techniques and policies used in a variety of printing departments and organizations.

Graphic Design (GRD)

GRD 110. Typography I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the history and mechanics of type and its application to layout and design. Topics include typographic fundamentals, anatomy, measurements, composition, identification, and terminology. Upon completion, students should be able to demonstrate proficiency in design application, analysis, specification, and creation of typographic elements.
Prerequisites: Take GRD 141 GRD 151
GRD 111. Typography II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of GRD 110. Emphasis is placed on solving challenging typographic problems. Upon completion, students should be able to understand and demonstrate advanced typographic applications.
Prerequisites: Take GRD 110

GRD 113. History of Graphic Design. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the history of graphic design and visual communications. Topics include major trends, developments, influences, and directions. Upon completion, students should be able to understand, recognize, and analyze important historical and world-wide cultural influences found in today's marketing of ideas and products.

GRD 121. Drawing Fundamentals I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course increases observation skills using basic drawing techniques and media in graphic design. Emphasis is placed on developing the use of graphic design principles, media applications, spatial considerations, drawing styles, and approaches. Upon completion, students should be able to show competence and proficiency in finished works.

GRD 131. Illustration I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the application of rendering techniques to create illustrations. Emphasis is placed on controlling various media, methods, surfaces, design problems, and the appropriate media selection process. Upon completion, students should be able to produce quality illustrations from conception through finished artwork.
Prerequisites: Take One: ART 131, DES 125, or GRD 121

GRD 132. Illustration II. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is a continuation of GRD 131. Topics include editorial, product, fashion, and advertising illustrations. Upon completion, students should be able to demonstrate increased proficiency in creating quality illustrations from conceptualization through finished artwork.
Prerequisites: Take GRD 131

GRD 141. Graphic Design I. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the conceptualization process used in visual problem solving. Emphasis is placed on learning the principles of design and the manipulation and organization of elements. Upon completion, students should be able to apply design principles and visual elements to projects.

GRD 142. Graphic Design II. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers the application of visual elements and design principles in advertising and graphic design. Topics include creation of various designs, such as logos, advertisements, posters, outdoor advertising, and publication design. Upon completion, students should be able to effectively apply design principles and visual elements to projects.
Prerequisites: Take One: ART 121, DES 135, or GRD 141

GRD 151. Computer Design Basics. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers designing and drawing with various types of software applications for advertising and graphic design. Emphasis is placed on creative and imaginative use of space, shapes, value, texture, color, and typography to provide effective solutions to advertising and graphic design problems. Upon completion, students should be able to use the computer as a creative tool.

GRD 152. Computer Design Techniques I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers complex design problems utilizing various design and drawing software applications. Topics include the expressive use of typography, image, and organization to communicate a message. Upon completion, students should be able to use appropriate computer software to professionally present their work.
Prerequisites: Take GRD 151

GRD 157. Photographic Imaging I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces basic camera operations and photographic production. Topics include subject composition, depth of field, shutter control, light control, color, photo-finishing, and digital imaging, correction and output. Upon completion, students should be able to produce traditional and/or digital photographic prints with acceptable technical and compositional quality.
Prerequisites: Take GRD 151 with a minimum grade of C

GRD 180. Interactive Design. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers skills and techniques used in designing interactive presentations. Emphasis is placed on design, including interface design, color, illustration, scripting, audio, typography, and animated elements. Upon completion, students should be able to design and produce interactive presentations.
Prerequisites: Take One: GRD 151 or GRA 151

GRD 241. Graphic Design III. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is an advanced exploration of various techniques and media for advertising and graphic design. Emphasis is placed on advanced concepts and solutions to complex and challenging graphic design problems. Upon completion, students should be able to demonstrate competence and professionalism in visual problem solving.
Prerequisites: Take One: DES 136 or GRD 142

GRD 242. Graphic Design IV. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is a continuation of GRD 241. Emphasis is placed on using advanced media techniques, concepts, strategies, and professionalism in all aspects of design. Upon completion, students should be able to conceptualize, create, and produce designs for reproduction.
Prerequisites: Take GRD 241

GRD 263. Illustrative Imaging. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers the creative manipulation of images utilizing digital techniques of masking, layering, airbrushing, and painting. Topics include the aesthetic analysis of visual imagery as well as the legalities of manipulating images. Upon completion, students should be able to utilize software applications to creatively manipulate and illustratively build digital images which accomplish design objectives.
Prerequisites: Take One: GRD 151 or GRA 151

GRD 265. Digital Print Production. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers preparation of digital files for output and reproduction. Emphasis is placed on output options, separations, color proofing, and cost and design considerations. Upon completion, students should be able to prepare files and select appropriate output methods for design solutions.
Prerequisites: Take One: GRD 151 or GRA 151
Health Information Technology (HIT)

HIT 110. Fundamentals of Health Information Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces Health Information Management (HIM) and its role in healthcare delivery systems. Topics include standards, regulations and initiatives; payment and reimbursement systems, healthcare providers and disciplines; and electronic health records (EHRs). Upon completion, students should be able to demonstrate an understanding of health information management and healthcare organizations, professions and trends.

HIT 112. Health Law and Ethics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers legislative and regulatory processes, legal terminology, and professional-related and practice-related ethical issues. Topics include confidentiality; privacy and security policies, procedures and monitoring; release of information policies and procedures; and professional-related and practice-related ethical issues. Upon completion, students should be able to apply policies and procedures for access and disclosure of Protected Health Information and apply and promote ethical standards.

HIT 114. Health Data Systems and Standards. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the organization and presentation of a design/art portfolio and appropriate related materials. Emphasis is placed on practical application of curriculum concepts to the healthcare setting. Upon completion, students should be able to apply health information theory to healthcare facility practices.

HIT 122. Professional Practice Experience I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides supervised clinical experience in healthcare settings. Emphasis is placed on practical application of curriculum concepts to the healthcare setting. Upon completion, students should be able to apply health information theory to healthcare facility practices.

HIT 124. Professional Practice Experience II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides supervised clinical experience in healthcare settings. Emphasis is placed on practical application of curriculum concepts to the healthcare setting. Upon completion, students should be able to apply health information theory to healthcare facility practices.

HIT 210. Healthcare Statistics. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers maintenance, compilation, analysis, and presentation of healthcare statistics and research protocols and techniques. Topics include basic statistical principles, indices, databases, registries, vital statistics, descriptive statistics, research protocol monitoring, Institutional Review Board processes, and knowledge-based research techniques. Upon completion, students should be able to apply, interpret, and present healthcare statistics and utilize research techniques to gather and interpret healthcare data.

Prerequisites: Take HIT 220
Corequisites: Take HIT 220

HEA 110. Personal Health/Wellness. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an introduction to basic personal health and wellness. Emphasis is placed on current health issues such as nutrition, mental health, and fitness. Upon completion, students should be able to demonstrate an understanding of the factors necessary to the maintenance of health and wellness.

HEA 112. First Aid & CPR. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the basics of emergency first aid treatment. Topics include rescue breathing, CPR, first aid for choking and bleeding, and other first aid procedures. Upon completion, students should be able to demonstrate skills in providing emergency care for the sick and injured until medical help can be obtained.

GRD 280. Portfolio Design. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers the organization and presentation of a design/art portfolio and appropriate related materials. Emphasis is placed on development and evaluation of the portfolio, design and production of a resume and self-promotional materials, and interview techniques. Upon completion, students should be able to prepare and professionally present an effective portfolio and related self-promotional materials.

Prerequisites: Complete one of the following options:
- GRD 142 and GRD 152
- GRD 142 and GRA 152

GRD 282. Advertising Copywriting. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers copywriting for print, electronic, and broadcast advertising and promotion. Topics include advertising strategies, proposals, headlines, slogans, and text copy for various types of advertising. Upon completion, students should be able to write and articulate advertising proposals and understand the ethical and regulatory environment for advertising.

Prerequisites: Take One: ENG 110 or ENG 111

GRD 285. Client/Media Relations. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces media pricing, scheduling, and business ethics. Emphasis is placed on communication with clients and determination of clients' advertising needs. Upon completion, students should be able to use professional communication skills to effectively orchestrate client/media relationships.

Prerequisites: Complete one of the following options:
- GRD 142 and GRA 121
- GRD 142 and GRA 152
- GRD 142 and GRD 152

Health (HEA)

HEA 110. Personal Health/Wellness. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an introduction to basic personal health and wellness. Emphasis is placed on current health issues such as nutrition, mental health, and fitness. Upon completion, students should be able to demonstrate an understanding of the factors necessary to the maintenance of health and wellness.

HEA 112. First Aid & CPR. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the basics of emergency first aid treatment. Topics include rescue breathing, CPR, first aid for choking and bleeding, and other first aid procedures. Upon completion, students should be able to demonstrate skills in providing emergency care for the sick and injured until medical help can be obtained.
**HIT 211. ICD Coding. 4.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course covers ICD diagnostics and procedural coding conventions and guidelines for inpatient, outpatient and ambulatory care. Emphasis is placed on a comprehensive application of anatomy, physiology and interrelationships among organ systems. Upon completion, students should be able to accurately assign and sequence diagnostic and procedural codes for patient outcomes, statistical and reimbursement purposes.

**HIT 214. CPT/Other Coding Systems. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course covers application of principles and guidelines of CPT/HCPCS coding. Topics include clinical classification/nomenclature systems such as SNOMED, DSM, ICD-O and the use of encoders. Upon completion, students should be able to apply coding principles to correctly assign CPT/HCPCS codes.

Prerequisites: Take HIT 211

**HIT 215. Reimbursement Methodology. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers reimbursement methodologies used in all healthcare settings as they relate to national billing, compliance, and reporting requirements. Topics include prospective payment systems, billing process and procedures, chargemaster maintenance, regulatory guidelines, reimbursement monitoring, and compliance strategies and reporting. Upon completion, students should be able to perform data quality reviews to validate code assignment and comply with reimbursement and reporting requirements.

**HIT 216. Quality Management. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces principles of quality assessment and improvement, and utilization, risk, and case management, in healthcare. Topics include Continuous Quality Improvement, and case management processes, data analysis/reporting techniques, credentialing, regulatory quality monitoring requirements, and outcome measures and monitoring. Upon completion, students should be able to abstract, analyze, and report clinical data for facility-wide quality management/performance improvement programs and monitor compliance measures.

Prerequisites: Take HIT 114 with a minimum grade of C

Corequisites: Take HIT 214 HIT 215 HIT 280

**HIT 218. Management Principles in HIT. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers organizational management concepts as applied to healthcare settings. Topics include roles/functions of teams/committees, leadership, communication and interpersonal skills, designing and implementing orientation/training programs, monitoring workflow, performance standards, revenue cycles, and organizational resources. Upon completion, students should be able to apply management, leadership, and supervisory concepts to various healthcare settings.

**HIT 220. Health Informatics & EHRs. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers EHR systems, design, implementation and application. Topics include EHR, Informatics, speech & imaging technology, information/network security & integrity, data dictionaries, modeling and warehousing. Upon completion, students should be able to facilitate usage of electronic health record systems and other technologies.

Prerequisites: Take HIT 114 CIS 110 with a minimum grade of C

Take HIT 114 CIS 111 with a minimum grade of C

Complete one of the following options:
- HIT 114 and CIS 110
- HIT 114 and CIS 111

**HIT 221. Lifecycle of Electronic Health Record. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers the system selection, design and implementation of an electronic health record (EHR) in integrated delivery networks. Topics include the system development life cycle, analysis of existing systems, required resources, and common resource constraints. Upon completion, students should be able to understand system development life cycles, analyze design and engineering, and make recommendations to improve efficiency of operations.

Prerequisites: Take HIT 110 HIT 114

Corequisites: Take HIT 225

**HIT 222. Prof Practice Exp III. 2.0 Credits.** Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0

This course provides supervised clinical experience in healthcare settings. Emphasis is placed on practical application of curriculum concepts to the healthcare setting. Upon completion, students should be able to apply health information theory to healthcare facility practices.

**HIT 225. Healthcare Informatics. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0

This course covers data analysis to support decision making, patient care, and regulatory compliance. Topics include clinical terminology and vocabulary systems, data capture methodology, data presentation and reporting, and initiatives to improve the quality of patient care. Upon completion, students should be able to identify data elements and sets, analyze capture methodology in healthcare settings, analyze compliance issues and make improvement recommendations.

Prerequisites: Take HIT 110 HIT 114

Corequisites: Take HIT 221

**HIT 226. Principles of Disease. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers disease etiology and organ system involvement, including physical signs and symptoms, prognoses, and common complications and their management. Topics include basic microbiology, basic pharmacology, and principles of disease. Upon completion, students should be able to relate disease processes to etiology, physical signs and symptoms, prognosis, and common complications and their management.

Prerequisites: Take BIO 166 or BIO 169 with a minimum grade of C

Take One: BIO 166 or BIO 169
HIT 227. Informatics Project Management. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the required skills needed for implementing healthcare IT applications, with emphasis on electronic health records (EHR). Topics include leadership development skills, interdisciplinary collaboration, organizational change management, project management software, and the study of communication skills required across healthcare disciplines. Upon completion, students should be able to effectively collaborate and communicate with healthcare disciplines to implement informatics projects within the healthcare setting.
Prerequisites: Take HET 110 HIT 114
Corequisites: Take HIT 221 and HIT 225

HIT 280. Professional Issues. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a comprehensive discussion of topics common to the health information profession. Emphasis is placed on application of professional competencies, job search tools, and preparation for the certification examination. Upon completion, students should be able to demonstrate competence in entry-level domains and subdomains for health information technologies.
Prerequisites: Take HIT 211
Corequisites: Take DBA 112, HIT 214, HIT 215 and HIT 216

Heavy Equipment Maintenance (HET)

HET 110. Diesel Engines. 6.0 Credits. Class-3.0. Clinical-0.0. Lab-9.0. Work-0.0
This course introduces theory, design, terminology, and operating adjustments for diesel engines. Emphasis is placed on safety, theory of operation, inspection, measuring, and rebuilding diesel engines according to factory specifications. Upon completion, students should be able to measure, diagnose problems, and repair diesel engines.

HET 114. Power Trains. 5.0 Credits. Class-3.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces power transmission devices. Topics include function and operation of gears, chains, clutches, planetary gears, drive lines, differentials, and transmissions. Upon completion, students should be able to identify, research specifications, repair, and adjust power train components.

HET 115. Electronic Engines. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the principles of electronically controlled diesel engines. Emphasis is placed on testing and adjusting diesel engines in accordance with manufacturer’s specifications. Upon completion, students should be able to diagnose, test, and calibrate electronically controlled diesel engines.

HET 125. Preventive Maintenance. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces preventive maintenance practices used on medium and heavy duty vehicles and rolling assemblies. Topics include preventive maintenance schedules, services, DOT rules and regulations, and road ability. Upon completion, students should be able to set up and follow a preventive maintenance schedule as directed by manufacturers.

HET 126. Preventive Maintenance Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a laboratory setting to enhance preventive maintenance practices used on medium and heavy duty vehicles and rolling assemblies. Emphasis is placed on practical experiences that enhance the topics presented in HET 125. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in HET 125.
Corequisites: Take HET 125

HET 128. Medium/Heavy Duty Tune Up. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces tune-up and troubleshooting according to manufacturers’ specifications. Topics include troubleshooting engine systems, tune-up procedures, and use and care of special test tools and equipment. Upon completion, students should be able to troubleshoot, diagnose, and repair engines and components using appropriate diagnostic equipment.

HET 230. Air Brakes. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the theory and repair of braking systems used on trucks. Topics include safety, governors, compressors, and supporting systems. Upon completion, students should be able to diagnose, disassemble, inspect, repair, and reassemble air brake systems.

HET 231. Medium/Heavy Duty Brake Systems. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the theory and repair of braking systems used in medium and heavy duty vehicles. Topics include air, hydraulic, and ABS system diagnosis and repair. Upon completion, students should be able to troubleshoot, adjust, and repair braking systems on medium and heavy duty vehicles.

HET 232. Medium/Heavy Duty Brake Systems Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides a laboratory setting to enhance the skills for troubleshooting, adjusting, and repairing brake systems on medium and heavy duty vehicles. Emphasis is placed on practical experiences that enhance the topics presented in HET 231. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in HET 231.
Corequisites: Take HET 231

HET 233. Suspension and Steering. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the theory and principles of medium and heavy duty steering and suspension systems. Topics include wheel and tire problems, frame members, fifth wheel, bearings, and coupling systems. Upon completion, students should be able to troubleshoot, adjust, and repair suspension and steering components on medium and heavy duty vehicles.
History (HIS)

HIS 111. World Civilizations I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces world history from the dawn of civilization to the early modern era. Topics include Eurasian, African, American, and Greco-Roman civilizations and Christian, Islamic and Byzantine cultures. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in pre-modern world civilizations. Students seeking to take this course to meet the college transfer Social/Behavioral Sciences requirement may also take HIS-112. (no HIS prerequisites).
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

HIS 112. World Civilizations II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces world history from the early modern era to the present. Topics include the cultures of Africa, Europe, India, China, Japan, and the Americas. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern world civilizations. Students seeking to take this course to meet the college transfer Social/Behavioral Sciences requirement may also take HIS-111. (no HIS prerequisites).
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

HIS 131. American History I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a survey of American history from pre-history through the Civil War era. Topics include the migrations to the Americas, the colonial and revolutionary periods, the development of the Republic, and the Civil War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early American history. Students seeking to take this course to meet the college transfer Social/Behavioral Sciences requirement may also take HIS-132. (no HIS prerequisites).
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

HIS 132. American History II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a survey of American history from the Civil War era to the present. Topics include industrialization, immigration, the Great Depression, the major American wars, the Cold War, and social conflict. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in American history since the Civil War. Students seeking to take this course to meet the college transfer Social/Behavioral Sciences requirement may also take HIS-131. (no HIS prerequisites).
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

HIS 141. Genealogy & Local History. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course explores the role of the local or family historian. Emphasis is placed on historical or genealogical research techniques including a survey of local, state, and national archival resources. Upon completion, students should be able to conduct genealogical research and do a major research project on local or family history.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

HIS 162. Women and History. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course surveys the experience of women in historical perspective. Topics include the experiences and contributions of women in culture, politics, economics, science, and religion. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural contributions of women in history.
HIS 221. African-American History. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers African-American history from the Colonial period to the present. Topics include African origins, the slave trade, the Civil War, Reconstruction, the Jim Crow era, the civil rights movement, and contributions of African Americans. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the history of African Americans.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

HIS 222. African-American History I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers African-American history through the Civil War period. Topics include African origins, the nature of slavery, African-American participation in the American Revolution, abolitionism, and the emergence of a distinct African-American culture. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early African-American history.

HIS 223. African-American History II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers African-American history from the Civil War to the present. Topics include Reconstruction, the Jim Crow era, urbanization, the Harlem Renaissance, the Civil Rights movement, and the philosophies of major African-American leaders. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in African-American history since the Civil War.

HIS 224. The Changing South. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers major developments in the South from European settlement through the Civil War. Topics include the multi-ethnic character of colonization, the plantation economy, relations between social classes, the nature of slavery, and issues leading to the Civil War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the antebellum South.

HIS 225. The Civil War. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course examines the social, political, economic, and ideological forces that led to the Civil War and Reconstruction. Topics include regional conflicts and sectionalism, dissolution of the Union, military campaigns, and the war's socioeconomic impact, aftermath, and consequences. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the United States during the era of the Civil War.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

HIS 226. The Civil War. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course surveys the history and cultures of Native Americans from pre-history to the present. Topics include Native American civilizations, relations with Europeans, and the continuing evolution of Native American cultures. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments among Native Americans.

HIS 227. Native American History. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the origin and development of the South as a distinct region of the United States. Emphasis is placed on Southern identity and its basis in cultural, social, economic, and political developments during the 19th and 20th centuries. Upon completion, students should be able to identify and analyze the major cultural, social, economic, and political developments in the South.

HIS 228. History of the South. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a study of American society from the post-Depression era to the present. Topics include World War II, the Cold War, social unrest, the Vietnam War, the Great Society, and current political trends. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in recent America.
HIS 232. History of the Old West. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course surveys the development of the western United States. Emphasis is placed on Native American cultures, Manifest Destiny, conflicts on the frontier, and subsequent developments. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the western United States.

HIS 233. History of Appalachia. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the Appalachian region and its relationship to mainstream American history. Topics include regional settlement patterns and a study of Appalachian culture. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in Appalachia.

HIS 234. Cherokee History. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a survey of the history and culture of the Cherokees. Topics include origins, belief systems, contact and conflict with European settlers, removals, and contemporary problems faced by the Cherokees. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in Cherokee history.

HIS 236. North Carolina History. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a study of geographical, political, economic, and social conditions existing in North Carolina from America’s discovery to the present. Topics include native and immigrant backgrounds; colonial, antebellum, and Reconstruction periods; party politics; race relations; and the transition from an agrarian to an industrial economy. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in North Carolina.

HIS 260. History of Africa. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course surveys the history of Africa from pre-history to the present. Emphasis is placed on the evolution of social, political, economic, and governmental structures in Africa. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in Africa.

Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

HIS 261. East Asian History. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course surveys the history of China and Japan from the development of civilization in Asia to the present. Emphasis is placed on the evaluation of social, political, economic, and governmental structures in China and Japan. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in East Asia.

Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

HIS 262. Middle East History. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course surveys the history of the Middle East from the development of civilization in Mesopotamia to the present. Emphasis is placed on social, political, economic, religious, and governmental structures in the Middle East. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the Middle East.

Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

HIS 271. The French Revolution Era. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course traces the causes and effects of the French Revolution. Topics include the Enlightenment; Jacobins; Reign of Terror; Napoleon’s republic, empire, and wars; and the French Revolution’s impact upon world history. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments during the French revolutionary era.

Horticulture (HOR)

HOR 112. Landscape Design I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers landscape principles and practices for residential and commercial sites. Emphasis is placed on drafting, site analysis, and common elements of good design, plant material selection, and proper plant utilization (encouraged use of native plants and discouraged use of invasive species). Upon completion, students should be able to read plans and draft a landscape design according to sustainable practices.

Prerequisites: Take HOR 160 or HOR 260 with a minimum grade of C
HOR 114. Landscape Construction. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the design and fabrication of landscape structures/features. Emphasis is placed on safety, tool identification and use, material selection, construction techniques, and fabrication. Upon completion, students should be able to design and construct common landscape structures/features.

HOR 116. Landscape Management I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers information and skills necessary to analyze a property and develop a management schedule. Emphasis is placed on property measurement, plant condition, analysis of client needs, and plant culture needs. Upon completion, students should be able to analyze a property, develop management schedules, and implement practices based on client needs.

HOR 118. Equipment Operation and Maintenance. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the proper operation and maintenance of selected equipment used in horticulture. Emphasis is placed on the maintenance, minor repairs, safety devices, and actual operation of selected equipment. Upon completion, students should be able to design a maintenance schedule, service equipment, and demonstrate safe operation of selected equipment.

HOR 124. Nursery Operations. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers nursery site and crop selection, cultural practices, and production and marketing methods. Topics include site considerations, water availability, equipment, irrigation, fertilization, containers, media, and pest control. Upon completion, students should be able to design and implement a nursery operation and grow and harvest nursery crops.

HOR 134. Greenhouse Operations. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the principles and procedures involved in the operation and maintenance of greenhouse facilities. Emphasis is placed on the operation of greenhouse systems, including the environmental control, record keeping, scheduling, and production practices. Upon completion, students should be able to demonstrate the ability to operate greenhouse systems and facilities to produce greenhouse crops.

HOR 142. Fruit & Vegetable Production. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the principles and techniques of growing fruits and field-grown vegetables. Topics include site selection, proper varietal selection, nutritional values, cultural techniques, harvesting and marketing, and insect and disease control. Upon completion, students should be able to demonstrate an understanding of the principles related to the production of selected fruits and vegetables.

HOR 150. Introduction to Horticulture. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the history, development, and basic techniques of horticulture. Topics include propagation techniques, planting procedures, watering and fertility, plant growth, pest and disease control, and garden design and history. Upon completion, students should be able to demonstrate an understanding of the basic principles of horticulture. Students will explore horticultural careers, organizations, and reference materials.

HOR 154. Introduction to Horticulture Therapy. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the concept of horticulture therapy and how it can be applied to improve human well-being. Emphasis is placed on developing a horticulture therapy program, planning activities, and adjusting activities based on the age, disability, or need of the individual. Upon completion, students should be able to develop project ideas, write lesson plans, and lead informal classes using horticulture therapy techniques.

HOR 160. Plant Materials I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers identification, culture, characteristics, and use of plants in a sustainable landscape. Emphasis is placed on nomenclature, identification, growth requirements, soil preferences, and landscape applications. Upon completion, students should be able to demonstrate knowledge of the proper selection and utilization of plant materials, including natives and invasive plants.

HOR 161. Plant Materials II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a supplementary opportunity to cover identification, culture, characteristics, and use of plants in a sustainable landscape, giving students a broader knowledge of available landscape plants for utilization in landscapes and plant production. Emphasis is placed on nomenclature, identification, growth requirements, cultural requirements, soil preferences, landscape applications, and expansion of the plant palette. Upon completion, students should be able to demonstrate knowledge of the proper selection and utilization of plant materials, including natives and invasive plants.

Prerequisites: hor 160

HOR 162. Applied Plant Science. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the basic concepts of botany as they apply to horticulture. Topics include nomenclature, physiology, morphology, and anatomy as they apply to plant culture. Upon completion, students should be able to apply the basic principles of botany to horticulture.

HOR 164. Horticultural Pest Management. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the identification and management of plant pests including insects, diseases, and weeds. Topics include pest identification and beneficial organisms, pesticide application safety and use of least toxic methods of management. Upon completion, students should be able to manage common landscape pests using least toxic methods of control and be prepared to sit for North Carolina Commercial Pesticide Ground Applicators license. Students will apply the Integrated Pest Management Model in plant management.

HOR 166. Soils and Fertilizers. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the physical and chemical properties of soils and soil fertility and management. Topics include soil formation; classification; physical, chemical, and biological properties (including microorganisms); testing; and fertilizer application. Upon completion, students should be able to analyze, evaluate, and properly amend soils/media according to sustainable practices.
HOR 168. Plant Propagation. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a study of sexual and asexual reproduction of plants. Emphasis is placed on seed propagation, grafting, stem and root propagation, micro-propagation, and other propagation techniques. Upon completion, students should be able to successfully propagate ornamental plants.

HOR 170. Horticultural Computer Applications. 2.0 Credits.
Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces computer programs as they apply to the horticulture industry. Emphasis is placed on applications of software for plant identification, design, and irrigation. Upon completion, students should be able to use computer programs in horticultural situations. Students will create a CAD drawing of a landscape.
Prerequisites: Take HOR 112

HOR 213. Landscape Design II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers residential and commercial landscape design, cost analysis, and installation. Emphasis is placed on job cost estimates, installation of the landscape design, and maintenance techniques. Upon completion, students should be able to design and implement the design.
Prerequisites: Take HOR 112

HOR 215. Landscape Irrigation. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces basic irrigation design, layout, and installation. Topics include site analysis, components of irrigation systems, safety, types of irrigation systems, and installation techniques. Upon completion, students should be able to design and install basic landscape irrigation systems.

HOR 217. Landscape Management II. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides additional opportunities to design plans, write contracts, and present proposals. Emphasis is placed on the development, pricing, and presentation of proposals and additional exploration of cultural applications. Upon completion, students should be able to analyze a property, develop a management plan, and price and present that plan.
Prerequisites: Take One: HOR 110 or HOR 116

HOR 225. Nursery Production. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers all aspects of nursery crop production. Emphasis is placed on field production and covers soils, nutrition, irrigation, pest control, and harvesting. Upon completion, students should be able to produce a marketable nursery crop.

HOR 235. Greenhouse Production. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the production of greenhouse crops. Emphasis is placed on product selection and production based on market needs and facility availability, including record keeping. Upon completion, students should be able to select and make production schedules to successfully produce greenhouse crops.

HOR 245. Horticultural Specialty Crops. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the techniques and requirements for the production of horticultural crops of special or local interest. Topics include development of a local market, proper varietal selection, cultural practices, site selection, and harvesting and marketing practices. Upon completion, students should be able to choose, grow, and market a horticultural crop of special or local interest.

HOR 251. Insects & Diseases. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces insects and diseases of economic importance to horticultural crops. Topics include insect life cycles and identifying characteristics; plant diseases, including their signs and symptoms; control methods; and insect scouting for IPM. Upon completion, students should be able to demonstrate an understanding of insect and disease identification, collection, and control.

HOR 253. Horticulture Turfgrass. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers information and skill development necessary to establish and manage landscape turfgrasses. Topics include grass identification, establishment, cultural requirements, application of control products, fertilization, and overseeding techniques. Upon completion, students should be able to analyze a landscape site and determine those cultural and physical activities needed to establish or manage a quality turf.
Prerequisites: Take One: HOR 162 or HOR 166

HOR 255. Interiorscapes. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers plant selection, design, and management for interior settings. Topics include tropical plant identification, cultural requirements, insect and disease identification and control, and design and management requirements for interior plants. Upon completion, students should be able to design, install, and manage plants in interior settings.

HOR 257. Arboriculture Practices. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the culture and maintenance of trees and shrubs. Topics include fertilization, pruning, approved climbing techniques, pest control, and equipment use and safety. Upon completion, students should be able to properly prune trees and shrubs and perform arboricultural practices.

HOR 265. Advanced Plant Materials. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers important landscape plants. Emphasis is placed on identification, plant nomenclature, growth characteristics, cultural requirements, and landscape uses. Upon completion, students should be able to correctly select plants for specific landscape uses.
Prerequisites: Take HOR 260 or HOR 160

HOR 268. Advanced Propagation. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers applied production techniques for asexual and sexual plant propagation. Emphasis is placed on the major accepted methods of asexual propagation and sexual propagation of woody ornamental plants, with evaluation of all initiated propagation. Upon completion, students should be able to successfully propagate a variety of plant materials utilizing methods covered in the course.

HOR 273. Horticultural Management & Marketing. 3.0 Credits.
Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the steps involved in starting or managing a horticultural business. Topics include financing, regulations, market analysis, employer/employee relations, formulation of business plans, and operational procedures in a horticultural business. Upon completion, students should be able to assume ownership or management of a horticultural business.
HOR 293. Selected Topics in Horticulture. 3.0 Credits. Class-3.0, Clinical-0.0, Lab-0.0, Work-0.0
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on the subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

Hotel & Restaurant Management (HRM)

HRM 110. Introduction to Hospitality and Tourism. 3.0 Credits. Class-3.0, Clinical-0.0, Lab-0.0, Work-0.0
This course covers the growth and progress of the hospitality industry. Topics include tourism, lodging, resorts, gaming, restaurants, foodservice and clubs. Upon completion, students should be able to demonstrate an understanding of the background, context, and career opportunities that exist within the hospitality industry. This course covers the growth and progress of the hospitality industry. Topics include financing, hotels, restaurants, and clubs. Upon completion, students should be able to demonstrate an understanding of the background, context, and career opportunities that exist in the hospitality industry. Corequisites: Take CUL 111 and CUL 110

HRM 120. Front Office Procedures. 3.0 Credits. Class-3.0, Clinical-0.0, Lab-0.0, Work-0.0
This course introduces a systematic approach to lodging front office procedures. Topics include reservations, registration, guest satisfaction, occupancy and revenue management, security, interdepartmental communications, and related guest services. Upon completion, students should be able to demonstrate a basic understanding of current front office operating systems, including efficient and courteous guest services. Prerequisites: Take CUL 111 with a minimum grade of C

HRM 125. Etiquette for Hospitality. 1.0 Credit. Class-1.0, Clinical-0.0, Lab-0.0, Work-0.0
This course covers social skills needed to effectively interact within organizational and customer situations. Topics include general social manners, personal appearance, table manners, restaurant and meeting etiquette, and business interaction. Upon completion, students should be able to function with confidence in various social, cultural, and professional situations. Prerequisites: Take CUL 111 with a minimum grade of C

HRM 140. Legal Issues-Hospitality. 3.0 Credits. Class-3.0, Clinical-0.0, Lab-0.0, Work-0.0
This course covers the rights and responsibilities that the law grants to or imposes upon the hospitality industry. Topics include federal and state regulations, historical and current practices, safety and security, risk management, loss prevention, relevant torts, and contracts. Upon completion, students should be able to demonstrate an understanding of the legal system and the concepts necessary to prevent or minimize organizational liability. Prerequisites: Take CUL 111 with a minimum grade of C

HRM 150. Training for Hospitality. 3.0 Credits. Class-3.0, Clinical-0.0, Lab-0.0, Work-0.0
This course introduces techniques and methodology involved in developing training programs. Topics include job specification/description and breakdown, current and traditional training methods, coaching, evaluation, and management development. Upon completion, students should be able to produce job specifications, descriptions and breakdowns, and conduct technical training. Prerequisites: Take CUL 111 with a minimum grade of C

HRM 210. Meetings and Event Planning. 3.0 Credits. Class-3.0, Clinical-0.0, Lab-0.0, Work-0.0
This course introduces concepts related to the planning and operation of conventions, trade shows, professional meetings, and foodservice events. Emphasis is placed on methods of marketing, selling, organizing, and producing conventions, events, and trade shows that will increase financial and environmental value. Upon completion, students should be able to demonstrate an understanding of management principles for multi-function, multi-day conferences and events. Prerequisites: Take CUL 111 with a minimum grade of C

HRM 220. Cost Control-Food and Beverage. 3.0 Credits. Class-3.0, Clinical-0.0, Lab-0.0, Work-0.0
This course introduces controls and accounting procedures as applied to costs in the hospitality industry. Topics include reports, cost control, planning and forecasting, control systems, financial statements, operational efficiencies, labor controls and scheduling. Upon completion, students should be able to demonstrate an understanding of food, beverage, and labor cost control systems for operational troubleshooting and problem solving. Prerequisites: Take CUL 110 with a minimum grade of C Take MAT 110 MAT 121 MAT 122 MAT 143 MAT 152 MAT 171 MAT 172 MAT 223 MAT 263 MAT 271 MAT 272 MAT 273 MAT 280 or MAT 285 with a minimum grade of C

HRM 225. Beverage Management. 3.0 Credits. Class-3.0, Clinical-0.0, Lab-0.0, Work-0.0
This course introduces the management of beverages served in hospitality operations. Topics include history and trends; service, procurement and storage; knowledge and control of wines and fermented/distilled beverages; and non-alcoholic beverages, coffees, and teas. Upon completion, students should be able to demonstrate an understanding of responsible alcoholic beverage and the knowledge of beverages consumed in a hospitality operation. Prerequisites: Take CUL 111 with a minimum grade of C

HRM 230. Club & Resort Management. 3.0 Credits. Class-3.0, Clinical-0.0, Lab-0.0, Work-0.0
This course introduces specific principles of managing a hospitality operation in a resort or club setting. Topics include operational efficiencies, resort and club marketing, recreational and sport activity management, and retail management. Upon completion, students should be able to demonstrate an understanding of the specialized skills involved in resort and club management. Prerequisites: Take CUL 111 with a minimum grade of C

HRM 240. Marketing for Hospitality. 3.0 Credits. Class-3.0, Clinical-0.0, Lab-0.0, Work-0.0
This course covers planning, organizing, directing, and analyzing the results of marketing programs for the hospitality industry. Emphasis is placed on target marketing, marketing mix, analysis, product and image development, use of current media, sales planning, advertising, public relations, and collateral materials. Upon completion, students should be able to apply the marketing process as it relates to the hospitality industry. Prerequisites: Take CUL 111 with a minimum grade of C
HRM 245. Human Resource Management-Hospitality. 3.0 Credits.
Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces a systematic approach to human resource management in the hospitality industry. Topics include training and development, staffing, selection, hiring, recruitment, evaluation, benefit administration, employee relations, labor regulations/laws, discipline, motivation, productivity, shift management, contract employees and organizational culture. Upon completion, students should be able to apply human resource management skills for the hospitality industry.
Prerequisites: Take CUL 111 with a minimum grade of C.

HRM 280. Management Problems-Hospitality. 3.0 Credits. Class-3.0.
Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to introduce students to timely issues within the hospitality industry and is intended to move students into a managerial mindset. Emphasis is placed on problem-solving skills using currently available resources. Upon completion, students should be able to demonstrate knowledge of how hospitality management principles may be applied to real challenges facing industry managers.
Prerequisites: Take HRM 110

Human Services (HSE)

HSE 110. Introduction to Human Services. 3.0 Credits. Class-2.0.
Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the human services field, including the history, agencies, roles, and careers. Topics include personal/professional characteristics, diverse populations, community resources, disciplines in the field, systems, ethical standards, and major theoretical and treatment approaches. Upon completion, students should be able to identify the knowledge, skills, and roles of the human services worker.

HSE 112. Group Process I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0.
Work-0.0
This course introduces interpersonal concepts and group dynamics. Emphasis is placed on self-awareness facilitated by experiential learning in small groups with analysis of personal experiences and the behavior of others. Upon completion, students should be able to show competence in identifying and explaining how people are influenced by their interactions in group settings.

HSE 120. Interpersonal Relations. 3.0 Credits. Class-3.0. Clinical-0.0.
Lab-0.0. Work-0.0
This course introduces the interpersonal and communication skills used in helping relationships and professions. Topics include self-understanding; growth techniques; assertive, passive, and aggressive behaviors; and effective communications in the helping role. Upon completion, students should be able to demonstrate skills for effective communications in helping relationships which promote understanding of self, other people, and personal growth.

HSE 123. Interviewing Techniques. 3.0 Credits. Class-2.0. Clinical-0.0.
Lab-2.0. Work-0.0
This course covers the purpose, structure, focus, and techniques employed in effective interviewing. Emphasis is placed on observing, attending, listening, responding, recording, and summarizing of personal histories with instructor supervision. Upon completion, students should be able to perform the basic interviewing skills needed to function in the helping relationship.

HSE 125. Counseling. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0.
Work-0.0
This course covers the major approaches to psychotherapy and counseling, including theory, characteristics, and techniques. Emphasis is placed on facilitation of self-exploration, problem solving, decision making, and personal growth. Upon completion, students should be able to understand various theories of counseling and demonstrate counseling techniques.

HSE 210. Human Services Issues. 2.0 Credits. Class-2.0. Clinical-0.0.
Lab-0.0. Work-0.0
This course covers current issues and trends in the field of human services. Emphasis is placed on contemporary topics with relevance to special issues in a multi-faceted field. Upon completion, students should be able to integrate the knowledge, skills, and experiences gained in classroom and clinical experiences with emerging trends in the field.

HSE 212. Group Process II. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0.
Work-0.0
This course is a continuation of the study of interpersonal concepts and group dynamics. Emphasis is placed on self-awareness facilitated by experiential learning in small groups with analysis of personal experiences and the behavior of others. Upon completion, students should be able to demonstrate their ability to communicate with others and facilitate communications between others.
Prerequisites: Take HSE 112

HSE 220. Case Management. 3.0 Credits. Class-2.0. Clinical-0.0.
Lab-2.0. Work-0.0
This course covers the variety of tasks associated with professional case management. Topics include treatment planning, needs assessment, referral procedures, and follow-up and integration of services. Upon completion, students should be able to effectively manage the care of the whole person from initial contact through termination of services.
Prerequisites: Take HSE 110 with a minimum grade of C.

HSE 225. Crisis Intervention. 3.0 Credits. Class-3.0. Clinical-0.0.
Lab-0.0. Work-0.0
This course introduces the basic theories and principles of crisis intervention. Emphasis is placed on identifying and demonstrating appropriate and differential techniques for intervening in various crisis situations. Upon completion, students should be able to assess crisis situations and respond appropriately.

HSE 227. Children & Adolescents in Crisis. 3.0 Credits. Class-3.0.
Clinical-0.0. Lab-0.0. Work-0.0
This course covers the crises affecting children and adolescents in contemporary society. Emphasis is placed on abuse and neglect, suicide and murder, dysfunctional family living, poverty, and violence. Upon completion, students should be able to identify and discuss intervention strategies and available services for the major contemporary crises affecting children and adolescents.

HSE 242. Family Systems. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0.
Work-0.0
This course introduces the concepts of family structure as a system and includes the impact of contemporary society on the family. Topics include systems theory, family structure, blended families, divorce, adoption, and the elderly. Upon completion, students should be able to demonstrate an understanding of families as a system and the impact of change on family structure.
Prerequisites: Take One: PSY 150 or SOC 210
Humanities (HUM)

HUM 115. Critical Thinking. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the use of critical thinking skills in the context of human conflict. Emphasis is placed on evaluating information, problem solving, approaching cross-cultural perspectives, and resolving controversies and dilemmas. Upon completion, students should be able to demonstrate orally and in writing the use of critical thinking skills in the analysis of appropriate texts.
Prerequisites: Complete one of the following options:
• DRE 098
• ENG 090 and RED 090*
• ENG 095*
• *These are archived courses which are no longer available for enrollment. They will be removed in Summer 2015.

HUM 120. Cultural Studies. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the distinctive features of a particular culture. Topics include art, history, music, literature, politics, philosophy, and religion. Upon completion, students should be able to appreciate the unique character of the study culture.

HUM 130. Myth in Human Culture. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an in-depth study of myths and legends. Topics include the varied sources of myths and their influence on the individual and society within diverse cultural contexts. Upon completion, students should be able to demonstrate a general familiarity with myths and a broad-based understanding of the influence of myths and legends on modern culture.

HUM 160. Introduction to Film. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the fundamental elements of film artistry and production. Topics include film styles, history, and production techniques, as well as the social values reflected in film art. Upon completion, students should be able to critically analyze the elements covered in relation to selected films. This course is a Writing Intensive Elective for UNCC.
Prerequisites: Take ENG 111 with a minimum grade of C

HUM 211. Humanities I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind’s answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from early modern times to the present. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied.
Prerequisites: Take ENG 111

HUM 212. Humanities II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind’s answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from early modern times to the present. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied.
Prerequisites: Take ENG 111

Hydraulics (HYD)

HYD 110. Hydraulics/Pneumatics I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the basic components and functions of hydraulic and pneumatic systems. Topics include standard symbols, pumps, control valves, control assemblies, actuators, FRL, maintenance procedures, and switching and control devices. Upon completion, students should be able to understand the operation of a fluid power system, including design, application, and troubleshooting.

HYD 112. Hydraulics-Medium and Heavy Duty. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces hydraulic theory and applications as applied to mobile equipment. Topics include component studies such as pumps, motors, valves, cylinders, filters, reservoirs, lines, and fittings. Upon completion, students should be able to identify, diagnose, test, and repair hydraulic systems using schematics and technical manuals.

HYD 134. Hydraulic/Hydrostatic Construction. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers the hydraulic/hydrostatic components of construction equipment hydraulics and power trains. Topics include testing, adjusting, repair, and replacement of components that are applied to construction equipment hydraulics and transmissions along with other related topics. Upon completion, students should be able to use proper diagnostic procedures and identify, repair, and replace hydraulic and hydrostatic systems on construction equipment.

HYD 210. Advanced Hydraulics. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers advanced hydraulic systems. Emphasis is placed on advanced hydraulic systems and components, troubleshooting, and other related topics. Upon completion, students should be able to demonstrate an understanding of the installation, application, operation, and maintenance of hydraulic components and systems.
Prerequisites: Take One Course: HYD 110, HYD 111, or HYD 112
Information Systems (CIS)

CIS 110. Introduction to Computers. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces computer concepts, including fundamental functions and operations of the computer. Topics include identification of hardware components, basic computer operations, security issues, and use of software applications. Upon completion, students should be able to demonstrate an understanding of the role and function of computers and use the computer to solve problems.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 080 ENG 080 with a minimum grade of C
• Take ENG 085 ENG 085A with a minimum grade of C
• Take EFL 074 EFL 094 with a minimum grade of C
• Take ENG 111 with a minimum grade of C
• Take CIS 111 with a minimum grade of C

CIS 111. Basic PC Literacy. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an overview of computer concepts. Emphasis is placed on the use of personal computers and software applications for personal and fundamental workplace use. Upon completion, students should be able to demonstrate basic personal computer skills.

CIS 115. Intro to Programming & Logic. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces computer programming and problem solving in a structured program logic environment. Topics include language syntax, data types, program organization, problem solving methods, algorithm design, and logic control structures. Upon completion, students should be able to manage files with operating system commands, use top-down algorithm design, and implement algorithmic solutions in a programming language.
Prerequisites: Complete one of the following options:
• DMA 010, DMA 020, DMA 030, and DMA 040
• MAT 121
• MAT 171

CIS 193. Selected Topics in Information Systems. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

CIS 196. Seminar in Information Systems. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0

Information Systems Security (SEC)

SEC 110. Security Concepts. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the concepts and issues related to securing information systems and the development of policies to implement information security controls. Topics include the historical view of networking and security, security issues, trends, security resources, and the role of policy, people, and processes in information security. Upon completion, students should be able to identify information security risks, create an information security policy, and identify processes to implement and enforce policy.

SEC 150. Secure Communications. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an overview of current technologies used to provide secure transport of information across networks. Topics include data integrity through encryption, Virtual Private Networks, SSL, SSH, and IPSec. Upon completion, students should be able to implement secure data transmission technologies.
Prerequisites: Complete one of the following options:
• SEC 110 and NET 110
• SEC 110 and NET 125

SEC 160. Security Administration I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an overview of security administration and fundamentals of designing security architectures. Topics include networking technologies, TCP/IP concepts, protocols, network traffic analysis, monitoring, and security best practices. Upon completion, students should be able to identify normal network traffic using network analysis tools and design basic security defenses.
Prerequisites: Complete one of the following options:
• SEC 110 and NET 110
• SEC 110 and NET 125

International Business (INT)

INT 110. International Business. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of the environment, concepts, and basic differences involved in international business. Topics include forms of foreign involvement, international trade theory, governmental influences on trade and strategies, international organizations, multinational corporations, personnel management, and international marketing. Upon completion, students should be able to describe the foundation of international business.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

INT 115. Global Communication. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces principles and techniques basic to intercultural business communications. Topics include selected cultural values and customs, verbal and non-verbal communication skills, and global etiquette. Upon completion students should be able to demonstrate beginning skills in effective verbal and non-verbal intercultural communications.
INT 180. Travel Study Abroad. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to apply language and theoretical skills in an appropriate international business setting in a foreign country. Emphasis is placed on strengthening foreign language skills, performing with greater competence and confidence in the international workplace, and completing objectives outlined in training plan. Upon completion, students should be able to understand and utilize cultural patterns and business practices in the region of study.

INT 210. International Trade. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers international business trade practices and foreign market research. Emphasis is placed on current trends of US trade practices in foreign countries and how to engage in international trade and acquire foreign marketing information. Upon completion, students should be able to formulate an overall product policy for the international marketplace. This course covers international business trade practices and foreign market research. Emphasis is placed on current trends of U.S trade practices in foreign countries and how to engage in international trade and acquire foreign marketing information. Upon completion, students should be able to formulate an overall product policy for the international marketplace.
Prerequisites: Take INT 110

INT 220. International Economics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the forces and criteria for the development of a new international economic order. Emphasis is placed on balance of payments, foreign exchange rates and their determination, International Monetary System, and arguments for and against free trade and protectionism. Upon completion, students should be able to describe economic principles and concepts of international trade.
Prerequisites: Take ECO 151, ECO 251, or ECO 252

INT 230. International Law. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to apply language and theoretical skills in an appropriate international business setting in a foreign country. Emphasis is placed on strengthening foreign language skills, performing with greater competence and confidence in the international workplace, and completing objectives outlined in training plan. Upon completion, students should be able to understand and utilize cultural patterns and business practices in the region of study.

IPP 111. Introduction to Interpretation. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an orientation to the field of interpreting, interpretation models, cognitive processes associated with interpretation, professional ethical standards, employment opportunities, and working conditions. Topics include specialized jargon, code of ethics, theories, interpreter assessments/qualifications, and protocol associated with various settings. Upon completion, students should be able to explain the rationale for placement of interpreters and apply ethical standards to a variety of working situations.
Prerequisites: Take DRE 098 or ENG 111 with a minimum grade of C

IPP 112. Comparative Cultures. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces various cultural attributes and how they impact the consumers and the interpreting process. Topics include value systems of deaf and non-deaf individuals, enculturation stages, sociolinguistic continuum of language use within the deaf community, and cross-cultural management. Upon completion, students should be able to compare deaf and non-deaf cultures and discuss how attitudes impact communication interactions and interpreting.
Prerequisites: Take ASL 212 with a minimum grade of C

IPP 130. Analytical Skills for Interpreting. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is designed to improve cognitive processes associated with interpreting, listening, short-term memory, semantic equivalence, visual/auditory processing, thought organization, and logic. Emphasis is placed on developing skills necessary to generate equivalent messages between ASL and English. Upon completion, students should be able to consecutively interpret non-technical, interactive messages between ASL and English.
Prerequisites: Take ASL 212 with a minimum grade of C

IPP 152. ASL/English Translation. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a study of the component parts of a cultural scheme and the manner in which ASL and English differ. Emphasis is placed on analyzing, discussing, and translating basic ASL and English texts. Upon completion, students should be able to discuss and apply techniques of cross-cultural communication and translation between deaf and non-deaf communities.
Prerequisites: Take ASL 112

IPP 153. Introduction to Discourse Analysis. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces discourse types and functions and specialized vocabulary and examines the specific nature of ASL discourse. Emphasis is placed on applying and practicing a model of analysis utilizing specialized vocabulary. Upon completion, students should be able to utilize specialized vocabulary and demonstrate ASL discourse features.
Prerequisites: Take ASL 112

IPP 161. Consecutive Interpreting. 5.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the process of ASL/English consecutive interpreting in a variety of interview, meeting, and small conference settings. Emphasis is placed on generating equivalent messages between ASL and English. Upon completion, students should be able to discuss and apply the principles of the protocol of consecutive interpreting.
Prerequisites: Take IPP 152

IPP 221. Simultaneous Interpreting I. 5.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces simultaneous ASL/English interpreting through a variety of interview, meeting, and small conference settings. Emphasis is placed on analyzing expository texts originating in group, meeting, and conference settings. Emphasis is placed on analyzing expository texts, identifying registers, and applying principles of the protocol of interpreting. Upon completion, students should be able to apply the appropriate linguistic and/or cultural adjustments required to generate equivalent messages.
Prerequisites: Take IPP 161
Corequisites: Take IPP 240

Interpreter Preparation (IPP)

IPP 112. Comparative Cultures. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces various cultural attributes and how they impact the consumers and the interpreting process. Topics include value systems of deaf and non-deaf individuals, enculturation stages, sociolinguistic continuum of language use within the deaf community, and cross-cultural management. Upon completion, students should be able to compare deaf and non-deaf cultures and discuss how attitudes impact communication interactions and interpreting.
Prerequisites: Take ASL 212 with a minimum grade of C

IPP 130. Analytical Skills for Interpreting. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is designed to improve cognitive processes associated with interpreting, listening, short-term memory, semantic equivalence, visual/auditory processing, thought organization, and logic. Emphasis is placed on developing skills necessary to generate equivalent messages between ASL and English. Upon completion, students should be able to consecutively interpret non-technical, interactive messages between ASL and English.
Prerequisites: Take ASL 212 with a minimum grade of C

IPP 152. ASL/English Translation. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a study of the component parts of a cultural scheme and the manner in which ASL and English differ. Emphasis is placed on analyzing, discussing, and translating basic ASL and English texts. Upon completion, students should be able to discuss and apply techniques of cross-cultural communication and translation between deaf and non-deaf communities.
Prerequisites: Take ASL 112

IPP 153. Introduction to Discourse Analysis. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces discourse types and functions and specialized vocabulary and examines the specific nature of ASL discourse. Emphasis is placed on applying and practicing a model of analysis utilizing specialized vocabulary. Upon completion, students should be able to utilize specialized vocabulary and demonstrate ASL discourse features.
Prerequisites: Take ASL 112

IPP 161. Consecutive Interpreting. 5.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the process of ASL/English consecutive interpreting in a variety of interview, meeting, and small conference settings. Emphasis is placed on generating equivalent messages between ASL and English. Upon completion, students should be able to discuss and apply the principles of the protocol of consecutive interpreting.
Prerequisites: Take IPP 152

IPP 221. Simultaneous Interpreting I. 5.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces simultaneous ASL/English interpreting through a variety of interview, meeting, and small conference settings. Emphasis is placed on analyzing expository texts originating in group, meeting, and conference settings. Emphasis is placed on analyzing expository texts, identifying registers, and applying principles of the protocol of interpreting. Upon completion, students should be able to apply the appropriate linguistic and/or cultural adjustments required to generate equivalent messages.
Prerequisites: Take IPP 161
Corequisites: Take IPP 240
Prerequisites: Take ENG 111

a Writing Intensive elective for UNCC.

to gather, write, and edit news, feature, and sports articles. This course is
related legal and ethical issues. Upon completion, students should be able
writing. Emphasis is placed on basic news writing techniques and on

to discuss current issues, become familiar with evaluation practices, and
reviews, and editorials.
for educational interpreters. Upon completion, students should be able
to write clear, concise, accurate, language, effective supporting details, completeness, and accuracy. Upon

This course provides an overview of educational interpreting in the US and
discusses recent trends in the education of deaf students. Topics include
history of deaf education, current employment practices and requirements
for educational interpreters. Upon completion, students should be able
to discuss current issues, become familiar with evaluation practices, and
apply professional/ethical standards to the interpreting role.

Prerequisites: Take IPP 221

This course develops intellectual and ethical decision-making abilities
and considers common ethical dilemmas that arise within the interpreting
process. Topics include a model of ethical/intellectual development and
the application of the model to interpreting practices. Upon completion,
students should be able to discuss ethical resolution to various case
studies and apply recognized principles of professional behavior to the
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Corequisites: Take IPP 221

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This course is an introduction to news writing for newspapers and
other print media. Emphasis is placed on basic news writing techniques and on
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Writing Intensive elective for UNCC.

Prerequisites: Take ENG 111 with a minimum grade of C

This course introduces the paralegal profession and the legal system,
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Topics include regulations, ethics, case analysis, legal reasoning, career
opportunities, professional organizations, terminology and other related
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of a paralegal and identify the skills, knowledge, and ethics required of
paralegals.

Prerequisites: Take ENG 111 Minimum grade C

This course introduces students to sustainable practices in site design
and land development. Topics include conservation subdivision design,
transportation issues, urban planning, water conservation, rain gardens,
alternative technologies, permaculture design, low impact design, and grey
water systems. Upon completion, students should be able to demonstrate
techniques and procedures used for mitigating the impact of development
on the environment.

This course covers advanced topics in legal research and writing. Topics
include more complex legal issues and assignments involving preparation
of a paralegal and identify the skills, knowledge, and ethics required of
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Prerequisites: Take ENG 111 Minimum grade C

This course covers the basics of persuasive writing for community
newspapers and other print media. Emphasis is placed on writing
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language, effective supporting details, completeness, and accuracy. Upon
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on the environment.
LEX 130. Civil Injuries. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers traditional tort concepts and the evolving body of individual rights created by statute. Topics include intentional and non-intentional torts with emphasis on negligence, strict liability, civil rights, workplace and environmental liability, remedies, and damages. Upon completion, students should be able to recognize, explain, and evaluate elements of civil injuries and related defenses.
Prerequisites: Take ENG 111 with a minimum grade of C

LEX 140. Civil Litigation I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the structure of the legal system and the rules governing civil litigation. Topics include jurisdiction state and federal rules of civil procedure and evidence. Upon completion, students should be able to assist an attorney in pre-litigation matters and preparation of pleadings and motions.
Prerequisites: Take ENG 111 with a minimum grade of C

LEX 141. Civil Litigation II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers advanced topics in the civil litigation process. Topics include motions, discovery, and trial and appellate procedures. Upon completion, students should be able to assist an attorney in preparing and organizing documents for trial, settlement and post-trial practice.
Prerequisites: Take LEX 140

LEX 150. Commercial Law I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers legally enforceable agreements, forms of organization, and selected portions of the Uniform Commercial Code. Topics include drafting and enforcement of contracts, leases, and related documents and selection and implementation of business organization forms, sales, and commercial papers. Upon completion, students should be able to apply the elements of a contract, prepare various business documents, and understand the role of commercial paper.
Prerequisites: Take ENG 111 with a minimum grade of C

LEX 155. Commercial Law II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the techniques of reading and applying legal opinions and the skills of case analysis. Emphasis is placed on the components of opinions and on types of legal writing. Upon completion, students should be able to read, analyze, and brief opinions and prepare legal memoranda, briefs, and other legal documents.
Prerequisites: Take ENG 111 with a minimum grade of C Corequisites: Take LEX 120

LEX 160. Criminal Law & Procedure. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces substantive criminal law and procedural rights of the accused. Topics include elements of state/federal crimes, defenses, constitutional issues, pre-trial and trial process, and other related topics. Upon completion, students should be able to explain elements of specific crimes and assist an attorney in preparing a criminal case.
Prerequisites: Take ENG 111 with a minimum grade of C

LEX 170. Administrative Law. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the scope, authority, and regulatory operations of various federal, state, and local administrative agencies. Topics include social security, worker's compensation, unemployment, zoning, and other related topics. Upon completion, students should be able to research sources of administrative law, investigate, and assist in representation of clients before administrative agencies.
Prerequisites: Take ENG 111 with a minimum grade of C

LEX 180. Case Analysis & Reasoning. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the techniques of reading and applying legal opinions and the skills of case analysis. Emphasis is placed on the components of opinions and on types of legal writing. Upon completion, students should be able to read, analyze, and brief opinions and prepare legal memoranda, briefs, and other legal documents.
Prerequisites: Take ENG 111 with a minimum grade of C

LEX 210. Real Property I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the study of real property law. Topics include the distinction between real and personal property, various estates, mechanics of conveyance and encumbrance, recordation, special proceedings, and other related topics. Upon completion, students should be able to identify estates, forms of deeds, requirements for recording, and procedures to enforce rights to real property.
Prerequisites: Take ENG 111 with a minimum grade of C

LEX 211. Real Property II. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course continues the study of real property law relating to title examination and preparation of closing documents. Topics include use of courthouse and other public records in title examination and preparation of documents required in real estate transactions and closings. Upon completion, students should be able to plot/draft a description, perform complete title examination, draft closing documents including title insurance forms, and prepare disbursement reconciliation. Labs will take place at the local Register of Deeds office.
Prerequisites: Take LEX 210

LEX 220. Corporate Law. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the legal aspects of forming, operating, and maintaining a business. Emphasis is placed on the business corporation with additional coverage of sole proprietorships and partnerships. Upon completion, students should be able to draft basic partnership and corporate documents and file these documents as required.
Prerequisites: Take ENG 111 with a minimum grade of C

LEX 240. Family Law. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers laws governing domestic relations. Topics include marriage, separation, divorce, child custody, support, property division, adoption, domestic violence, and other related topics. Upon completion, students should be able to interview clients, gather information, and draft documents related to family law.
Prerequisites: Take ENG 111 with a minimum grade of C

LEX 250. Wills, Estates, & Trusts. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers various types of wills, trusts, probate, estate administration, and intestacy. Topics include types of wills and execution requirements, caveats and dissents, intestate succession, inventories and accountings, distribution and settlement, and other related topics. Upon completion, students should be able to draft simple wills, prepare estate forms, understand administration of estates including taxation, and explain terms regarding trusts.
Prerequisites: Take ENG 111 with a minimum grade of C
LEX 260. Bankruptcy and Collections. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of the laws of bankruptcy and the rights of creditors and debtors. Topics include bankruptcy procedures and estate management, attachment, claim and delivery, repossession, foreclosure, collection, garnishment, and post-judgment collection procedure. Upon completion, students should be able to prepare and file bankruptcy forms, collection letters, statutory liens, and collection of judgments.
Prerequisites: Take ENG 111 Minimum grade C

LEX 270. Law Office Management/Technology. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an overview of law office management and organization. Topics include office forms, filing systems, billing/time keeping, computer systems, calendar systems, library administration, case management, office/personnel procedures, ethics, and technology. Upon completion, students should be able to draft letters to clients, opposing counsel, government entities, and insurance companies and prepare the settlement brochure.
Prerequisites: Take LEX 120 with a minimum grade of C

LEX 271. Law Office Writing. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the basics of writing for the law office including the drafting of general correspondence, the briefing of cases, and the preparation of settlement brochures. Emphasis is placed on legal vocabulary in the context of letter writing, briefing judicial opinions, and the preparation of the settlement brochure. Upon completion, students should be able to establish and maintain various law office systems, monitor case progress, and supervise non-lawyer personnel.
Prerequisites: Take LEX 120 with a minimum grade of C

LEX 280. Ethics & Professionalism. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course reinforces legal ethics and the role of the paralegal in a professional work environment. Topics include a review of ethics, employment opportunities, and search techniques; paralegal certification and other related topics. Upon completion, students should be able to understand the paralegal's role in the ethical practice of law.
Prerequisites: Take ENG 111 with a minimum grade of C

LEX 281. Intellectual Property. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the basics of intellectual property theory, and the paralegal's practical role. Topics include copyright, patent and trademark theory which emphasizes statutory creation and property rights. Upon completion, students should be able to discuss the creation and sustainability of copyrights, patents and trademarks.
Prerequisites: Take All: LEX 110, LEX 120, and LEX 140

LEX 282. Immigration Law. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers both theoretical and practical application of immigration law to everyday scenarios and the paralegal's role in the process. Topics include administrative agency formation, the role of INS and the implication of the decisions on the immigration process. Upon completion, students should be able to discuss administrative agencies, the relationship of the INS to the governmental structure and immigration case law.
Prerequisites: Take All: LEX 110, LEX 120, and LEX 140

LEX 283. Investigation. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers various aspects of civil and criminal investigation. Topics include locating witnesses, interviewing techniques, obtaining records, sketching and photographing accident scenes, collecting and preserving evidence, and preparation of exhibits for trial. Upon completion, students should be able to locate witnesses, prepare questionnaires, interview witnesses, obtain criminal/motor vehicle/medical/accident records, sketch scenes, and prepare exhibits.
Prerequisites: Take LEX 110 LEX 120 LEX 140 ENG 111 with a minimum grade of C

LEX 285. Workers' Compensation Law. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the process of initiating and handling workers' compensation claims. Emphasis is placed on reviewing and drafting relevant Industrial Commission forms. Upon completion, students should be able to interview clients, gather information, and draft documents related to workers' compensation claims.
Prerequisites: Take ENG 111 with a minimum grade of C

LEX 289. U.S. Constitutional Law. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the creation, content, and interpretation of the Constitution of the United States and its amendments as it relates to civil law and practice. Topics include constitutional formation, structure, court interpretation and the implication of legal decision for legal practitioners. Upon completion, students should be able to discuss the formation of the Constitution, its interpretation and application to the practice of civil law.
Prerequisites: Take All: LEX 110, LEX 120, and LEX 140

Logistics Management (LOG)

LOG 110. Introduction to Logistics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of logistics. Topics include traffic management, warehousing, inventory control, material handling, global logistics, and the movement and storage of goods from raw materials sources to end consumers. Upon completion, students should be able to identify the different segments of logistics and use the terminology of the industry.
Prerequisites: Complete one of the following options:
- Take RED 090 ENG 090 ENG 090A
- Take ENG 095 ENG 095A
- Take EFL 111 EFL 112
- Take ENG 090 ENG 090A
- Take RED 090 EFL 111
- Take ENG 111
- Take DRE 098
LOG 125. Transportation Logistics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the role and importance of the transportation industry. This is an overview of transportation emphasizing its environmental and sociological aspects, economic impact, services, regulatory guidelines, policies, and its future. Upon completion, students should be able to identify modes of transportation, interpret governing regulations, and describe the principles and terminology used in the transportation industry. Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A
• Take ENG 095 ENG 095A
• Take EFL 111 EFL 112
• Take RED 090 ENG 090A
• Take RED 090 EFL 111
• Take ENG 111

LOG 215. Supply Chain Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers all activities involved in the flow of products and information between the suppliers, customers, producers, and service providers. Topics include acquiring, purchasing, manufacturing, assembling, and distributing goods and services throughout the supply chain organizations. Upon completion, students should be able to identify the supply chain units, describe the materials management processes, and prepare for the APICS CPIM examination. Prerequisites: Take LOG 110

LOG 235. Import/Export Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the elements of import and export operations, from transportation to documentation, finance, and security and the effects on the global supply chain. Emphasis is placed on existing import/export regulations, customs documentation, intermodal transportation, foreign freight forwarders, global technology, and homeland security initiatives. Upon completion, students should be able to perform import/export operations, channels of distribution, implemented technologies, and associate with operating a secure supply chain. Prerequisites: Take LOG 125

LOG 240. Purchasing Logistics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the various aspects of purchasing, and their impact on materials management, supply chain, transportation, and global logistics processes. Emphasis is placed on the different methods of electronic sourcing, negotiating and pricing principles, and on the internal and external considerations associated with international logistics. Upon completion, students should be able to describe and apply the principles and terminology used in procurement including electronic data interchange services, purchasing and logistics systems. Prerequisites: Take LOG 110

LOG 250. Advanced Global Logistics. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the advanced application of global operations and logistics strategies, planning, technology, risk, and management necessary to cope with the global business environment. Emphasis is placed on an in-depth understanding of global sourcing, shipping, tracking, and e-logistics systems necessary to operate inbound/outbound logistics in a global market. Upon completion, students should be able to identify the different global markets and logistics technology available to process international inbound/outbound logistics transactions. Prerequisites: Take LOG 125

Low Impact Development (LID)

LID 111. Low Impact Development Design Principles. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces design principles of Low Impact Development (LID) which incorporate sustainable development and natural resources management as an alternative to traditional site design. Topics include science-based interdisciplinary design practices including tools from civil and environmental engineering, hydrology, horticulture, ecology, and architecture. Upon completion, students should be able to use multifaceted approaches to recommend site-specific LID design concepts for residential, public, and commercial sites.

Machining (MAC)

MAC 111. Machining Technology I. 6.0 Credits. Class-2.0. Clinical-0.0. Lab-12.0. Work-0.0
This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, drilling machines, saws, milling machines, bench grinders, and layout instruments. Upon completion, students should be able to safely perform the basic operations of measuring, layout, drilling, sawing, turning, and milling.

MAC 111AB. Machining Technology I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, drilling machines, saws, milling machines, bench grinders, and layout instruments. Upon completion, students should be able to safely perform the basic operations of measuring, layout, drilling, sawing, turning, and milling. This is the first part of a course sequence and emphasizes engine lathe set-up and operation.

MAC 111BB. Machining Technology I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, drilling machines, saws, milling machines, bench grinders, and layout instruments. Upon completion, students should be able to safely perform the basic operations of measuring, layout, drilling, sawing, turning, and milling. This is the second part of a course sequence and emphasizes milling machine setup and operation.

MAC 114. Introduction to Metrology. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the care and use of precision measuring instruments. Emphasis is placed on the inspection of machine parts and use of a wide variety of measuring instruments. Upon completion, students should be able to demonstrate the correct use of measuring instruments.
MAC 121. Introduction to CNC. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the concepts and capabilities of computer numerical control machine tools. Topics include setup, operation, and basic applications. Upon completion, students should be able to explain operator safety, machine protection, data input, program preparation, and program storage.

MAC 122. CNC Turning. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the programming, setup, and operation of CNC turning centers. Topics include programming formats, control functions, program editing, part production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC turning centers.

MAC 124. CNC Milling. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the manual programming, setup, and operation of CNC machining centers. Topics include programming formats, control functions, program editing, part production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC machining centers.

MAC 131. Blueprint Reading-Machining I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the basics of blueprint reading and sketching. Topics include multi-view drawings, interpretation of conventional lines, and dimensions, notes, and thread notations. Upon completion, students should be able to interpret basic drawings, visualize parts, and make pictorial sketches.

MAC 132. Blueprint Reading-Machining II. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces more complex industrial blueprints. Emphasis is placed on auxiliary views, section views, violations of true project, special views, applications of GD & T, and interpretation of complex parts. Upon completion, students should be able to read and interpret complex industrial blueprints.

Prerequisites: Take MAC 131 with a minimum grade of C

MAC 142. Machining Applications II. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides instruction in the wide variety of processes associated with machining. Topics include safety, equipment set-up, holding fixtures, tooling, cutting speeds and depths, metal properties, and proper finishes. Upon completion, students should be able to safely demonstrate advanced machining operations, accurately measure components, and produce accurate components with a proper finish.

Prerequisites: Take MAC 111AB MAC 111BB MAC 114 with a minimum grade of C

MAC 143. Machining Applications III. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides instruction in the field of advanced machining. Emphasis is placed on creating complex components, close-tolerance machining, precise measurement, and proper equipment usage. Upon completion, students should be able to demonstrate the ability to produce an accurately machined component with a quality finish using the proper machining process.

Prerequisites: Take MAC 142 with a minimum grade of C

MAC 151. Machining Calculations. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces basic calculations as they relate to machining occupations. Emphasis is placed on basic calculations and their applications in the machine shop. Upon completion, students should be able to perform basic shop calculations.

MAC 152. Advanced Machining Calculations. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course combines mathematical functions with practical machine shop applications and problems. Emphasis is placed on gear ratios, lead screws, indexing problems, and their applications in the machine shop. Upon completion, students should be able to calculate solutions to machining problems.

Prerequisites: Take MAC 151 or MAC 121 with a minimum grade of C

MAC 192. Selected Topics in Machining. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides an opportunity to explore areas of current interest in the specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

MAC 222. Advanced CNC Turning. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers advanced methods in setup and operation of CNC turning centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC turning centers. This course covers advanced methods in setup and operation of CNC turning centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC turning centers.

Prerequisites: Take MAC 121 with a minimum grade of C

MAC 224. Advanced CNC Milling. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers advanced methods in setup and operation of CNC machining centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC machining centers.

Prerequisites: Take MAC 121 with a minimum grade of C

MAC 228. Advanced CNC Processes. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers advanced programming, setup, and operation of CNC turning centers and CNC milling centers. Topics include advanced programming formats, control functions, program editing, and part production and inspection. Upon completion, students should be able to manufacture complex parts using CNC turning and milling centers.

Prerequisites: Take MAC 121 with a minimum grade of C

MAC 231. Cam: Computer Numerical Control Turning. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces Computer Numerical Control graphics programming and concepts for turning center applications. Emphasis is placed on the interaction of menus to develop a shape file in a graphics CAM system and to develop tool path geometry and part geometry. Upon completion, students should be able to develop a job plan using CAM software, including machine selection, tool selection, operational sequence, speed, feed, and cutting depth. Students will write transfer machine code from CAM graphics to the CNC turning center.

Prerequisites: Take MAC 121 with a minimum grade of C
MAC 232. CAM: Computer Numerical Control Milling. 3.0 Credits.
Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces Computer Numerical Control graphics programming and concepts for machining center applications. Emphasis is placed on developing a shape file in a graphics CAM system and transferring coded information from CAM graphics to the CNC milling center. Upon completion, students should be able to develop a complete job plan using CAM software to create a multi-axis CNC program.
Prerequisites: Take MAC 121 with a minimum grade of C

MAC 234. Advanced Multi-Axis Machining. 3.0 Credits. Class-2.0.
Clinical-0.0. Lab-3.0. Work-0.0
This course includes multi-axis machining using machining centers with multi-axis capabilities. Emphasis is placed on generation of machining center input with a CAM system and setup of pallet changer and rotary system for multi-axis machining fixtures. Upon completion, students should be able to convert CAD to output for multi-axis machining centers, including tooling, setup, and debugging processes.
Prerequisites: Take MAC 232 or DFT 154 with a minimum grade of C

MAC 292. Selected Topics in Machining. 2.0 Credits. Class-2.0.
Clinical-0.0. Lab-6.0. Work-0.0
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

Marketing and Retailing (MKT)

MKT 120. Principles of Marketing. 3.0 Credits. Class-3.0. Clinical-0.0.
Lab-0.0. Work-0.0
This course introduces principles and problems of marketing goods and services. Topics include promotion, placement, and pricing strategies for products. Upon completion, students should be able to apply marketing principles in organizational decision making.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

MKT 121. Retailing. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0.
Work-0.0
This course examines the role of retailing in the economy. Topics include the development of present retail structure, functions performed, effective operations, and managerial problems resulting from current economic and social trends. Upon completion, students should be able to demonstrate an understanding of the basic principles of retailing.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

MKT 122. Visual Merchandising. 3.0 Credits. Class-3.0. Clinical-0.0.
Lab-0.0. Work-0.0
This course introduces basic layout design and commercial display in retail and service organizations. Topics include an analysis of display as a visual merchandising medium and an examination of the principles and applications of display and design. Upon completion, students should be able to plan, build, and evaluate designs and displays. MKT-122 is a concentration requirement of the Marketing and Retailing concentration in the Business Administration program.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

MKT 123. Fundamentals of Selling. 3.0 Credits. Class-3.0. Clinical-0.0.
Lab-0.0. Work-0.0
This course is designed to emphasize the necessity of selling skills in a modern business environment. Emphasis is placed on sales techniques involved in various types of selling situations. Upon completion, students should be able to demonstrate an understanding of the techniques covered.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
MKT 220. Advertising and Sales Promotion. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the elements of advertising and sales promotion in the business environment. Topics include advertising and sales promotion appeals, selection of media, use of advertising and sales promotion as a marketing tool, and means of testing effectiveness. Upon completion, students should be able to demonstrate an understanding of the concepts covered through application.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

MKT 221. Consumer Behavior. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to describe consumer behavior as applied to the exchange processes involved in acquiring, consuming, and disposing of goods and services. Topics include an analysis of basic and environmental determinants of consumer behavior with emphasis on the decision-making process. Upon completion, students should be able to analyze concepts related to the study of the individual consumer.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

MKT 222. Customer Service. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course stresses the importance of customer relations in the business world. Emphasis is placed on learning how to respond to complex customer requirements and to efficiently handle stressful situations. Upon completion, students should be able to demonstrate the ability to handle customer relations.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 112 with a minimum grade of C
• Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

MKT 224. International Marketing. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the basic concepts of international marketing activity and theory. Topics include product promotion, placement, and pricing strategies in the international marketing environment. Upon completion, students should be able to demonstrate a basic understanding of the concepts covered.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

MKT 225. Marketing Research. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides information for decision making by providing guidance in developing, analyzing, and using data. Emphasis is placed on marketing research as a tool in decision making. Upon completion, students should be able to design and conduct a marketing research project and interpret the results. This course provides information for decision making by providing guidance in developing, analyzing, and using data. Emphasis is placed on marketing research as a tool in decision making. Upon completion, students should be able to design and conduct a marketing research project and interpret the results. This course is a unique concentration requirement of the marketing and retailing concentration in the business administration program.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
• Take MKT 120
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

MKT 227. Marketing Applications. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course extends the study of diverse marketing strategies. Emphasis is placed on case studies and small-group projects involving research or planning. Upon completion, students should be able to effectively participate in the formulation of a marketing strategy. This course extends the study of diverse marketing strategies. Emphasis is placed on case studies and small-group projects involving research or planning. Upon completion, students should be able to effectively participate in the formulation of a marketing strategy. This course is a unique concentration requirement of the marketing and retailing concentration in the business administration program.
Prerequisites: Take MKT 120 Minimum grade C
MKT 228. Service Marketing. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to define service marketing, demonstrate its importance, and note its special characteristics. Topics include basic building blocks of service marketing, distinctive aspects of services, and applications of service marketing mix. Upon completion, students should be able to demonstrate a basic understanding of the marketing mix as it applies to the service industry.
Prerequisites: Complete one of the following options:
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

MKT 229. Special Events Production. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the different objectives of various special events and the procedures and elements necessary for successful promotional activity. Emphasis is placed on planning, budgeting, promoting, and coordinating activities. Upon completion, students should be able to utilize the elements studied in the production of special events.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

MKT 230. Public Relations. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces public relations as it affects communications, strategic planning, and management of the organization. Topics include basic principles and functions of management that guide public relations activities as applied to businesses, services, institutions, and associations. Upon completion, students should be able to perform the communications, evaluation, planning, and research activities of the public relations professional.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C

MKT 232. Social Media Marketing. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to build students' social media marketing skills by utilizing projects that give students hands-on experience implementing social media marketing strategies. Topics include integrating different social media technologies into a marketing plan, creating social media marketing campaigns, and applying appropriate social media tools. Upon completion, students should be able to use social media technologies to create and improve marketing efforts for businesses.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 with a minimum grade of C

Mathematics (MAT)

MAT 110. Mathematical Measurement and Literacy. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an activity-based approach that develops measurement skills and mathematical literacy using technology to solve problems for non-math intensive programs. Topics include unit conversions and estimation within a variety of measurement systems; ratio and proportion; basic geometric concepts; financial literacy; and statistics including measures of central tendency, dispersion, and charting of data. Upon completion, students should be able to demonstrate the use of mathematics and technology to solve practical problems, and to analyze and communicate results.
Prerequisites: Complete one of the following options:
- Take DMA 010 DMA 020 DMA 030
- Take MAT 060 MAT 070
- Take MAT 060 MAT 080
- Take MAT 060 MAT 090
- Take MAT 095

MAT 121. Algebra/Trigonometry I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include the properties of plane and solid geometry, area and volume, and basic proportion applications; simplification, evaluation, and solving of algebraic equations and inequalities and radical functions; complex numbers; right triangle trigonometry; and systems of equations. Upon completion, students will be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.
Prerequisites: Take All: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DMA 060
MAT 122. Algebra/Trigonometry II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to cover concepts in algebra, function analysis, and trigonometry. Topics include exponential and logarithmic functions, transformations of functions, Law of Sines, Law of Cosines, vectors, and statistics. Upon completion, students should be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.
Prerequisites: Take MAT 121

MAT 143. Quantitative Literacy. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to engage students in complex and realistic situations involving the mathematical phenomena of quantity, change and relationship, and uncertainty through project- and activity-based assessment. Emphasis is placed on authentic contexts which will introduce the concepts of numeracy, proportional reasoning, dimensional analysis, rates of growth, personal finance, consumer statistics, practical probabilities, and mathematics for citizenship. Upon completion, students should be able to utilize quantitative information as consumers and to make personal, professional, and civic decisions by decoding, interpreting, using, and communicating quantitative information found in modern media and encountered in everyday life.
Prerequisites: Take All One Set:
• DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DRE 098
• DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and ENG 095
• DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and ENG 090* and RED 090* "These are archived courses which are no longer available for enrollment. They will be removed in Summer 2015.

MAT 152. Statistical Methods I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a project-based approach to introductory statistics with an emphasis on using real-world data and statistical literacy. Topics include descriptive statistics, correlation and regression, basic probability, discrete and continuous probability distributions, confidence intervals and hypothesis testing. Upon completion, students should be able to use appropriate technology to describe important characteristics of a data set, draw inferences about a population from sample data, and interpret and communicate results.
Prerequisites: Take All: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DRE 098

MAT 171. Precalculus Algebra. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to develop topics which are fundamental to the study of Calculus. Emphasis is placed on solving equations and inequalities, solving systems of equations and inequalities, and analysis of functions (absolute value, radical, polynomial, rational, exponential, and logarithmic) in multiple representations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to algebra-related problems with and without technology.
Prerequisites: Complete one of the following options:
• DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, and DMA 080
• DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DMA 065
• MAT 121

MAT 172. Precalculus Trigonometry. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to develop an understanding of topics which are fundamental to the study of Calculus. Emphasis is placed on the analysis of trigonometric functions in multiple representations, right and oblique triangles, vectors, polar coordinates, conic sections, and parametric equations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to trigonometry-related problems with and without technology.
Prerequisites: Take MAT 171

MAT 192. Selected Topics in Math. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore areas of current interest in the specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

MAT 223. Applied Calculus. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an introduction to the calculus concepts of differentiation and integration by way of application and is designed for engineering technology students. Topics include limits, slope, derivatives, related rates, areas, integrals, and applications. Upon completion, students should be able to demonstrate an understanding of the use of calculus and technology to solve problems and to analyze and communicate results.
Prerequisites: Take MAT 122

MAT 263. Brief Calculus. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed for students needing only one semester of calculus. Topics include functions, graphing, differentiation, and integration with emphasis on applications drawn from business, economics, and biological and behavioral sciences. Upon completion, students should be able to demonstrate an understanding of the use of basic calculus and technology to solve problems and to analyze and communicate results. This course introduces concepts of differentiation and integration, and their applications to solving problems; the course is designed for students needing one semester of calculus. Topics include functions, graphing, differentiation, and integration with emphasis on applications drawn from business, economics, and biological and behavioral sciences. Upon completion, students should be able to demonstrate an understanding of the use of basic calculus and technology to solve problems and to analyze and communicate results.
Prerequisites: Take One: MAT 161, MAT 171, or MAT 175
Corequisites: Take MAT 263A

MAT 271. Calculus I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to develop the topics of differential and integral calculus. Emphasis is placed on limits, continuity, derivatives and integrals of algebraic and transcendental functions of one variable. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to derivative-related problems with and without technology. This course covers in depth the differential calculus portion of a three-course calculus sequence. Topics include limits, continuity, derivatives, and integrals of algebraic and transcendental functions of one variable, with applications. Upon completion, students should be able to apply differentiation and integration techniques to algebraic and transcendental functions.
Prerequisites: Take: MAT 172
MAT 272. Calculus II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to develop advanced topics of differential and integral calculus. Emphasis is placed on the applications of definite integrals, techniques of integration, indeterminate forms, improper integrals, infinite series, conic sections, parametric equations, polar coordinates, and differential equations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to integral-related problems with and without technology. Prerequisites: Take MAT 271

MAT 273. Calculus III. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to develop the topics of multivariate calculus. Emphasis is placed on multivariate functions, partial derivatives, multiple integration, solid analytical geometry, vector valued functions, and line and surface integrals. Upon completion, students should be able to select and use appropriate models and techniques for finding the solution to multivariate-related problems with and without technology. Prerequisites: Take MAT 272

MAT 280. Linear Algebra. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an introduction to linear algebra topics. Emphasis is placed on the development of abstract concepts and applications for vectors, systems of equations, matrices, determinants, vector spaces, multi-dimensional linear transformations, eigenvectors, eigenvalues, diagonalization and orthogonality. Upon completion, students should be able to demonstrate understanding of the theoretical concepts and select and use appropriate models and techniques for finding solutions to linear algebra-related problems with and without technology. Prerequisites: Take MAT 271

MAT 285. Differential Equations. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an introduction to topics involving ordinary differential equations. Emphasis is placed on the development of abstract concepts and applications for first-order and linear higher-order differential equations, systems of differential equations, numerical methods, series solutions, eigenvalues and eigenvectors, and LaPlace transforms. Upon completion, students should be able to demonstrate understanding of the theoretical concepts and select and use appropriate models and techniques for finding solutions to differential equations-related problems with and without technology. Prerequisites: Take MAT 272

Mechanical (MEC)

MEC 111. Machine Processes I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces shop safety, hand tools, machine processes, measuring instruments, and the operation of machine shop equipment. Topics include use and care of tools, safety, measuring tools, and the basic setup and operation of common machine tools. Upon completion, students should be able to manufacture simple parts to specified tolerance.

MEC 130. Mechanisms. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the purpose and action of various mechanical devices. Topics include cams, cables, gear trains, differentials, screws, belts, pulleys, shafts, levers, lubricants, and other devices. Upon completion, students should be able to analyze, maintain, and troubleshoot the components of mechanical systems.

MEC 155. Environmentally Benign Manufacturing. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces environmental issues involving the generation and management of hazardous materials and wastes in manufacturing operations. Topics include the analysis of manufacturing trends, pollution minimization strategies, and the advantages of incorporating a sustainable approach to manufacturing. Upon completion, students should be able to discuss analysis and modification of industrial processes in manufacturing facilities toward a sustainable end.

MEC 161. Manufacturing Processes I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides the fundamental principles of value-added processing of materials into usable forms for the customer. Topics include material properties and traditional and non-traditional manufacturing processes. Upon completion, students should be able to specify appropriate manufacturing processing for common engineering materials.

MEC 172. Introduction to Metallurgy. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the production, properties, testing, classification, microstructure, and heat-treating effects of ferrous and non-ferrous metals. Topics include the iron-carbon phase diagram, ITT diagram, ANSI code, quenching, senescing, and other processes concerning metallurgical transformations. Upon completion, students should be able to understand the iron-carbon phase diagram, ITT diagram, microstructure images, and other phenomena concerning the behavior of metals.

MEC 180. Engineering Materials. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the physical and mechanical properties of materials. Topics include materials testing, pre- and post-manufacturing processes, and material selection of ferrous and non-ferrous metals, plastics, composites, and non-conventional materials. Upon completion, students should be able to utilize basic material property tests and select appropriate materials for applications. This course covers the physical and mechanical properties of materials. Topics include testing, heat treating, ferrous and non-ferrous metals, plastics, composites, and material selection. Upon completion, students should be able to specify basic tests and properties and select appropriate materials on the basis of specific properties.

MEC 210. Applied Mechanics. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a study of forces, stresses, and strains acting upon mechanical components. Topics include static equilibrium; normal, shear, and bending stresses; mathematical and graphical solution techniques; and the relationship between stress and strain. Upon completion, students should be able to demonstrate proficiency in analyzing the forces, stresses, and strains common to applications in the workplace. Prerequisites: Take PHY 131 or PHY 151

MEC 260. Fundamentals of Machine Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the fundamental principles of machine design. Topics include simple analysis of forces, moments, stresses, strains, friction, kinematics, and other considerations for designing machine elements. Upon completion, students should be able to analyze machine components and make component selections from manufacturers' catalogs. Prerequisites: Take MEC 210 with a minimum grade of D
MEC 265. Fluid Mechanics. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the physical behavior of fluids and fluid systems. Topics include fluid statics and dynamics, laminar and turbulent flow, Bernoulli’s Equation, components, applications, and other related topics. Upon completion, students should be able to apply fluid power principles to practical applications. This course covers the physical behavior of fluids and fluid systems. Topics include fluid statics and dynamics, laminar and turbulent flow, Bernoulli’s equation, components, applications and other related topics. Upon completion, students should be able to apply fluid power principles to practical applications.
Prerequisites: Take PHY 131 or PHY 151

MEC 267. Thermal Systems. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the fundamental laws of thermodynamics. Topics include work and energy, open and closed systems, and heat engines. Upon completion, students should be able to demonstrate a knowledge of the laws and principles that apply to thermal power.
Prerequisites: Take One: PHY 131 or PHY 151

MEC 270. Machine Design. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the basic principles underlying design and selection of machine elements. Topics include stress analysis, selection of components, power transmission, and other design considerations. Upon completion, students should be able to identify and solve mechanical design problems by applying basic engineering principles. This course covers the basic principles underlying design and selection of machine elements. Topics include stress analysis, selection of components, power transmission, and other design considerations. Upon completion, students should be able to identify and solve mechanical design problems by applying basic engineering principles.
Prerequisites: Complete one of the following options:
• EGR 250
• EGR 251 and EGR 252

MEC 275. Engineering Mechanisms. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers plane motion and devices used to generate plane motion. Topics include analysis of displacement, velocity, acceleration, gears, cams, and other mechanical systems. Upon completion, students should be able to graphically and mathematically analyze a plane motion system. This course covers plane motion and devices used to generate plane motion. Topics include analysis of displacement, velocity, acceleration, gears, cams, and other mechanical systems. Upon completion, students should be able to graphically and mathematically analyze a plane motion system.
Prerequisites: Take One: PHY 131, PHY 151, or PHY 251

MEC 292. Selected Topics in Mechanical Engineering Technology. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, the student should be able to demonstrate an understanding on the specific area of study.

Medical Assisting (MED)

MED 110. Orientation to Medical Assisting. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the history of medicine and the role of the medical assistant in the health care setting. Emphasis is placed on professionalism, communication, attitude, behaviors, and duties in the medical environment. Upon completion, students should be able to project a positive attitude and promote the profession of medical assisting.

MED 116. Introduction to Anatomy & Physiology. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces basic anatomy and physiology. Emphasis is placed on the relationship between body structure and function and the procedures common to health care. Upon completion, students should be able to identify body system components and functions relating this knowledge to the delivery of health care.

MED 118. Medical Law and Ethics. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers legal relationships of physicians and patients, contractual agreements, professional liability, malpractice, medical practice acts, informed consent, and bioethical issues. Emphasis is placed on legal terms, professional attitudes, and the principles and basic concepts of ethics and laws involved in providing medical services. Upon completion, students should be able to meet the legal and ethical responsibilities of a multi-skilled health professional.

MED 120. Survey of Medical Terminology. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the vocabulary, abbreviations, and symbols used in the language of medicine. Emphasis is placed on building medical terms using prefixes, suffixes, and word roots. Upon completion, students should be able to pronounce, spell, and define accepted medical terms.

MED 121. Medical Terminology I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces prefixes, suffixes, and word roots used in the language of medicine. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems. Upon completion, students should be able to pronounce, spell, and define medical terms as related to selected body systems and their pathological disorders.

MED 122. Medical Terminology II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is the second in a series of medical terminology courses. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems. Upon completion, students should be able to pronounce, spell, and define medical terms as related to selected body systems and their pathological disorders.

MED 130. Administrative Office Procedures I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces medical office administrative procedures. Topics include appointment processing, written and oral communications, medical records, patient orientation, and safety. Upon completion, students should be able to perform basic administrative skills within the medical environment.
MED 131. Administrative Office Procedures II. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides medical office procedures in both economic and management skills. Topics include physical plant maintenance, equipment and supplies, liability coverage, medical economics, and introductory insurance procedures. Upon completion, students should be able to manage the economics of the medical office and supervise personnel.

MED 140. Examining Room Procedures I. 5.0 Credits. Class-3.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides instruction in clinical examining room procedures. Topics include asepsis, infection control, assisting with exams and treatment, patient education, preparation and administration of medications, EKG, vital signs, and medical emergencies. Upon completion, students should be able to demonstrate competence in exam room procedures.

MED 150. Laboratory Procedures I. 5.0 Credits. Class-3.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides instruction in basic lab techniques used by the medical assistant. Topics include lab safety, quality control, collecting and processing specimens, performing selective tests, phlebotomy, screening and follow-up of test results, and OSHA/CLIA regulations. Upon completion, students should be able to perform basic lab tests/skills based on course topics.
Corequisites: Take MED 240

MED 232. Medical Insurance Coding. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is designed to develop coding skills. Emphasis is placed on advanced diagnostic and procedural coding in the outpatient facility. Upon completion, students should be able to demonstrate proficiency in coding for reimbursement.

MED 240. Examining Room Procedures II. 5.0 Credits. Class-3.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is designed to expand and build upon skills presented in MED 140. Emphasis is placed on advanced exam room procedures. Upon completion, students should be able to demonstrate enhanced competence in selected exam room procedures.
Prerequisites: Take MED 140
Corequisites: Take MED 150

MED 260. MED Clinical Practicum. 5.0 Credits. Class-0.0. Clinical-15.0. Lab-0.0. Work-0.0
This course provides the opportunity to apply clinical, laboratory, and administrative skills in a medical facility. Emphasis is placed on enhancing competence in clinical and administrative skills necessary for comprehensive patient care and strengthening professional communications and interactions. Upon completion, students should be able to function as an entry-level health care professional.
Corequisites: Take MED 262

MED 262. Clinical Perspectives. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to explore personal and occupational responsibilities of the practicing medical assistant. Emphasis is placed on problems encountered during externships and development of problem-solving skills. Upon completion, students should be able to demonstrate courteous and diplomatic behavior when solving problems in the medical facility.
Corequisites: Take MED 260

MED 270. Symptomatology. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the study of disease symptoms and the appropriate actions taken by medical assistants in a medical facility in relation to these symptoms. Emphasis is placed on interviewing skills and appropriate triage, preparing patients for procedures, and screening test results. Upon completion, students should be able to recognize how certain symptoms relate to specific diseases, recognize emergency situations, and take appropriate actions.

MED 272. Drug Therapy. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course focuses on major drug groups, including their side effects, interactions, methods of administration, and proper documentation. Emphasis is placed on the theory of drug administration. Upon completion, students should be able to identify, spell, recognize side effects of, and document the most commonly used medications in a physician's office.

MED 274. Diet Therapy/Nutrition. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the basic principles of nutrition as they relate to health and disease. Topics include basic nutrients, physiology, dietary deficiencies, weight management, and therapeutic nutrition in wellness and disease. Upon completion, students should be able to interpret clinical and dietary data and provide patient counseling and education.

Medical Laboratory Technology (MLT)

MLT 110. Introduction to Mlt. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces all aspects of the medical laboratory profession. Topics include health care/laboratory organization, professional ethics, basic laboratory techniques, safety, quality assurance, and specimen collection. Upon completion, students should be able to demonstrate a basic understanding of laboratory operations and be able to perform basic laboratory skills.

MLT 111. Urinalysis & Body Fluids. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the laboratory analysis of urine and body fluids. Topics include physical, chemical, and microscopic examination of the urine and body fluids. Upon completion, students should be able to demonstrate theoretical comprehension in performing and interpreting urinalysis and body fluid tests.

MLT 120. Hematology/Hemostasis I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the theory and technology used in analyzing blood cells and the study of hemostasis. Topics include hematology, hemostasis, and related laboratory testing. Upon completion, students should be able to demonstrate theoretical comprehension of hematology/hemostasis, perform diagnostic techniques, and correlate laboratory findings with disorders.

MLT 126. Immunology and Serology. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the immune system and response and basic concepts of antigens, antibodies, and their reactions. Emphasis is placed on basic principles of immunologic and serodiagnostic techniques and concepts of cellular and humoral immunity in health and disease. Upon completion, students should be able to demonstrate theoretical comprehension and application in performing and interpreting routine immunologic and serodiagnostic procedures.
MLT 127. Transfusion Medicine. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the blood group systems and their applications in transfusion medicine. Emphasis is placed on blood bank techniques including blood grouping and typing, pretransfusion testing, donor selection and processing, and blood component preparation and therapy. Upon completion, students should be able to demonstrate theoretical comprehension and application in performing/interpreting routine blood bank procedures and recognizing/resolving common problems.

MLT 130. Clinical Chemistry I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the quantitative analysis of blood and body fluids and their variations in health and disease. Topics include clinical biochemistry, methodologies, instrumentation, and quality control. Upon completion, students should be able to demonstrate theoretical comprehension of clinical chemistry, perform diagnostic techniques, and correlate laboratory findings with disorders.

MLT 140. Introduction to Microbiology. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces basic techniques and safety procedures in clinical microbiology. Emphasis is placed on the morphology and identification of common pathogenic organisms, aseptic technique, staining techniques, and usage of common media. Upon completion, students should be able to demonstrate theoretical comprehension in performing and interpreting basic clinical microbiology procedures.

MLT 216. Professional Issues. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course surveys professional issues in preparation for career entry. Emphasis is placed on work readiness and theoretical concepts in microbiology, immunohematology, hematology, and clinical chemistry. Upon completion, students should be able to demonstrate theoretical comprehension in performing/interpreting routine blood bank procedures and recognizing/resolving common problems.

MLT 220. Hematology/Hemostasis II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the theories and techniques used in the advanced analysis of human blood cells and hemostasis. Emphasis is placed on the study of hematologic disorders, abnormal cell development and morphology, and related testing. Upon completion, students should be able to demonstrate a theoretical comprehension and application of abnormal hematology and normal and abnormal hemostasis. Prerequisites: Take MLT 120 with a minimum grade of C.

MLT 230. Clinical Chemistry II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is designed to supplement the biochemical and physiologic theory presented in MLT 130. Emphasis is placed on special chemistry techniques and methodologies. Upon completion, students should be able to recognize and differentiate technical and physiological causes of unexpected test results. Prerequisites: Take MLT 130.

MLT 240. Special Clinical Microbiology. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is designed to introduce special techniques in clinical microbiology. Emphasis is placed on advanced areas in microbiology. Upon completion, students should be able to demonstrate theoretical comprehension in performing and interpreting specialized clinical microbiology procedures. Prerequisites: Take MLT 140.

MLT 251. MLT Practicum I. 1.0 Credit. Class-0.0. Clinical-3.0. Lab-0.0. Work-0.0
This course provides entry-level clinical laboratory experience. Emphasis is placed on technique, accuracy, and precision. Upon completion, students should be able to demonstrate entry-level competence on final clinical evaluations. MLT Practicum I. Prerequisites: Take MLT 110 with a minimum grade of C.

MLT 267. MLT Practicum II. 8.0 Credits. Class-0.0. Clinical-24.0. Lab-0.0. Work-0.0
This course provides entry-level clinical laboratory experience. Emphasis is placed on technique, accuracy, and precision. Upon completion, students should be able to demonstrate entry-level competence on final clinical evaluations.

MLT 277. MLT Practicum III. 8.0 Credits. Class-0.0. Clinical-24.0. Lab-0.0. Work-0.0
This course provides entry-level clinical laboratory experience. Emphasis is placed on technique, accuracy, and precision. Upon completion, students should be able to demonstrate entry-level competence on final clinical evaluations.

Music (MUS)

MUS 110. Music Appreciation. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a basic survey of the music of the Western world. Emphasis is placed on the elements of music, terminology, composers, form, and style within a historical perspective. Upon completion, students should be able to demonstrate skills in basic listening and understanding of the art of music. Students seeking to take this course to meet the college transfer humanities requirement may also take MUS-110. (No MUS prerequisites).

MUS 111. Fundamentals of Music. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is an introductory course for students with little or no music background. Emphasis is placed on music notation, rhythmic patterns, scales, key signatures, intervals, and chords. Upon completion, students should be able to demonstrate an understanding of the rudiments of music.

MUS 112. Introduction to Jazz. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the origins and musical components of jazz and the contributions of its major artists. Emphasis is placed on the development of discriminating listening habits, as well as the investigation of the styles and structural forms of the jazz idiom. Upon completion, students should be able to demonstrate skills in listening and understanding this form of American music. Students seeking to take this course to meet the college transfer humanities requirement may also take MUS-110. (No MUS prerequisites).

MUS 121. Music Theory I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an in-depth introduction to melody, rhythm, and harmony. Emphasis is placed on fundamental melody, rhythmic, and harmonic analysis, introduction to part writing, ear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above. Prerequisites: Take MUS 111.
MUS 122. Music Theory II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of studies begun in MUS 121. Emphasis is placed on advanced melodic, rhythmic, and harmonic analysis and continued studies in part-writing, ear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above.
Prerequisites: Take MUS 121

MUS 123. Music Composition. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a study of elementary forms and traditional approaches to the organization of melody, harmony, rhythm, etc. in musical composition. Emphasis is placed on using musical notation to create new musical works.
Prerequisites: Take MUS 121

MUS 131. Chorus I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to gain experience singing in a chorus. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.
Prerequisites: Take MUS 131

MUS 132. Chorus II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a continuation of studies begun in MUS 131. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.
Prerequisites: Take MUS 131

MUS 135. Jazz Ensemble I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity for those who play an appropriate instrument to gain experience playing in a jazz ensemble. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course provides the opportunity for development of jazz improvisational skills using chords related to 12-BAR blues and simple songs using 11-V-I progressions.

MUS 136. Jazz Ensemble II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 135. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles and periods of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course provides opportunities for learning to improvise over chord changes inherent in each jazz style studied.
Prerequisites: Take MUS 135

MUS 141. Ensemble I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

MUS 141B. Ensemble I (baroque Music Consort I). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Mus 141B is Baroque Music Consort I.

MUS 141C. Ensemble I (Intro to Early Mus Ensemble). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Mus 141C is Introduction to Early Music Ensembles.

MUS 141E. Ensemble I (early Music Consort I). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 141E is Early Music Consort I.

MUS 141G. Ensemble I (Guitar Ensemble I). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 141G is Guitar Ensemble I.

MUS 141P. Ensemble I (Piano Ensemble I). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 141P is Piano Ensemble I.

MUS 141R. Ensemble I (Recorder Ensemble I). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 141R is Recorder Ensemble I.
MUS 142. Ensemble II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 141. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.
Prerequisites: Take MUS 141

MUS 142B. Ensemble II (baroque Ensemble). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of baroque MUS 141. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course is a continuation of MUS 141B. MUS 142V is Baroque Music Consort II with the prerequisite of MUS 141B.
Prerequisites: Take MUS 141

MUS 142C. Introduction to Ensemble II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 141. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course is Introduction to Early Music Ensembles, a continuation of MUS 141C and provides an opportunity to perform in any combination of instrumental, vocal or keyboard groups of two or more.
Prerequisites: Take MUS 141

MUS 142E. Ensemble II (Early Music Consort II). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 141E. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course is Early Music Consort II with the prerequisite of MUS 141E.
Prerequisites: Take MUS 141E

MUS 142G. Ensemble II (Guitar Ensemble II). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 141G. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course is Guitar Ensemble II with the prerequisite of MUS 141G.
Prerequisites: Take MUS 141G

MUS 142P. Ensemble II (Piano Ensemble II). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 141P. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course is Piano Ensemble II with the prerequisite of MUS 141P.
Prerequisites: Take MUS 141P

MUS 142R. Ensemble II (Recorder Ensemble II). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 141R. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. MUS 142R is Recorder Ensemble II with the prerequisite of MUS 141R.
Prerequisites: Take MUS 141R

MUS 151. Class Music I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Corequisites: Take MUS 161;

MUS 151E. Class Music I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course prepares students for applied private study.

MUS 151G. Class Music I (beginning Guitar). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. MUS 151G is Beginning Guitar in which focus is on reading guitar music in first position, playing chords in first position, and transposition to selected keys.

MUS 151I. Class Music I Instrumental Rep 1. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course will focus on preparation and performance presentation.
Corequisites: Take MUS 161;

MUS 151J. Class Music I (jazz Vocal). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. MUS 151J is Jazz Vocal which will include singing solos as well as scat singing and modern 4-PART harmony.
MUS 151L. Class Music I Vocal Repertoire I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course provides an opportunity to perform vocal music from western classical common practice vocal literature. Corequisites: Take MUS 161;

MUS 151P. Class Music I (piano I). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course provides an opportunity to learn the International Phonetic Alphabet (IPA) that is need sign vocal music from western classical common practice vocal literature. Corequisites: Take MUS 161;

MUS 151V. Class Music I (voice I). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course provides an opportunity to learn the International Phonetic Alphabet (IPA) that is need sign vocal music from western classical common practice vocal literature. Corequisites: Take MUS 161;

MUS 151T. Class Music I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Theory Ear Training Transfer Prep & Review.

MUS 151Y. Class Music I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Theory Ear Training Transfer Prep & Review.

MUS 151X. Class Music I (repertoire). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course will focus on learning to work as an accompanying pianists with both vocalist and instrumentalists in a collaborative setting. Corequisites: Take MUS 161;

MUS 151G. Class Music II (Intermediate Guitar). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course will focus on practicing performing in public, recitals, end of semester juries, techniques for memorizing music and controlling performance anxiety. Corequisites: Take MUS 162;

MUS 152E. Class Music II Preparatory Applied Music. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course provides continued individual preparatory instruction for vocalists instrumentalists with emphasis on classical styles and extensive exploration and study of appropriate literature. Prerequisites: Take MUS 151
Corequisites: Take MUS 162;

MUS 152F. Class Music II (Intermediate Flute). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course provides continued individual preparatory instruction for vocalists instrumentalists with emphasis on classical styles and extensive exploration and study of appropriate literature. Prerequisites: Take MUS 151
Corequisites: Take MUS 162;

MUS 152G. Class Music II (Intermediate Guitar). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course provides continued individual preparatory instruction for vocalists instrumentalists with emphasis on classical styles and extensive exploration and study of appropriate literature. Prerequisites: Take MUS 151
Corequisites: Take MUS 162;
MUS 152L. Class Music II Vocal Repertoire II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course provides an opportunity to perform vocal music from western classical common practice vocal literature. Prerequisites: Take MUS 151
Corequisites: Take MUS 162;

MUS 152P. Class Music II (Piano II). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of Mus 151P. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Mus 152P is Piano II in which piano compositions, scales, and chords studied will include the keys of C, G and F major, and A and D minor. Prerequisites: Take MUS 151P

MUS 152S. Class Music II (Sightreading--Piano). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of mus 151P. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Mus 152S provides an opportunity to study collaborative literature and sight-reading for pianists and soloists. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as an elective course requirement. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. Prerequisites: Take MUS 151P

MUS 152V. Class Music II (Voice II). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of mus 151V. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Mus 152V is Class Voice II in which study of the international phonetic alphabet will facilitate the performance of repertoire which will include art songs, arias, and other songs with the prerequisite of Mus 151V. Prerequisites: Take MUS 151V

MUS 152W. Class Music II Intro to Vocal Diction II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course provides an opportunity to learn the vocal music from western classical common practice vocal literature (French & German). Prerequisites: Take MUS 152W
Take MUS 151

MUS 152X. Class Music II Piano Repertoire 2. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Piano Repertoire 2. Prerequisites: Take MUS 151
Corequisites: Take MUS 162;

MUS 161. Applied Music I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides individual instruction in the skills and techniques of the particular instrument or voice. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

MUS 162. Applied Music II. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 161. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Prerequisites: Take MUS 161

MUS 173. Opera Production I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-9.0. Work-0.0
This course provides an applied laboratory study of the processes involved in the production of an opera. Topics include fundamental practices, principles, and techniques associated with producing operas of various musical periods with an emphasis on vocal technique. Upon completion, students should be able to participate in an assigned position in a college opera production. Prerequisites: Take MUS 173

MUS 174. Opera Production II. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-9.0. Work-0.0
This course provides an applied laboratory study of the processes involved in the production of an opera. Topics include fundamental practices, principles, and techniques associated with producing operas of various musical periods with an emphasis on musical/language production. Upon completion, students should be able to participate in an assigned position in a college opera production. Prerequisites: Take MUS 173

MUS 210. History of Rock Music. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a survey of Rock music from the early 1950’s to the present. Emphasis is placed on musical groups, soloists, and styles related to the evolution of this idiom and on related historical and social events. Upon completion, students should be able to identify specific styles and to explain the influence of selected performers within their respective eras.

MUS 213. Opera and Musical Theatre. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the origins and development of opera and musical theatre from the works of Claudio Monteverdi to the present. Emphasis is placed on how the structure and components of opera and musicals effect dramaturgy through listening examples and analysis. Upon completion, students should be able to demonstrate analytical and listening skills in understanding both opera and the musical.
This course is a continuation of MUS 122. Emphasis is placed on altered and chromatic harmony, common practice era compositional techniques and forms, and continued studies in part-writing, ear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above.

Prerequisites: Take MUS 122

MUS 222. Music Theory IV. 4.0 Credits.
This course is a continuation of studies begun in MUS 221. Emphasis is placed on continued study of common practice era compositional techniques and forms, 20th century practices, ear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above.

Prerequisites: Take MUS 221

MUS 231. Chorus III. 1.0 Credit.
This course is a continuation of MUS 132. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.

Prerequisites: Take MUS 132

MUS 232. Chorus IV. 1.0 Credit.
This course is a continuation of MUS 231. Emphasis is placed on vocal techniques and the study of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance.

Prerequisites: Take MUS 231

MUS 235. Jazz Ensemble III. 1.0 Credit.
This course is a continuation of MUS 136. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles and periods of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 136

MUS 236. Jazz Ensemble IV. 1.0 Credit.
This course is a continuation of MUS 235. Emphasis is placed on jazz ensemble techniques and the study and performance of a variety of styles and periods of jazz literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 235

MUS 241. Ensemble III. 1.0 Credit.
This course is a continuation of MUS 142. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

Prerequisites: Take MUS 142
Corequisites: Take MUS 261;

MUS 241B. Ensemble III. 1.0 Credit.
This course is a continuation of MUS 142. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course is Baroque Ensemble III which provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more with the prerequisite of MUS 142B.

Prerequisites: Take MUS 142

MUS 241D. Ensemble III (Appalachian Dulcimer Ensemble III). 1.0 Credit.
This course is a continuation of MUS 142D. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. MUS 241D is Appalachian Dulcimer Ensemble III.

MUS 241E. Ensemble III (Early Music Consort III). 1.0 Credit.
This course is a continuation of MUS 142E. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 241E is Early Music Consort III with the prerequisite of MUS 142E.

Prerequisites: Take MUS 142

MUS 241F. Ensemble III (Folk Music "Jam" III). 1.0 Credit.
This course is a continuation of MUS 142F. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. MUS 241F is Folk Music "Jam" III.

MUS 241G. Ensemble III (Guitar Ensemble III). 1.0 Credit.
This course is a continuation of MUS 142G. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 241G is Guitar Ensemble III with the prerequisite of MUS 142G.

Prerequisites: Take MUS 142

MUS 241H. Ensemble III (Folk Harp Ensemble III). 1.0 Credit.
This course is a continuation of MUS 142H. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. MUS 241H is Folk Harp Ensemble III.
MUS 241P. Ensemble III (Piano Ensemble III). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of Mus 142P. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 241P is Piano Ensemble III with the prerequisite of Mus 142P.
Prerequisites: Take MUS 142P

MUS 241R. Ensemble III (Recorder Ensemble III). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of Mus 142R. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 241R is Recorder Ensemble III with the prerequisite of Mus 142R.
Prerequisites: Take MUS 142R

MUS 242. Ensemble IV. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 241. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. MUS 242 is Guitar Ensemble IV with the prerequisite of Mus 241G.
Prerequisites: Take MUS 241
Corequisites: Take MUS 262;

MUS 242B. Ensemble IV. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 241. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course is a continuation of Mus 241D. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. MUS 242D is Appalachian Dulcimer Ensemble IV.

MUS 242E. Ensemble IV (Early Music Consort IV). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of Mus 241. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 242E is Early Music Consort IV with the prerequisite of Mus 242E.
Prerequisites: Take MUS 241E

MUS 242F. Ensemble IV (Folk Music "Jam" IV). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 241F. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. MUS 242F is Folk Music "Jam" IV.

MUS 242G. Ensemble IV (Guitar Ensemble IV). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 241G. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 242G is Guitar Ensemble IV with the prerequisite of Mus 241G.
Prerequisites: Take MUS 241G

MUS 242H. Ensemble IV (Folk Harp Ensemble IV). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 241H. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. MUS 242H is Folk Harp Ensemble IV.

MUS 242P. Ensemble IV (Piano Ensemble IV). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of Mus 241P. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 242P is Piano Ensemble IV with the prerequisite of Mus 241P.
Prerequisites: Take MUS 241P

MUS 242R. Ensemble IV (Recorder Ensemble IV). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of Mus 241R. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Mus 242R is Recorder Ensemble IV with the prerequisite of Mus 241R.
Prerequisites: Take MUS 241R

MUS 251. Class Music III. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 152. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.
Prerequisites: Take MUS 152

MUS 251C. Class Music III (chords). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 152. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Mus 251C is a course on Chords on the keyboard which will provide students with the ability to use chord symbols and to re-harmonize simple tunes and reduce them to lead sheets with the prerequisite of Mus 152P.
Prerequisites: Take MUS 152P
MUS 251E. Class Music III. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 152. Emphasis is placed on
techniques and styles and the exploration and study of appropriate
literature. Upon completion, students should be able to demonstrate
proficiency in the studied skills and repertoire through performance. This
course has been approved to satisfy the Comprehensive Articulation
Agreement pre-major and/or elective course requirement.
Prerequisites: Take MUS 152

MUS 251G. Class Music III (jazz Guitar). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of Mus 152G. Emphasis is placed on
techniques and styles and the exploration and study of appropriate
literature. Upon completion, students should be able to demonstrate
proficiency in the studied skills and repertoire through performance. Mus
251G is Jazz Guitar I which includes harmonization of tunes using
standard jazz chords and explores chord/Scale relationships through use
of chord shapes with the prerequisite of Mus 152G.
Prerequisites: Take MUS 152G

MUS 251I. Class Music III Instrumental Rep. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 152. Emphasis is placed on
techniques and styles and the exploration and study of appropriate
literature. Upon completion, students should be able to demonstrate
proficiency in the studied skills and repertoire through performance. This
course has been approved to satisfy the Comprehensive Articulation
Agreement pre-major and/or elective course requirement. This course also
provides ongoing group and individual instruction for instrumentalists with
emphasis on classical styles, preparation and performance presentation.
Prerequisites: Take MUS 152

MUS 251P. Class Music III (piano III). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of Mus 152P. Emphasis is placed on
techniques and styles and the exploration and study of appropriate
literature. Upon completion, students should be able to demonstrate
proficiency in the studied skills and repertoire through performance. Mus
251P is Class Piano III in an electronic piano laboratory setting with the
prerequisite of Mus 152P.
Prerequisites: Take MUS 152P

MUS 251S. Class Music III Accompanying. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 152. Emphasis is placed on
techniques and styles and the exploration and study of appropriate
literature. Upon completion, students should be able to demonstrate
proficiency in the studied skills and repertoire through performance. This
course has been approved to satisfy the Comprehensive Articulation
Agreement pre-major and/or elective course requirement.
Prerequisites: Take MUS 152

MUS 251V. Class Music III - Voice. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 152. Emphasis is placed on
techniques and styles and the exploration and study of appropriate
literature. Upon completion, students should be able to demonstrate
proficiency in the studied skills and repertoire through performance. This
course has been approved to satisfy the Comprehensive Articulation
Agreement pre-major and/or elective course requirement. This course is a
continuation of MUS 152V.
Prerequisites: Take MUS 152

MUS 252. Class Music IV. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 251. Emphasis is placed on
techniques and styles and the exploration and study of appropriate
literature. Upon completion, students should be able to demonstrate
proficiency in the studied skills and repertoire through performance. Prerequisites: Take MUS 251

MUS 252G. Class Music IV Jazz Guitar. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 251. Emphasis is placed on
techniques and styles and the exploration and study of appropriate
literature. Upon completion, students should be able to demonstrate
proficiency in the studied skills and repertoire through performance. This
course has been approved to satisfy the Comprehensive Articulation
Agreement pre-major and/or elective course requirement.
Prerequisites: Take MUS 251

MUS 252I. Class Music IV Instrumental Repertoire. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 251. Emphasis is placed on
techniques and styles and the exploration and study of appropriate
literature. Upon completion, students should be able to demonstrate
proficiency in the studied skills and repertoire through performance. This
course has been approved to satisfy the Comprehensive Articulation
Agreement pre-major and/or elective course requirement.
Prerequisites: Take MUS 251

MUS 252J. Class Music IV (jazz Piano). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 251. Emphasis is placed on
techniques and styles and the exploration and study of appropriate
literature. Upon completion, students should be able to demonstrate
proficiency in the studied skills and repertoire through performance. Mus
252J is Jazz Piano which explores the application of both simple and
complex chord forms in re-harmonizing standard popular tunes with the
prerequisite of Mus 251C.
Prerequisites: Take MUS 251C

MUS 252P. Class Music IV (piano IV). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of Mus 251. Emphasis is placed on
techniques and styles and the exploration and study of appropriate
literature. Upon completion, students should be able to demonstrate
proficiency in the studied skills and repertoire through performance. Mus
252P is Class piano IV in an electronic piano laboratory setting with the
prerequisite of Mus 251P.
Prerequisites: Take MUS 251P

MUS 252V. Class Music IV - Voice. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 251. Emphasis is placed on
techniques and styles and the exploration and study of appropriate
literature. Upon completion, students should be able to demonstrate
proficiency in the studied skills and repertoire through performance. This
course has been approved to satisfy the Comprehensive Articulation
Agreement pre-major and/or elective course requirement.
Prerequisites: Take MUS 251
**MUS 253. Big Band. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course includes the Big Band instrumentation of five saxes, four trumpets, four trombones, and four-piece rhythm section (bass, piano, drums, and guitar). Emphasis is placed on learning the repertoire specifically written for Big Band instrumentation. Upon completion, students should be able to demonstrate skills needed to participate in performance of Big Band music.

**MUS 261. Applied Music III. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 162. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Prerequisites: Take MUS 162
Corequisites: Take MUS 242;

**MUS 262. Applied Music IV. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 261. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Prerequisites: Take MUS 261
Corequisites: Take MUS 242;

**MUS 265. Piano Pedagogy. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the basic methods and materials of piano instruction. Emphasis is placed on basic teaching techniques and piano literature appropriate for various skill levels. Upon completion, students should be able to identify and utilize appropriate teaching methods and materials for various levels of piano instruction.

**MUS 271. Music History I. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is the first of a two-semester, in-depth study of music history. Emphasis is placed on the history and literature of music from Antiquity through the Baroque Period. Upon completion, students should be able to trace important musical developments and demonstrate an understanding of the composers' styles. Prerequisites: Take MUS 122

**MUS 272. Music History II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is the second of a two-semester, in-depth study of music history. Emphasis is placed on the history and literature of music from the Classical Period to the present. Upon completion, students should be able to trace important musical developments and demonstrate an understanding of the composers' styles. Prerequisites: Take MUS 271

**MUS 273. Opera Production III. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-9.0. Work-0.0
This course provides an applied laboratory study of the processes involved in the production of an opera. Topics include fundamental practices, principles, and techniques associated with producing operas of various musical periods with an emphasis on stagecraft. Upon completion, students should be able to participate in an assigned position in a college opera production. Prerequisites: Take MUS 174

**MUS 274. Opera Production IV. 3.0 Credits.** Class-0.0. Clinical-0.0. Lab-9.0. Work-0.0
This course provides an applied laboratory study of the processes involved in the production of an opera. Topics include fundamental practices, principles, and techniques associated with producing operas of various musical periods with an emphasis on rehearsal and performance techniques. Upon completion, students should be able to participate in an assigned position in a college opera production. Prerequisites: Take MUS 273

**Network Operating Systems (NOS)**

**NOS 110. Operating Systems Concepts. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces students to a broad range of operating system concepts, including installation and maintenance. Emphasis is placed on operating system concepts, management, maintenance, and resources required. Upon completion of this course, students will have an understanding of OS concepts, installation, management, maintenance, using a variety of operating systems.

**NOS 120. Linux/UNIX Single User. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course develops the necessary skills for students to develop both GUI and command line skills for using and customizing a Linux workstation. Topics include Linux file system and access permissions, GNOME Interface, VI editor, X Window System expression pattern matching, I/O redirection, network and printing utilities. Upon completion, students should be able to customize and use Linux systems for command line requirements and desktop productivity roles. Prerequisites: Take One: CET 211, CTI 130, or NOS 110

**NOS 130. Windows Single User. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces operating system concepts for single-user systems. Topics include hardware management, file and memory management, system configuration/optimization, and utilities. Upon completion, students should be able to perform operating system functions at the support level in a single-user environment. Prerequisites: Take One: CET 211, CTI 130, or NOS 110

**NOS 220. Linux/UNIX Administration I. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the Linux file system, group administration, and system hardware controls. Topics include installation, creation and maintaining file systems, NIS client and DHCP client configuration, NFS, SMB/Samba, Configure X, Gnome, KDE, basic memory, processes, and security. Upon completion, students should be able to perform system administration tasks including installation, configuring and attaching a new Linux workstation to an existing network. Prerequisites: Take NOS 120

**NOS 221. Linux/UNIX Administration II. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course includes skill building in configuring common network services and security administration using Linux. Topics include server-side setup, configuration, basic administration of common networking services, and security administration using Linux. Upon completion, students should be able to setup a Linux server and configure common network services including security requirements. Prerequisites: Take NOS 220
NET 125. Networking Basics. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces students to the networking field. Topics include network terminology and protocols, local-area networks, wide-area networks, OSI model, cabling, router programming, Ethernet, IP addressing, and network standards. Upon completion, students should be able to deploy and manage services on a Windows Server operating system.

NOS 231. Windows Administration II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the management of a Windows Server operating system. Emphasis is placed on the deployment of print services, network services, Active Directory, group policies and access controls. Upon completion, students should be able to deploy and manage services on a Windows Server operating system.

NET 126. Routing Basics. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course focuses on initial router configuration, router software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Emphasis will be placed on the fundamentals of router configuration, managing router software, routing protocol, and access lists. Upon completion, students should have an understanding of routers and their role in WANs, router configuration, routing protocols, TCP/IP, troubleshooting, and ACLs.

Prerequisites: Take NET 125

NET 175. Wireless Technology. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the student to wireless technology and interoperability with different communication protocols. Topics include Wireless Application Protocol (WAP), Wireless Mark-up language (WML), link manager, service discovery protocol, transport layer and frequency band. Upon completion, students should be able to discuss in written and oral form protocols and procedures required for different wireless applications.

Prerequisites: Take One: NET 110 or NET 125

NET 225. Routing & Switching I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course focuses on advanced IP addressing techniques, intermediate routing protocols, command-line interface configuration of switches, Ethernet switching, VLANs, STP, and VTP. Emphasis will be placed on application and demonstration of skills acquired in pre-requisite courses. Upon completion, students should be able to perform tasks related to VLSM, routing protocols, switching concepts and configuration, STP, VLANs, and VTP.

Prerequisites: Take NET 126

NET 226. Routing and Switching II. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces WAN theory and design, WAN technology, PPP, Frame Relay, ISDN, and additional case studies. Topics include network congestion problems, TCP/IP transport and network layer protocols, advanced routing and switching configuration, ISDN protocols, PPP encapsulation operations on a router. Upon completion, students should be able to provide solutions for network routing problems, identify ISDN protocols, and describe the Spanning Tree protocol.

Prerequisites: Take NET 225

NET 289. Networking Project. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides an opportunity to complete a significant networking project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, documentation, installation, testing, presentation, and training. Upon completion, students should be able to complete a project from the definition phase through implementation.

Prerequisites: Take NET 226 NOS 230
Corequisites: Take NOS 231

Networking Technology (NET)

NET 110. Networking Concepts. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces students to the networking field. Topics include network terminology and protocols, local-area networks, wide-area networks, terminal addresses, and network standards. Upon completion, students should be able to perform tasks related to networking mathematics, terminology, and models, media, Ethernet, subnetting, and TCP/IP Protocols.

NET 125. Networking Basics. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the networking field. Emphasis is placed on network terminology and protocols, local-area networks, wide-area networks, OSI model, cabling, router programming, Ethernet, IP addressing, and network standards. Upon completion, students should be able to perform tasks related to networking mathematics, terminology, and models, media, Ethernet, subnetting, and TCP/IP Protocols.

NET 126. Routing Basics. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course focuses on initial router configuration, router software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Emphasis will be placed on the fundamentals of router configuration, managing router software, routing protocol, and access lists. Upon completion, students should have an understanding of routers and their role in WANs, router configuration, routing protocols, TCP/IP, troubleshooting, and ACLs.

Prerequisites: Take NET 125

NET 175. Wireless Technology. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the student to wireless technology and interoperability with different communication protocols. Topics include Wireless Application Protocol (WAP), Wireless Mark-up language (WML), link manager, service discovery protocol, transport layer and frequency band. Upon completion, students should be able to discuss in written and oral form protocols and procedures required for different wireless applications.

Prerequisites: Take One: NET 110 or NET 125

NET 225. Routing & Switching I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course focuses on advanced IP addressing techniques, intermediate routing protocols, command-line interface configuration of switches, Ethernet switching, VLANs, STP, and VTP. Emphasis will be placed on application and demonstration of skills acquired in pre-requisite courses. Upon completion, students should be able to perform tasks related to VLSM, routing protocols, switching concepts and configuration, STP, VLANs, and VTP.

Prerequisites: Take NET 126

NET 226. Routing and Switching II. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces WAN theory and design, WAN technology, PPP, Frame Relay, ISDN, and additional case studies. Topics include network congestion problems, TCP/IP transport and network layer protocols, advanced routing and switching configuration, ISDN protocols, PPP encapsulation operations on a router. Upon completion, students should be able to provide solutions for network routing problems, identify ISDN protocols, and describe the Spanning Tree protocol.

Prerequisites: Take NET 225

NET 289. Networking Project. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides an opportunity to complete a significant networking project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, documentation, installation, testing, presentation, and training. Upon completion, students should be able to complete a project from the definition phase through implementation.

Prerequisites: Take NET 226 NOS 230
Corequisites: Take NOS 231

Nondestructive Examination (NDE)

NDE 110. Intro to Nondestructive Examination. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces Nondestructive Examination (NDE) and its benefits, and provides a survey of the basic NDE methods and their limitations and advantages. Topics include terms and definitions associated with NDE, the basic approach to the nondestructive form of testing, and examples of industrial applications. Upon completion, students should be able to demonstrate a basic understanding of the major NDE methods and their applications.
NDE 112. Materials and Processes. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the student to materials, processing discontinuities, design parameters, metrology, and spatial relationships of industrial components. Topics include steel making, the nature of materials, inherent and processing discontinuities, elementary metallurgy, and the understanding of drawings. Upon completion, students should be able to demonstrate an understanding of how metals are formed, associated discontinuities, and how processing and geometric factors affect NDE results.

NDE 121. Principles of Ultrasonic Exam UT. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the student to basic principles associated with ultrasound and provides the initial elements of ASNT SNT-TC-1A Level I requirements for UT practitioners. Topics include wave modes and sound theory, and display modes are discussed and demonstrated through lab applications. Upon completion, students should be able to demonstrate a basic understanding of ultrasonics, and select proper equipment and set-up an instrument for straight beam examinations.
Prerequisites: Take All: NDE 110, MAT 121, and NDE 112
Corequisites: Take PHY 131

NDE 122. Angle Beam Examination. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the student to the principles associated with transverse wave examination. Topics include shear wave discontinuity location, effects of shear waves in various materials, and inspection of components. Upon completion, students should be able to select and calibrate transverse wave equipment and the equipment for shear wave inspection, using inspection procedures.
Prerequisites: Take NDE 121

NDE 131. Radiation Safety & Principles of Rt. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces basics principles of radiation safety, and the limitations and advantages of the radiographic testing (RT) method. Emphasis is placed on radiation safety, interaction of radiation with matter, radiation monitoring, radiographic physics, radiographic technique, and basic RT equipment. Upon completion, students should be able to demonstrate a basic understanding of Safeguarding the operating principles of RT.
Prerequisites: Take All: NDE 110, NDE 112, MAT 121, and PHY 131

NDE 132. RT Industrial Applications. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers advanced radiographic applications and the ASNT SNT-TC-1A Level II qualification program. Emphasis is placed on darkroom processing, image quality, geometric issues, and exposure calculations. Upon completion, students should be able to select a proper radiographic technique and film to perform acceptable radiography to specific codes and standards.
Prerequisites: Take NDE 131

NDE 142. Visual Testing-1,2. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course describes the principles, limitations, and advantages of non-destructive examination (NDE) visual testing as it's applied to industrial components such as pipes, pumps, valves, hangers and supports. Emphasis is placed on visual testing techniques including the use of visual aids and measuring gages. Upon completion, students should be able to demonstrate a basic understanding of NDE visual techniques and their applications.

NDE 143. Liquid Penetrant Testing-1,2. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course describes the principles, limitations, and advantages of non-destructive examination (NDE) liquid penetrant testing as it's applied to industrial components such as pipes, pumps, valves, hangers and supports. Emphasis is placed on liquid penetrant testing techniques including the use of color contrast solvent removable and water washable penetrant techniques. Upon completion, students should be able to demonstrate a basic understanding of various NDE liquid penetrant techniques and their applications.

NDE 152. Magnetic Particle Testing-1, 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course describes the principles, limitations, and advantages of non-destructive examination (NDE) magnetic particle testing as it's applied to industrial components such as pipes, pumps, valves, hangers and supports. Emphasis is placed on magnetic particle testing techniques including dry and wet fluorescent particle techniques. Upon completion, students should be able to demonstrate a basic understanding of NDE magnetic particle techniques and their applications.

NDE 153. Eddy Current Testing-1. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course describes the principles, limitations, and advantages of non-destructive examination (NDE) eddy current testing as it's applied to industrial components such as pipes, pumps, valves, hangers and supports. Emphasis is placed on eddy current testing techniques including the use of different types of eddy current equipment. Upon completion, students should be able to demonstrate a basic understanding of NDE eddy current techniques and their applications.
Prerequisites: Take All: NDE 110 and NDE 112

NDE 193V. Selected Topics in Adv Visual Test (VT). 3.0 Credits.
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.
This course prepares individuals for trainee positions in performing visual examinations of pressure retaining vessels, piping, pumps, and valves for nuclear power electric generating facilities. Topics include fundamentals of visual examination with emphasis on VT-1, VT-2 and VT-3 methods. Upon completion, students should be able to demonstrate a working knowledge of ASME Code visual inspection requirements during various phases of commercial nuclear power operations.
Corequisites: #Take NDE 142; Minimum grade C;

NDE 193W. Selected Topics in. 3.0 Credits.
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

NDE 210. NDE Procedure Development. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an understanding of codes and procedure qualifications as they relate to various testing methods. Emphasis is placed on writing NDE procedures in accordance with various codes and standards. Upon completion, students should be able to demonstrate a basic understanding of code requirements for procedures and how to write field applicable NDE procedures.
Prerequisites: Take All: NDE 122 and NDE 132
NDE 221. UT Industrial Applications. 4.0 Credits. Class-3.0. 
Clinical-0.0. Lab-3.0. Work-0.0
This course exposes the student to practical application of straight and angle beam techniques on actual component mock-ups and introduces automated equipment. Lab applications provide comprehensive inspection challenges and "blind" samples. Upon completion, students should be able to follow procedures to fully inspect a variety of components to differing code requirements. 
Prerequisites: Take NDE 122

NDE 222. Advanced Ultrasonic Testing. 3.0 Credits. Class-2.0. 
Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the student to principles of flaw detection and sizing using advanced inspection techniques. Topics include advanced detection, sizing techniques, and inspection criteria using AWS and ASME codes as reference. Upon completion, students should be able to select and apply the proper technique to detect and locate length, size, and depth flaws. 
Prerequisites: Take NDE 221

NDE 231. Advance Radiographic Testing Techniques. 3.0 Credits. 
Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an expert-level understanding of radiographic methods. Emphasis is placed on factors affecting image quality, RT techniques for more complex geometric situations, and enhanced film developing techniques. Upon completion, the student should be able to select a radiographic technique and film for complex geometries and enhanced film developing. 
Prerequisites: Take NDE 132

Clinical-0.0. Lab-2.0. Work-0.0
This course prepares individuals for trainee positions in performing visual examinations of pressure retaining vessels, piping, pumps, and valves for nuclear power electric generating facilities. Topics include fundamentals of visual examination with emphasis on VT-1, VT-2 and VT-3 methods. Upon completion, students should be able to demonstrate a working knowledge of ASME Code visual inspection requirements during various phases of commercial nuclear power operations. 
Corequisites: Take NDE 142

NDE 252. Eddy Current Testing (ET). 2.0 Credits. Class-1.0. 
Clinical-0.0. Lab-3.0. Work-0.0
This course provides practical applications of the eddy current testing (ET) method. Topics include generic and specialized applications of ET on industrial mock-ups. Upon completion, students should be able to demonstrate an understanding of ET in industrial applications. 
Prerequisites: Take NDE 151

NDE 261. Performance Demonstration Initiative -1, Ultrasonic Testing, Carbon Steel Pipe Welds. 7.0 Credits. Class-2.0. 
Clinical-0.0. Lab-15.0. Work-0.0
This course provides advanced ultrasonic instruction for nondestructive examination of carbon steel (CS) pipe welds. Topics include performance demonstration initiative (PDI), ultrasonic testing (UT), and longitudinal and shear wave examination techniques for carbon steel (CS) piping. Upon completion, students should be able to identify and describe the qualified detection and sizing techniques per PDI-UT-1 procedures. 
Prerequisites: Take NDE 221

NDE 262. Performance Demonstration Initiative -2, Ultrasonic Testing, Stainless Steel Pipe Welds. 7.0 Credits. Class-2.0. 
Clinical-0.0. Lab-15.0. Work-0.0
This course provides advanced ultrasonic instruction for nondestructive examination of stainless steel (SS) pipe welds. Topics include performance demonstration initiative (PDI), ultrasonic testing (UT), and longitudinal and shear wave examination techniques for stainless steel piping. Upon completion, students should be able to identify and describe the qualified detection and sizing techniques per PDI-UT-2 procedures. 
Prerequisites: Take NDE 221

NDE 263. Perf Demonstration Initiative -3, Ultrasonic Testing, Thru Wall Sizing, Carbon Steel/Stainless Steel. 3.0 Credits. Class-1.0. 
Clinical-0.0. Lab-6.0. Work-0.0
This course provides advanced ultrasonic instruction for NDE through wall sizing (TWS) in carbon steel (CS) and stainless steel (SS) pipe welds. Topics include performance demonstration initiative (PDI), ultrasonic testing (UT), and longitudinal and shear wave examination techniques for through wall sizing. Upon completion, students should be able to identify and describe the qualified TWS techniques per PDI-UT-3 procedures. 
Prerequisites: Take NDE 221

NDE 264. Perf Demonstration Initiative -8, Ultrasonic Testing, Weld Overlay and Dissimilar Metal Thru Wall Sizing. 3.0 Credits. Class-1.0. 
Clinical-0.0. Lab-6.0. Work-0.0
This course provides advanced ultrasonic instruction for NDE of weld overlay (WOL) and dissimilar metal (DM) welds. Topics include performance demonstration initiative (PDI), ultrasonic testing (UT), and longitudinal and shear wave examination techniques for through wall sizing (TWS) of welds. Upon completion, students should be able to identify and describe the qualified TWS techniques per PDI-UT-8 procedures. 
Prerequisites: Take NDE 221

NDE 265. Performance Demonstration Initiative -10 Ultrasonic Testing, Dissimilar Metal Detection and Length Sizing. 3.0 Credits. 
Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides advanced ultrasonic instruction for NDE of dissimilar metal (DM) welds for detection and length sizing. Topics include performance demonstration initiative (PDI), ultrasonic testing (UT), and longitudinal and shear wave examination techniques for detection and length sizing (DLS) of DM welds. Upon completion, students should be able to identify and describe the qualified DLS techniques per PDI-UT-10 procedures. 
Prerequisites: Take NDE 221

NUR 111. Introduction to Health Concepts. 8.0 Credits. Class-4.0. 
Clinical-6.0. Lab-6.0. Work-0.0
This course introduces the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts within each domain including medication administration, assessment, nutrition, ethics, interdisciplinary teams, informatics, evidence-based practice, individual-centered care, and quality improvement. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.
**NUR 112. Health-Illness Concepts. 5.0 Credits.** Class-3.0. Clinical-6.0. Lab-0.0. Work-0.0
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of acid-base, metabolism, cellular regulation, oxygenation, infection, stress/copling, health-wellness-illness, communication, caring interventions, managing care, safety, quality improvement, and informatics. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.
Prerequisites: Take NUR 111

**NUR 113. Family Health Concepts. 5.0 Credits.** Class-3.0. Clinical-6.0. Lab-0.0. Work-0.0
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, inflammation, sensory perception, stress/copling, mood/affect, cognition, self, violence, health-wellness-illness, professional behaviors, caring interventions, managing care, safety, and advocacy. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.
Prerequisites: Take NUR 111

**NUR 114. Holistic Health Concepts. 5.0 Credits.** Class-3.0. Clinical-6.0. Lab-0.0. Work-0.0
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, inflammation, sensory perception, stress/copling, mood/affect, cognition, self, violence, health-wellness-illness, professional behaviors, caring interventions, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.
Prerequisites: Take NUR 111

**NUR 211. Health Care Concepts. 5.0 Credits.** Class-3.0. Clinical-6.0. Lab-0.0. Work-0.0
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, infection, immunity, mobility, comfort, behaviors, health-wellness-illness, clinical decision-making, caring interventions, managing care, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.
Prerequisites: Take NUR 111

**NUR 212. Health System Concepts. 5.0 Credits.** Class-3.0. Clinical-6.0. Lab-0.0. Work-0.0
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of grief/loss, violence, health-wellness-illness, collaboration, managing care, safety, advocacy, legal issues, policy, healthcare systems, ethics, accountability, and evidence-based practice. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.
Prerequisites: Take NUR 111

**NUR 213. Complex Health Concepts. 10.0 Credits.** Class-4.0. Clinical-15.0. Lab-3.0. Work-0.0
This course is designed to assimilate the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of fluid/electrolytes, metabolism, perfusion, mobility, stress/copling, violence, health-wellness-illness, professional behaviors, caring interventions, managing care, healthcare systems, and quality improvement. Upon completion, students should be able to demonstrate the knowledge, skills, and attitudes necessary to provide quality, individualized, entry level nursing care.
Prerequisites: Take NUR 111
Corequisites: Take NUR 112, NUR 113, NUR 114, NUR 211 and NUR 212

**Nursing Assistant (NAS)**

**NAS 101. Nursing Assistant I. 6.0 Credits.** Class-3.0. Clinical-3.0. Lab-0.0. Work-0.0
This course introduces basic nursing skills required to provide personal care for patients, residents, or clients in a health care setting. Topics include communications, safety, patients' rights, personal care, vital signs, elimination, nutrition, emergencies, rehabilitation, and mental health. Upon completion, students should be able to demonstrate skills necessary to qualify as Nursing Assistant I with the North Carolina Nurse Aide I Registry.

**NAS 102. Nursing Assistant II. 6.0 Credits.** Class-3.0. Clinical-6.0. Lab-2.0. Work-0.0
This course provides training in selected advanced nursing assistant procedures. Emphasis is placed on sterile techniques, respiratory procedures, catheterizations, wound and trach care, irrigations, and ostomy care. Upon completion, students should be able to demonstrate skills necessary to qualify as a Nursing Assistant II with the North Carolina Board of Nursing.

**NAS 103. Home Health Care. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers basic health issues that affect clients in the home setting. Emphasis is placed on home safety, recognizing significant changes in the client's condition, family dynamics, and use of home health care equipment. Upon completion, students should be able to identify care for clients at home.

**Occupational Therapy Assistant (OTA)**

**OTA 110. Fundamentals of OT. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces occupational therapy theory, practice, philosophy, and principles. Emphasis is placed on providing a basic understanding of the profession as well as beginning to develop interaction and observation skills. Upon completion, students should be able to demonstrate basic understanding of OT practice options, uniform terminology, activity analysis, principles, process, philosophies, and frames of reference.
Corequisites: Take One: BIO 165 or BIO 168, Min Grade C;
OTA 120. OT Media I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides training in recognizing the therapeutic value of and using a wide variety of leisure, self-care, and work activities. Topics include crafts, games, personal care and work activities, as well as teaching and learning methods and styles. Upon completion, students should be able to design, select, and complete/perform leisure, self-care, and work activities that would be therapeutic for designated client populations.
Corequisites: Take OTA 110

OTA 130. Assessment Skills. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides training in appropriate and accurate assessment and intervention skills related to sensory, movement, perceptual/cognitive, affective systems, and ADL skills. Topics include kinesiology, body mechanics, sensory, ROM, MMT, cognitive/perceptual, psychosocial, self-care, and work-related assessments; treatment approaches; and basics of group structure and dynamics. Upon completion, students should be able to administer various assessment tools and appropriate treatment approaches regarding sensation, movement, perception/cognition, affect, self-care, and work-related skills.
Corequisites: Take OTA 110

OTA 135. Kinesiology. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides training in understanding and using principles of normal human movement. Topics include terminology, structures of the body associated with movement, principles of motion, analysis of movement, joint structure and its impact on motion, and muscle names and actions. Upon completion of this course, students should be able to demonstrate proficiency in identifying terms associated with movement, motions, structures, normal ranges and directions of motion, and general principles of human movement.
Prerequisites: Take OTA 110
Corequisites: Take BIO 168

OTA 140. Professional Skills I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the roles and responsibilities of COTAs/OTRs in OT practice and facilitates development of observation, documentation, and therapeutic use of self skills. Topics include Code of Ethics, roles/responsibilities, credentialing/licensing, documentation, therapeutic use of self and professional identity/behavior, supervisory relationships, time management, and observation skills. Upon completion, students should be able to demonstrate ethical behavior, discriminate between roles/responsibilities of COTAs/OTRs, and participate in acceptable supervision, documentation, and scheduling.
Corequisites: Take OTA 110

OTA 150. Life Span Skills I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is designed to use knowledge gained from PSY 241 as it applies to OT practice from birth to adolescence. Topics include review of normal growth and development, identification/discussion of common disabilities/delays, assessment, treatment planning, and intervention approaches used with these populations. Upon completion, students should be able to identify/use assessments/screenings and interventions for infants through adolescents for selected disabilities/developmental delays in various settings.
Corequisites: Take PSY 241 and OTA 170

OTA 161. Fieldwork I-Placement 1. 1.0 Credit. Class-0.0. Clinical-3.0. Lab-0.0. Work-0.0
This course provides introductory-level clinical training opportunities. Emphasis is placed on observational and basic interactional skills in a setting with a culturally diverse client population. Upon completion, students should be able to use observational and interactional skills to relate effectively with clients under the guidance/direction of fieldwork supervisors.
Prerequisites: Take OTA 120 and OTA 140
Corequisites: Take OTA 130

OTA 162. Fieldwork I-Placement 2. 1.0 Credit. Class-0.0. Clinical-3.0. Lab-0.0. Work-0.0
This course provides introductory-level clinical training opportunities. Emphasis is placed on observational and basic interactional skills in a setting with a culturally diverse client population. Upon completion, students should be able to use observational and interactional skills to relate effectively with clients under the guidance/direction of fieldwork supervisors.
Prerequisites: Take OTA 120 and OTA 140
Corequisites: Take OTA 130

OTA 163. Fieldwork I-Placement 3. 1.0 Credit. Class-0.0. Clinical-3.0. Lab-0.0. Work-0.0
This course provides introductory-level clinical training opportunities. Emphasis is placed on observational and basic interactional skills in a setting with a culturally diverse client population. Upon completion, students should be able to use observational and interactional skills to relate effectively with clients under the guidance/direction of fieldwork supervisors.
Prerequisites: Take OTA 120 and OTA 140
Corequisites: Take OTA 130

OTA 170. Physical Dysfunction. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is designed to provide knowledge and skills needed for working with individuals experiencing varied medical/physical conditions within their socioeconomic and cultural environments. Topics include medical terminology, common diagnoses, structures/functions that change with disease processes, assessment/treatment priorities for specific problems/conditions, treatment planning, and intervention. Upon completion, students should be able to recognize common symptoms, prioritize problems, and provide for patient safety and infection control when planning and implementing treatment.
Corequisites: Take OTA 130

OTA 180. Psychosocial Dysfunction. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course uses theories/principles related to psychological/psychiatric health and illnesses and provides training in assessing/treating symptoms of dysfunction and therapeutic use of self and groups. Topics include psychiatric illnesses, symptoms of dysfunction, assessment and treatment of individuals, planning and facilitating therapeutic groups, client safety, and psychosocial aspects of practice. Upon completion, students should be able to effectively plan and conduct individual and group treatment for client conditions related to psychosocial dysfunction recognizing temporal/socioeconomic/cultural contexts.
Prerequisites: Take PSY 281
Corequisites: Take OTA 130
OTA 220. OT Media II. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides training in appropriate and accurate assessment and intervention skills related to orthotics, prosthetics, assistive devices, environmental controls, and ADA issues. Topics include ergonomics and hand function, splint selection/fabrication, changes that improve access for persons with disabilities, use of modalities in treatment, and computers in OT intervention. Upon completion, students should be able to demonstrate proficiency fabricating/monitoring orthotic devices, constructing/modifying assistive devices, using ADA guidelines, and using computers for therapeutic purposes.
Prerequisites: Take OTA 120 and OTA 130

OTA 240. Professional Skills II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course builds upon and expands skills developed in OTA 140 with emphasis on documentation, supervisory relationships, involvement in the profession, and clinical management skills. Topics include clarification of roles/responsibilities, detailed examination of the supervisory process, professional participation in organizations, and the mechanics of assisting in clinic operations. Upon completion, students should be able to work effectively with a supervisor, plan/operate a professional activity, and perform routine clinic management tasks.
Prerequisites: Take OTA 140

OTA 250. Life Span Skills II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course uses knowledge gained from PSY 241 as it applies to OT practice from young adulthood through old age. Emphasis is placed on identification/discussion of common disabilities/chronic diseases, assessments, planning and interventions used with these populations, and activity programming. Upon completion, students should be able to identify/use assessments, interventions, and activities for adults with selected disabilities/losses in various settings.
Corequisites: Take PSY 241, OTA 170 and OTA 180

OTA 260. Fieldwork II-Placement 1. 6.0 Credits. Class-0.0. Clinical-18.0. Lab-0.0. Work-0.0
This course provides clinical experience under the direct supervision of experienced OTR or COTA personnel working in various practice settings. Emphasis is placed on final clinical preparation for entry-level practice in the profession. Upon completion, students should be able to meet all critical competencies established by the curriculum and AOTA guidelines for entry-level practice.

OTA 261. Fieldwork II-Placement 2. 6.0 Credits. Class-0.0. Clinical-18.0. Lab-0.0. Work-0.0
This course provides clinical experience under the direct supervision of experienced OTR or COTA personnel working in various practice settings. Emphasis is placed on final clinical preparation for entry-level practice in the profession. Upon completion, students should be able to meet all critical competencies established by the curriculum and AOTA guidelines for entry-level practice.

OTA 280. Professional Transitions. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides closure to the educational program following Fieldwork II placements. Emphasis is placed on portfolio development and presentation, program evaluation, Fieldwork II experience analysis and synthesis, and final preparation for the certification examination. Upon completion, students should be able to enter the OT work force with supportive documentation demonstrating progress toward meeting critical competencies set forth by the curriculum.
Corequisites: Take One: OTA 260 or OTA 261

Office Systems Technology (OST)

OST 131. Keyboarding. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers basic keyboarding skills. Emphasis is placed on the touch system, correct techniques, and development of speed and accuracy. Upon completion, students should be able to type at an acceptable speed and accuracy level using the touch system.

OST 132. Keyboard Skill Building. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to increase speed and improve accuracy in keyboarding. Emphasis is placed on diagnostic tests to identify accuracy and speed deficiencies followed by corrective drills. Upon completion, students should be able to type at a keyboard rhythmically with greater accuracy and speed.

OST 134. Text Entry & Formatting. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to provide skills needed to increase speed, improve accuracy, and format documents. Topics include letters, memos, tables, and business reports. Upon completion, students should be able to produce documents and key timed writings at speeds commensurate with employability.
Prerequisites: Take OST 131 Minimum grade C

OST 135. Advanced Text Entry & Formatting. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to incorporate computer application skills in the generation of office documents. Emphasis is placed on advanced document production. Upon completion, students should be able to make independent decisions regarding planning, style, and method of presentation.
Prerequisites: Take OST 134

OST 136. Word Processing. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to introduce word processing concepts and applications. Topics include preparation of a variety of documents and mastery of specialized software functions. Upon completion, students should be able to work effectively in a computerized word processing environment. Students should be proficient in keyboarding skills and will be introduced to a computerized skills and concepts testing environment.
Prerequisites: Take OST 131 with a minimum grade of C

OST 137. Office Software Applications. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the concepts and functions of software that meets the changing needs of the community. Emphasis is placed on the terminology and use of software through a hands on approach. Upon completion, students should be able to use software in a business environment.

OST 138. Advanced Software Applications. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to improve the proficiency in the utilization of software applications used in business offices through a hands-on approach. Emphasis is placed on in-depth usage of software to create a variety of documents applicable to current business environments. Upon completion, students should be able to master the skills required to design documents that can be customized using the latest software applications.
Prerequisites: Take One: OST 137, CIS 110, or CIS 111
OST 141. Med Terms I-Med Office. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course uses a language-structure approach to present the terminology and vocabulary that will be encountered in medical office settings. Topics include word parts that relate to systemic components, conditions, pathology, and disorder remediation in approximately one-half of the systems of the human body. Upon completion, students should be able to relate words to systems, pluralize, define, pronounce, and construct sentences with the included terms.
Prerequisites: Take OST 141

OST 142. Med Terms II-Med Office. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a continuation of OST 141 and continues the study, using a language-structure approach, of medical office terminology and vocabulary. Topics include word parts that relate to systemic components, conditions, pathology, and disorder remediation in the remaining systems of the human body. Upon completion, students should be able to relate words to systems, pluralize, define, pronounce, and construct sentences with the included terms.
Prerequisites: Take OST 141

OST 148. Medical Coding Billing & Insurance. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces fundamentals of medical coding, billing, and insurance. Emphasis is placed on the medical billing cycle to include third party payers, coding concepts, and form preparation. Upon completion, students should be able to explain the life cycle of and accurately complete a medical insurance claim.

OST 149. Medical Legal Issues. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the complex legal, moral, and ethical issues involved in providing health-care services. Emphasis is placed on the legal requirements of medical practices; the relationship of physician, patient, and office personnel; professional liabilities; and medical practice liability. Upon completion, students should be able to demonstrate a working knowledge of current medical law and accepted ethical behavior.

OST 155. Legal Terminology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the terminology appropriate to the legal profession. Topics include legal research, court systems, litigation, civil and criminal law, probate, real and personal property, contracts and leases, domestic relations, equity, and corporations. Upon completion, students should be able to spell, pronounce, define, and accurately use legal terms.

OST 156. Legal Office Procedures. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers legal office functions involved in the operation of a law office. Emphasis is placed on procedures in the law office involving the court system, legal research, litigation, probate, and real estate, personal injury, criminal, and civil law. Upon completion, students should be able to demonstrate a high level of competence in performing legal office duties. This course is a unique requirement of the Legal Office Systems concentration in the Office Systems Technology program.
Prerequisites: Take OST 134

OST 164. Text Editing Applications. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a comprehensive study of editing skills needed in the workplace. Emphasis is placed on grammar, punctuation, sentence structure, proofreading, and editing. Upon completion, students should be able to use reference materials to compose and edit text.

OST 168. Medical Office Simulation. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides experience in transcribing documents. Emphasis is placed on appropriate formatting, advanced text editing skills, and transcription techniques. Upon completion, students should be able to transcribe office documents.
Prerequisites: Complete one of the following options:
- OST 134 and OST 164
- OST 136 and OST 164

OST 184. Records Management. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course includes the creation, maintenance, protection, security, and disposition of records stored in a variety of media forms. Topics include alphabetic, geographic, subject, and numeric filing methods. Upon completion, students should be able to set up and maintain a records management system.

OST 191. Selected Topics in Office Systems Technology. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study. PowerPoint software is taught in this course.

OST 223. Administrative Office Transcription I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides entry-level skills in using software with desktop publishing capabilities. Topics include principles of page layout, desktop publishing terminology and applications, and legal and ethical considerations of software use. Upon completion, students should be able to design and produce professional business documents and publications. Hands-on experience using a software package on a PC is provided to illustrate concepts and provide practice in developing documents and publications.
Prerequisites: Take OST 136

OST 233. Office Publications Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides entry-level skills in using software with desktop publishing capabilities. Topics include principles of page layout, desktop publishing terminology and applications, and legal and ethical considerations of software use. Upon completion, students should be able to design and produce professional business documents and publications. Hands-on experience using a software package on a PC is provided to illustrate concepts and provide practice in developing documents and publications.
Prerequisites: Take OST 136

OST 236. Advanced Word or Information Processing. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course develops proficiency in the utilization of advanced word or information processing functions. Emphasis is placed on advanced word processing features. Upon completion, students should be able to produce a variety of complex business documents.
Prerequisites: Take OST 136 with a minimum grade of C
Take OST 136

OST 241. Med Ofc Transcription I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces machine transcription techniques as applied to medical documents. Emphasis is placed on accurate transcription, proofreading, and use of reference materials as well as vocabulary building. Upon completion, students should be able to prepare accurate and usable transcripts of voice recordings in the covered specialties.
Prerequisites: Take One: MED 121 or OST 141

OST 243. Med Office Simulation. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces medical systems used to process information in the automated office. Topics include traditional and electronic information resources, storing and retrieving information, and the billing cycle. Upon completion, students should be able to use the computer accurately to schedule, bill, update, and make corrections.
Prerequisites: Take OST 148
OST 251. Legal Document Formatting. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This document is designed to provide experience in the preparation of various types of legal forms and documents. Emphasis is placed on formatting and keying legal forms, documents, and correspondence. Upon completion, students should be able to produce these documents with accuracy and speed.
Prerequisites: Complete one of the following options:
• OST 134 and OST 155
• OST 136 and OST 155

OST 252. Legal Transcription I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides experience in transcribing legal correspondence, forms, and documents. Emphasis is placed on developing listening skills to transcribe documents. Upon completion, students should be able to transcribe documents with accuracy.
Prerequisites: Complete one of the following options:
• OST 155 and OST 134
• OST 155 and OST 136

OST 286. Professional Development. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the personal competencies and qualities needed to project a professional image in the office. Topics include interpersonal skills, health lifestyles, appearance, attitude, personal and professional growth, multicultural awareness, and professional etiquette. Upon completion, students should be able to demonstrate these attributes in the classroom, office, and society.

OST 289. Administrative Office Management. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to be a capstone course for the office professional and provides a working knowledge of modern office procedures. Emphasis is placed on scheduling, telephone procedures, travel arrangements, event planning, office design, and ergonomics. Upon completion, students should be able to adapt in an office environment.
Prerequisites: Take OST 134 OST 164 with a minimum grade of C
Take OST 136 OST 164 with a minimum grade of C Complete one of the following options:
• OST 134 and OST 164
• OST 136 and OST 164

Operations Management (OMT)

OMT 110. Intro to Operations Mgmt. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of the operations management field. Topics include production and operations planning, materials management, environmental health and safety, and quality management. Upon completion, students should be able to demonstrate an understanding of the operations management functions.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A
• Take RED 090 ENG 095 ENG 095A
• Take EFL 111 EFL 112
• Take ENG 090 ENG 090A
• Take RED 090 EFL 111
• Take ENG 111

Opticianry (OPH)

OPH 103. Introduction to Diseases of the Eye. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the fundamentals of common external and internal diseases of the eye and orbital region. Topics include common patient complaints, what constitutes an ocular emergency, triage procedure and common conditions and disorders. Upon completion, the student should be able to identify most common ocular diseases and determine appropriate emergency management of acute ocular problems.
Prerequisites: Take All: OPH 150 and OPH 151

OPH 104. Basic Ophthalmic Pharmacology. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces and compares drug delivery systems. Topics include topical and oral medications, use and abuse of drugs, irrigating solutions, and format for prescription writing. Upon completion, the students should administer and record topical and oral medications at the physician's direction.
Prerequisites: Take OPH 150 and OPH 151

OPH 105. Ophthalmic Clinical Procedures I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces basic clinical procedures for the ophthalmic practice. Topics include telephone triage and basic procedures commonly used in the preliminary examination of patients. Upon completion, the student should be able to perform basic administrative tasks, assist with minor office surgery, and perform procedures commonly used in patient examinations.
Prerequisites: Take OPH 150 and OPH 151

OPH 106. Ophthalmic Medical Assistant Practicum I. 7.0 Credits. Class-0.0. Clinical-21.0. Lab-0.0. Work-0.0
This course introduces ophthalmic patient care procedures. Topics include interpersonal skills with patients, work and legal ethics, confidentiality, clinical appearance and performance. Upon completion, the student will be able to determine equipment and instruments associated with patient examination, observation of examination techniques, assigned examination lanes to maintain, basic procedures for information gathering in an examination.
Prerequisites: Take OPH 150 and OPH 151
OPH 107. Ophthalmic Clinical Procedures II. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces more advanced clinical procedures for the ophthalmic practice. Topics include coding and testing associated with the treatment of glaucoma, cataracts and refractive errors. Upon completion, the student should understand coding for ophthalmic procedures and perform automated perimetry, A scan biometry, keratometry and pachymetry.
Prerequisites: Take OPH 151

OPH 108. Ophthalmic Patient Care. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is an overview of the care of the ophthalmic patient. Topics include systemic diseases in the eye, review of first aid, emergency equipment and supplies, infection control, identification and sterilization of minor surgical equipment, and aseptic technique. Upon completion, the students should be able to apply these principles in their interactions with patients.
Prerequisites: Take All: OPH 150 and OPH 151

OPH 109. Ophthalmic Optics & Basic Refractometry. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces basic theoretical and clinical optics. Topics include interaction of light and lenses, refractive states of the eye, and principles of retinoscopy and refractometry. Upon completion, the student will demonstrate physical and geometric optics, and basic refractometry techniques.
Prerequisites: Take All: OPH 150 and OPH 151

OPH 110. Ophthalmic Medical Assistant Practicum II. 7.0 Credits. Class-0.0. Clinical-21.0. Lab-0.0. Work-0.0
This course provides additional clinical experience in ophthalmic patient care procedures. Topics include interpersonal skills with patients, work and legal ethics, confidentiality, appearance and performance. Upon completion, the student will be able to demonstrate basic skills in patient care and examination techniques. Actual patient examination by student is performed under supervision.
Prerequisites: Take All: OPH 106, OPH 150, and OPH 151

OPH 150. Intro to Ophthalmic Medical Assisting. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the role, scope, and duties of the ophthalmic assistant. Topics include medical ethics, duties of assistant, medical history, basic medical terminology, and an overview of human anatomy and physiology. Upon completion, students should be able to demonstrate knowledge of medical history taking, preliminary patient examination, basic ophthalmic equipment, and office efficiency.
Corequisites: Take OPH 151

OPH 151. Ocular Anatomy & Physiology. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course studies the normal anatomy and physiology of eye and orbit. Topics include structures of the eye, functioning process of the eye and correct medical terminology of the structures and functions of the eye. Upon completion, the student should demonstrate a basic understanding and fundamental principles of anatomy and physiology of the eye.
Corequisites: Take OPH 150

Pharmacy (PHM)

PHM 110. Introduction to Pharmacy. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces pharmacy practice and the technician's role in a variety of pharmacy settings. Topics include medical terminology and abbreviations, drug delivery systems, law and ethics, prescription and medication orders, and the health care system. Upon completion, students should be able to explain the role of pharmacy technicians, read and interpret drug orders, describe quality assurance, and utilize pharmacy references.

PHM 111. Pharmacy Practice I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides instruction in the technical procedures for preparing and dispensing drugs in the hospital and retail settings under supervision of a registered pharmacist. Topics include drug packaging and labeling, out-patient dispensing, hospital dispensing procedures, controlled substance procedures, inventory control, and non-sterile compounding. Upon completion, students should be able to perform basic supervised dispensing techniques in a variety of pharmacy settings.
Corequisites: Take PHM 110 and PHM 115

PHM 115. Pharmacy Calculations. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an introduction to the metric, avoirdupois, and apothecary systems of measurement and the calculations used in pharmacy practice. Topics include ratio and proportion, dosage determinations, percentage preparations, reducing and enlarging formulas, dilution and concentration, aliquots, specific gravity and density, and flow rates. Upon completion, students should be able to correctly perform calculations required to properly prepare a medication order.

PHM 118. Sterile Products. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides an introduction to intravenous admixture preparation and other sterile products, including total parenteral nutrition and chemotherapy. Topics include aseptic techniques; facilities, equipment, and supplies utilized in admixture preparation; incompatibility and stability; laminar flow hoods; immunizations and irrigation solutions; and quality assurance. Upon completion, students should be able to describe and demonstrate the steps involved in preparation of intermittent and continuous infusions, total parenteral nutrition, and chemotherapy.
Prerequisites: Take PHM 110 and PHM 111

PHM 120. Pharmacology I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the study of the properties, effects, and therapeutic value of the primary agents in the major drug categories. Topics include nutritional products, blood modifiers, hormones, diuretics, cardiovascular agents, respiratory drugs, and gastrointestinal agents. Upon completion, students should be able to place major drugs into correct therapeutic categories and identify indications, side effects, and trade and generic names.

PHM 125. Pharmacology II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a continuation of the study of the properties, effects, and therapeutic value of the primary agents in the major drug categories. Topics include autonomic and central nervous system agents, anti-inflammatory agents, and anti-infective drugs. Upon completion, students should be able to place major drugs into correct therapeutic categories and identify indications, side effects, and trade and generic names.
Prerequisites: Take PHM 120
PHM 132. Pharmacy Clinical. 2.0 Credits. Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0
This course provides an opportunity to work in pharmacy settings under a pharmacist's supervision. Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications. Upon completion, students should be able to demonstrate an understanding of pharmacy operations, utilize references, dispense medications, prepare patient charges, and efficiently operate computers.
Prerequisites: Take PHM 111 with a minimum grade of C

PHM 134. Pharmacy Clinical. 4.0 Credits. Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0
This course provides an opportunity to work in pharmacy settings under a pharmacist's supervision. Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications. Upon completion, students should be able to demonstrate an understanding of pharmacy operations, utilize references, dispense medications, prepare patient charges, and efficiently operate computers.

PHM 138. Pharmacy Clinical. 8.0 Credits. Class-0.0. Clinical-24.0. Lab-0.0. Work-0.0
This course provides an opportunity to work in pharmacy settings under a pharmacist's supervision. Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications. Upon completion, students should be able to demonstrate an understanding of pharmacy operations, utilize references, dispense medications, prepare patient charges, and efficiently operate computers.

PHM 140. Trends in Pharmacy. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the major issues, trends, and concepts in contemporary pharmacy practice. Topics include professional ethics, continuing education, job placement, and the latest developments in pharmacy technician practice. Upon completion, students should be able to demonstrate a basic knowledge of the topics discussed.
Prerequisites: Take PHM 110 with a minimum grade of C

PHM 150. Hospital Pharmacy. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides an in-depth study of hospital pharmacy practice. Topics include hospital organizational structure, committee functions, utilization of reference works, purchasing and inventory control, drug delivery systems, and intravenous admixture preparation. Upon completion, students should be able to explain hospital organization/committee functions, interpret and enter patient orders, fill unit-dose cassettes, and prepare intravenous admixtures.
Prerequisites: Take PHM 118 with a minimum grade of C
Corequisites: Take PHM 118

PHM 155. Community Pharmacy. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the operational procedures relating to retail pharmacy. Emphasis is placed on a general knowledge of over-the-counter products, prescription processing, business/inventory management, and specialty patient services. Upon completion, students should be able to provide technical assistance and support to the retail pharmacist.

PHM 160. Pharm Dosage Forms. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a study of pharmaceutical dosage forms and considerations in their manufacture. Topics include bioavailability, routes of administration, tablets, capsules, solutions, syrups, suspensions, elixirs, aerosols, transdermals, topicals, ophthalmics, otics, and other dosage forms. Upon completion, students should be able to describe the characteristics of the major dosage forms and explain how these characteristics affect the action of the drug.

PHM 165. Pharmacy Prof Practice. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a general overview of all aspects of pharmacy technician practice. Emphasis is placed on pharmacy law, calculations, compounding, pharmacology, and pharmacy operations. Upon completion, students should be able to demonstrate competence in the areas required for the Pharmacy Technician Certification Examination.

PHM 265. Professional Issues. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a comprehensive discussion of topics common to the practice of the pharmacy technician. Emphasis is placed on application of professional competencies including legal/ethical issues, leadership/management concepts and employability skills. Upon completion, students should be able to demonstrate competence in pharmacy workplace skills and leadership/management roles.
Prerequisites: Take PHM 165

Philosophy (PHI)

PHI 210. History of Philosophy. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces fundamental philosophical issues through an historical perspective. Emphasis is placed on such figures as Plato, Aristotle, Lao-Tzu, Confucius, Augustine, Aquinas, Descartes, Locke, Kant, Wollstonecraft, Nietzsche, and Sartre. Upon completion, students should be able to identify and distinguish among the key positions of the philosophers studied.
Prerequisites: Take ENG 111

PHI 215. Philosophical Issues. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces fundamental issues in philosophy considering the views of classical and contemporary philosophers. Emphasis is placed on knowledge and belief, appearance and reality, determinism and free will, faith and reason, and justice and inequality. Upon completion, students should be able to identify, analyze, and critically evaluate the philosophical components of an issue. Students seeking to take this course to meet the college transfer humanities requirement may also take PHI-240. (no PHI prerequisites).
Prerequisites: Take ENG 111

PHI 220. Western Philosophy I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers Western intellectual and philosophic thought from the early Greeks through the medievalists. Emphasis is placed on such figures as the pre-Socratics, Plato, Aristotle, Epicurus, Epictetus, Augustine, Suarez, Anselm, and Aquinas. Upon completion, students should be able to trace the development of leading ideas regarding reality, knowledge, reason, and faith.
Prerequisites: Take ENG 111
PHI 221. Western Philosophy II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers Western intellectual and philosophic thought from post-medievalists through recent thinkers. Emphasis is placed on such figures as Descartes, Spinoza, Leibnitz, Locke, Berkeley, Hume, Kant, Hegel, Marx, Mill, and representatives of pragmatism, logical positivism, and existentialism. Upon completion, students should be able to trace the development of leading ideas concerning knowledge, reality, science, society, and the limits of reason.
Prerequisites: Take ENG 111

PHI 230. Introduction to Logic. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces basic concepts and techniques for distinguishing between good and bad reasoning. Emphasis is placed on deduction, induction, validity, soundness, syllogisms, truth functions, predicate logic, analogical inference, common fallacies, and scientific methods. Upon completion, students should be able to analyze arguments, distinguish between deductive and inductive arguments, test validity, and appraise inductive reasoning.
Prerequisites: Take ENG 111

PHI 240. Introduction to Ethics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces theories about the nature and foundations of moral judgments and applications to contemporary moral issues. Emphasis is placed on moral theories such as consequentialism, deontology, and virtue ethics. Upon completion, students should be able to apply various ethical theories to moral issues such as abortion, capital punishment, poverty, war, terrorism, the treatment of animals, and issues arising from new technologies. Students seeking to take this course to meet the college transfer humanities requirement may also take PHI-215. (no PHI prerequisites).
Prerequisites: Take ENG 111

Physical Education (PED)

PED 110. Fit and Well for Life. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to investigate and apply the basic concepts and principles of lifetime physical fitness and other health-related factors. Emphasis is placed on wellness through the study of nutrition, weight control, stress management, and consumer facts on exercise and fitness. Upon completion, students should be able to plan a personal, lifelong fitness program based on individual needs, abilities, and interests.

PED 111. Physical Fitness I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides an individualized approach to physical fitness utilizing the five major components. Emphasis is placed on the scientific basis for setting up and engaging in personalized physical fitness programs. Upon completion, students should be able to set up and implement an individualized physical fitness program.

PED 113. Aerobics I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces a program of cardiovascular fitness involving continuous, rhythmic exercise. Emphasis is placed on developing cardiovascular efficiency, strength, and flexibility and on safety precautions. Upon completion, students should be able to select and implement a rhythmic aerobic exercise program.

PED 117. Weight Training I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the basics of weight training. Emphasis is placed on developing muscular strength, muscular endurance, and muscle tone. Upon completion, students should be able to establish and implement a personal weight training program.

PED 121. Walk, Jog, Run. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the basic concepts involved in safely and effectively improving cardiovascular fitness. Emphasis is placed on walking, jogging, or running as a means of achieving fitness. Upon completion, students should be able to understand and appreciate the benefits derived from these activities.

PED 122. Yoga I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the basic discipline of yoga. Topics include proper breathing, relaxation techniques, and correct body positions. Upon completion, students should be able to demonstrate the procedures of yoga.

PED 128. Golf-Beginning. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course emphasizes the fundamentals of golf. Topics include the proper grips, stance, alignment, swings for the short and long game, putting, and the rules and etiquette of golf. Upon completion, students should be able to perform the basic golf shots and demonstrate a knowledge of the rules and etiquette of golf.

PED 143. Volleyball-Beginning. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the fundamentals of volleyball. Emphasis is placed on the basics of serving, passing, setting, spiking, blocking, and the rules and etiquette of volleyball. Upon completion, students should be able to participate in recreational volleyball.

PED 145. Basketball-Beginning. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the fundamentals of basketball. Emphasis is placed on skill development, knowledge of the rules, and basic game strategy. Upon completion, students should be able to participate in recreational basketball.

PED 152. Swimming-Beginning. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed for non-swimmers and beginners. Emphasis is placed on developing confidence in the water, learning water safety, acquiring skills in floating, and learning elementary strokes. Upon completion, students should be able to demonstrate safety skills and be able to tread water, back float, and use the crawl stroke for 20 yards.

PED 159. Sailboarding-Beginning. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course teaches the basic skills of sailboarding. Topics include theory, navigation rules, equipment, and safety practices of sailboarding. Upon completion, students should be able to safely ride and navigate a sailboard.
Prerequisites: Take PED 152

PED 163. Kayaking-Basic. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to teach the basic skills of kayaking. Topics include forward and reverse strokes, sweeps, Eskimo roll, and self-rescue skills. Upon completion, students should be able to maneuver and demonstrate safe kayaking practices.
PED 169. Orienteering. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the various types of orienteering and proper orienteering techniques. Emphasis is placed on defining various types of orienteering and recognizing and drawing topographic map symbols. Upon completion, students should be able to draw topographic map symbols and negotiate a 3-5 km cross-country orienteering course in a specified time period.

PED 170. Backpacking. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the proper techniques for establishing a campsite, navigating in the wilderness, and planning for an overnight trip. Topics include planning for meals, proper use of maps and compass, and packing and dressing for extended periods in the outdoors. Upon completion, students should be able to identify quality backpacking equipment, identify the principles of no-trace camping, and successfully complete a backpacking experience.

PED 171. Nature Hiking. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides instruction on how to equip and care for oneself on the trail. Topics include clothing, hygiene, trail ethics, and necessary equipment. Upon completion, students should be able to successfully participate in nature trail hikes. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

PED 173. Rock Climbing. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course teaches the fundamental skills and safety of rock climbing. Topics include rock climbing, bouldering, rappelling, the correct method of belaying for climbing and rappelling, and knowledge of equipment. Upon completion, students should be able to demonstrate strong and skillful techniques in climbing and rappelling.

Physical Science (PHS)

PHS 110. Survey of Physical Science. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the physical environment with emphasis on the laws and physical concepts that impact the world and universe. Topics include astronomy, geology, meteorology, general chemistry, and general physics. Upon completion, students should be able to describe the forces and composition of the earth and universe.

Physical Therapy (PTA)

PTA 110. Intro to Physical Therapy. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the field of physical therapy including the history and standards of practice for the physical therapist assistant and basic treatment techniques. Emphasis is placed on ethical and legal considerations, universal precautions, vital signs, documentation, basic patient preparation and treatment skills, and architectural barrier screening. Upon completion, students should be able to explain the role of the physical therapist assistant and demonstrate competence in basic techniques of patient care.
Prerequisites: Take BIO 168 with a minimum grade of C
Corequisites: Take PTA 125

PTA 125. Gross & Functional Anatomy. 5.0 Credits. Class-3.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides an in-depth, clinically oriented survey of gross and functional anatomy. Emphasis is placed on musculoskeletal and nervous systems and clinical biomechanics, including goniometry, basic manual muscle testing, and components of normal gait. Upon completion, students should be able to identify specific anatomical structures and describe, observe, and measure musculoskeletal posture and function.
Prerequisites: Take BIO 168 with a minimum grade of C
Corequisites: Take PTA 110

PTA 135. Pathology. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces principles of pathology, processes of and normal responses to injury and disease, and changes related to aging. Emphasis is placed on conditions most commonly treated in physical therapy. Upon completion, students should be able to discuss basic pathological processes and identify etiology, signs, symptoms, complications, treatment options, and prognoses of specific orthopedic conditions.
Prerequisites: Take BIO 169 PTA 110 PTA 125 with a minimum grade of C
Corequisites: Take PTA 215

PTA 145. Therapeutic Procedures. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides a detailed study of specific treatment procedures and the physiological principles and techniques involved. Emphasis is placed on the correct application of superficial heat and cold, massage and soft tissue mobilization, ultrasound, diathermy, traction, and electrical stimulation. Upon completion, students should be able to demonstrate competence in the application of these modalities and explain the indications, contraindications, effects, and precautions for each.
Prerequisites: Take BIO 169 PTA 110 PTA 125 with a minimum grade of C
Corequisites: Take PTA 222

PTA 165. PTA Clinical I. 3.0 Credits. Class-0.0. Clinical-9.0. Lab-0.0. Work-0.0
This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation.
Prerequisites: Take PTA 135 PTA 145 PTA 215 PTA 222 with a minimum grade of C
Corequisites: Take PTA 185

PTA 185. PTA Clinical II. 3.0 Credits. Class-0.0. Clinical-9.0. Lab-0.0. Work-0.0
This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation.
Prerequisites: Take PTA 135 PTA 145 PTA 215 PTA 222 with a minimum grade of C
Corequisites: Take PTA 165
PTA 212. Health Care/Resources. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of various aspects of health care delivery systems and the interrelationships of health care team members. Topics include health agencies and their functions, health care team member roles, management, and other health care issues. Upon completion, students should be able to discuss the functions of health organizations and team members and aspects of health care affecting physical therapy delivery. Prerequisites: Take PTA 225 PTA 235AB PTA 165 PTA 185 with a minimum grade of C Corequisites: Take PTA 235BB

PTA 215. Therapeutic Exercise. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces basic concepts of strengthening, endurance, and flexibility exercise and balance, gait, and posture training. Emphasis is placed on applying techniques to the treatment of orthopedic conditions. Upon completion, students should be able to safely and effectively execute basic exercise programs and balance, gait, and posture training. Prerequisites: Take BIO 169 PTA 110 PTA 125 with a minimum grade of C Corequisites: Take PTA 135

PTA 222. Professional Interactions. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to assist in the development of effective interpersonal skills in the physical therapist assistant setting. Topics include reactions to disability, the grieving process, methods of communication, motivation, health promotion, disease prevention, and aging. Upon completion, students should be able to discuss and demonstrate methods for achieving effective interaction with patients, families, the public, and other health care providers. Prerequisites: Take BIO 169 PTA 110 PTA 125 with a minimum grade of C Corequisites: Take PTA 145

PTA 225. Intro to Rehabilitation. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers cardiovascular, pulmonary, and integumentary conditions, as well as causes and treatment of amputations. Emphasis is placed upon pathological processes as well as comprehensive treatment of the various conditions studied. Upon completion, students should be able to discuss etiology, signs, symptoms, complications, and prognoses of various conditions and implement components of a comprehensive treatment program. Prerequisites: Take PTA 135 PTA 145 PTA 215 PTA 222 with a minimum grade of C Corequisites: Take PTA 235AB

PTA 235. Neurological Rehab. 5.0 Credits. Class-3.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers neurological and neuromuscular conditions experienced throughout the life span. Topics include the pathology of selected conditions and the methods and rationales of various treatment approaches. Upon completion, students should be able to discuss etiology, signs, symptoms, complications, and prognoses of various conditions and implement components of a comprehensive treatment program.

PTA 235AB. Neurological Rehab. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers neurological and neuromuscular conditions experienced throughout the life span. Topics include the pathology of selected conditions and the methods and rationales of various treatment approaches. Upon completion, students should be able to discuss etiology, signs, symptoms, complications, and prognoses of various conditions and implement components of a comprehensive treatment program. This is the first part of a course sequence consisting of an in-depth study of the neurological system and focusing on conditions affecting it in adulthood. Prerequisites: Take PTA 135 PTA 145 PTA 215 PTA 222 with a minimum grade of C Corequisites: Take PTA 225

PTA 235BB. Neurological Rehab. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers neurological and neuromuscular conditions experienced throughout the life span. Topics include the pathology of selected conditions and the methods and rationales of various treatment approaches. Upon completion, students should be able to discuss etiology, signs, symptoms, complications, and prognoses of various conditions and implement components of a comprehensive treatment program. Prerequisites: Take PTA 225 PTA 235AB PTA 165 PTA 185 with a minimum grade of C Corequisites: Take PTA 212

PTA 245. PTA Clinical III. 4.0 Credits. Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0
This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation. Prerequisites: Take PTA 225 PTA 235AB PTA 165 PTA 185 with a minimum grade of C Corequisites: Take PTA 255

PTA 255. PTA Clinical IV. 4.0 Credits. Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0
This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation. Prerequisites: Take PTA 225 PTA 235AB PTA 165 PTA 185 with a minimum grade of C Corequisites: Take PTA 245 and PTA 270

PTA 270. PTA Topics. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the physical therapist assistant profession in preparation for the state licensure exam. Topics include developing time management skills and practicing for the competence examinations. Upon completion, students should be able to identify individual academic strengths and weaknesses and utilize this information to continue self-study for the licensure exam. Prerequisites: Take PTA 225 PTA 235AB PTA 165 PTA 185 with a minimum grade of C Corequisites: Take PTA 255
Physics (PHY)

PHY 110. Conceptual Physics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a conceptually-based exposure to the fundamental principles and processes of the physical world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Upon completion, students should be able to describe examples and applications of the principles studied.
Corequisites: Take PHY 110A

PHY 110A. Conceptual Physics Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a laboratory for PHY 110. Emphasis is placed on laboratory experiences that enhance materials presented in PHY 110. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in PHY 110.
Corequisites: Take PHY 110

PHY 131. Physics-Mechanics. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This algebra/trigonometry-based course introduces fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, vectors, motion, forces, Newton's laws of motion, work, energy, power, momentum, and properties of matter. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.
Prerequisites: Take One: MAT 121 or MAT 171

PHY 132. Physics-Electricity & Magnetism. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This algebra/trigonometry-based course is a study of fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, waves, electricity, magnetism, circuits, transformers, motors, and generators. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields. Credit by exam for PHY 152 can be obtained by request upon completion.
Prerequisites: Take PHY 131

PHY 151. College Physics I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vector operations, linear kinematics and dynamics, energy, power, momentum, rotational mechanics, periodic motion, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.
Prerequisites: Take MAT 171

PHY 152. College Physics II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.
Prerequisites: Take PHY 151

PHY 251. General Physics I. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vector operations, linear kinematics and dynamics, energy, power, momentum, rotational mechanics, periodic motion, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.
Prerequisites: Take MAT 271
Corequisites: Take MAT 272

PHY 252. General Physics II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.
Prerequisites: Take All: MAT 272 and PHY 251

PHY 253. Modern Physics. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include atomic structure, nuclear processes, natural and artificial radioactivity, quantum theory, and special relativity. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.
Prerequisites: Take PHY 251

Plastics (PLA)

PLA 110. Introduction to Plastics. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the plastics processing industry, including thermoplastics and thermosets. Emphasis is placed on the description, classification, and properties of common plastics and processes and current trends in the industry. Upon completion, students should be able to describe the differences between thermoplastics and thermostats and recognize the basics of the different plastic processes.
Political Science (POL)

POL 110. Introduction to Political Science. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces basic political concepts used by governments and addresses a wide range of political issues. Topics include political theory, ideologies, legitimacy, and sovereignty in democratic and non-democratic systems. Upon completion, students should be able to discuss a variety of issues inherent in all political systems and draw logical conclusions in evaluating these systems.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

POL 120. American Government. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a study of the origins, development, structure, and functions of American government. Topics include the constitutional framework, federalism, the three branches of government including the bureaucracy, civil rights and liberties, political participation and behavior, and policy process. Upon completion, students should be able to demonstrate an understanding of the basic concepts and participatory processes of the American political system.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

POL 130. State & Local Government. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a study of the origins, development, structure, and functions of American government. Topics include the constitutional framework, federalism, the three branches of government including the bureaucracy, civil rights and liberties, political participation and behavior, and policy process. Upon completion, students should be able to discuss a variety of issues inherent in all political systems and draw logical conclusions in evaluating these systems.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

POL 210. Comparative Government. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a cross-national perspective on the government and politics of contemporary nations such as Great Britain, France, Germany, and Russia. Topics include each country’s historical uniqueness, key institutions, attitudes and ideologies, patterns of interaction, and current political problems. Upon completion, students should be able to identify and compare various nations’ governmental structures, processes, ideologies, and capacity to resolve major problems.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

POL 220. International Relations. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a study of the effects of ideologies, trade, armaments, and alliances on relations among nation-states. Emphasis is placed on regional and global cooperation and conflict, economic development, trade, non-governmental organizations, and international institutions such as the World Court and UN. Upon completion, students should be able to identify and discuss major international relationships, institutions, and problems.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

Printing (PRN)

PRN 131. Flexography I. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides basic hands-on instruction in flexographic image preparation, platemaking, mounting, and printing. Emphasis is placed on taking press measurements, making and mounting plates, and obtaining quality in press operation on a narrow-web press. Upon completion, students should be able to describe and perform flexographic production procedures in pre-press, press setup, press operation, and die-cutting.

PRN 132. Flexography II. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is a continuation of PRN 131 and introduces wide-web presses. Emphasis is placed on troubleshooting press problems, color matching, parts identification, make-ready, and setup of narrow-web, wide-web, or corrugated presses. Upon completion, students should be able to produce advanced projects involving all flexographic production phases. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.
Prerequisites: Take PRN 131
PRN 140. Binnder & Finishing. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers bindery and finishing operations. Topics include folding, cutting, gathering, binding, embossing, stamping, die-cutting, drilling, punching, mailing, and packaging. Upon completion, students should be able to operate various finishing and bindery equipment and demonstrate an understanding of the relationship of finishing to printing processes.

PRN 155. Screen Printing I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers screen printing techniques and materials. Topics include methods, materials, design, and image and stencil preparation techniques. Upon completion, students should be able to produce single- or multi-color projects.

PRN 156. Screen Printing II. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is a continuation of PRN 155. Emphasis is placed on advanced techniques and current industry practices. Upon completion, students should be able to produce multi-color projects utilizing various photographic stencil methods and substrates.
Prerequisites: Take PRN 155

PRN 221. Offset Press Operations. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers advanced lithographic theory and provides extensive hands-on operating experience. Emphasis is placed on make-ready, press operation, maintenance, and troubleshooting of multi-color jobs on sheet-fed offset presses and duplicators. Upon completion, students should be able to set up, run, maintain, and produce commercial-quality multi-color work.

PRN 231. Flexography III. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is a continuation of PRN 132. Emphasis is placed on the products made and processes used in the industry. Upon completion, students should be able to demonstrate an understanding of advanced production techniques of flexographic products. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.
Prerequisites: Take PRN 132

PRN 232. Flexography IV. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides opportunities for advanced and specialized study in flexography. Emphasis is placed on specialized product design and production. Upon completion, students should be able to demonstrate an understanding of the comprehensive scope of the flexographic industry, products, and processes. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.
Prerequisites: Take PRN 231

PRN 240. Print Estimating/Planning. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers printing economics, development of cost centers, job flow throughout departments, and material and labor costs. Topics include budgeted, hourly, cost-rate derivation; production standards and data; and analysis of other estimating procedures including computer-assisted estimating. Upon completion, students should be able to demonstrate an understanding of economic factors of the printing industry and determine all production costs of printed jobs. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.
Prerequisites: Take GRA 121

PRN 241. Flexo Applications I. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides an opportunity to specialize in certain applications in flexographic printing. Emphasis is placed on understanding color and production concerns in order to produce products. Upon completion, students should be able to troubleshoot color problems during printing and relate them to the production procedures. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.
Prerequisites: Take All: PRN 241, GRA 153, and GRA 255

PRN 242. Flexo Applications II. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides an opportunity to produce comprehensive projects, including color work on special substrates using specialty inks. Emphasis is placed on compensation for press limitations to produce high-quality color products. Upon completion, students should be able to produce color images on a variety of substrates and troubleshoot and solve production problems. This course is a unique concentration requirement in the Flexography concentration in the Graphic Arts and Imaging Technology program.
Prerequisites: Take All: PRN 241, GRA 153, and GRA 255

Process Control Instrumentatio (PCI)

PCI 162. Instrumentation Controls. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course surveys industrial process control instrumentation concepts, devices, and systems. Topics include process control devices and process control applications associated with industrial instrumentation. Upon completion, students should be able to demonstrate a basic understanding of the various industrial process control and instrumentation systems.
Prerequisites: Take ELC 213

PCI 170. DAQ and Control. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is a survey of data acquisition and control applications in an industrial setting. Topics include remote I/O systems, PC-based data acquisition, real-time monitoring, and other related topics. Upon completion, students should be able to demonstrate an understanding of data acquisition circuits.
Prerequisites: Take ELN 133E
PCI 172. SCADA Systems. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is a survey of SCADA systems found in the industrial setting. Topics include single and/or multiple machine operator interfaces utilizing hardware and software systems running SCADA or HMI software for system monitoring and control. Upon completion, students should be able to demonstrate an understanding of the utilization and implementation of custom and commercial SCADA or HMI software.
Prerequisites: Take ELN 260

PCI 173. Programmable Systems. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
The course is a survey of various programmable systems used in industry. Topics include PLC systems, PAC systems, DCS systems, and embedded systems and other types of control systems implementation. Upon completion, students should be able to demonstrate an understanding of the programming, troubleshooting, maintenance and planning involved in control systems.
Prerequisites: Take ELN 260

Psychology (PSY)

PSY 150. General Psychology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of the scientific study of human behavior. Topics include history, methodology, biopsychology, sensation, perception, learning, motivation, cognition, abnormal behavior, personality theory, social psychology, and other relevant topics. Upon completion, students should be able to demonstrate a basic knowledge of the science of psychology.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C

PSY 231. Forensic Psychology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces students to concepts which unite psychology and the legal system. Topics include defining competency, insanity, involuntary commitment, as well as introducing forensic assessment techniques, such as interviewing process, specialized assessments, and collecting collateral information. Upon completion, students should be able to demonstrate knowledge in areas of forensic psychology: risk assessment, criminal competencies, insanity, psychopathology, and mentally disordered offenders.
Prerequisites: Take PSY 150

PSY 237. Social Psychology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the study of individual behavior within social contexts. Topics include affiliation, attitude formation and change, conformity, altruism, aggression, attribution, interpersonal attraction, and group behavior. Upon completion, students should be able to demonstrate an understanding of the basic principles of social influences on behavior.
Prerequisites: Take One: PSY 150 or SOC 210

PSY 241. Developmental Psychology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a study of human growth and development. Emphasis is placed on major theories and perspectives as they relate to the physical, cognitive, and psychosocial aspects of development from conception to death. Upon completion, students should be able to demonstrate knowledge of development across the life span.
Prerequisites: Take PSY 150 with a minimum grade of C
Take PSY 150

PSY 281. Abnormal Psychology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an examination of the various psychological disorders, as well as theoretical, clinical, and experimental perspectives of the study of psychopathology. Emphasis is placed on terminology, classification, etiology, assessment, and treatment of the major disorders. Upon completion, students should be able to distinguish between normal and abnormal behavior patterns as well as demonstrate knowledge of etiology, symptoms, and therapeutic techniques.
Prerequisites: Take PSY 150 with a minimum grade of C
Take PSY 150

Race Car Technology (RCT)

RCT 110. Introduction to Racing. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers safe working practices for the shop and race track environments, various types of racing, race vehicles, and organizations that sponsor events. Topics include circle track racing, drag racing, road racing on asphalt and dirt, knowledge and personal motivation, and safety in the racing environment. Upon completion, students should demonstrate knowledge of the professional aspects of racing.

RCT 121. Race Car Metal Inert Gas Welding. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces safety, proper setup, and operation of the gas metal arc welding process, also known as MIG welding. Topics include safety, equipment setup and minor repair, and operation of MIG welding equipment. Upon completion, students should be able to make industry-acceptable welds on flat plate, round, and box tubing made of mild carbon steel.

RCT 254. Racing Chassis Fabrication. 5.0 Credits. Class-2.0. Clinical-0.0. Lab-9.0. Work-0.0
This course covers racing chassis fabrication following either a professionally prepared blueprint or a personal design. Topics include cutting and fitting different types of tubing, and the proper use of specialized fabrication equipment necessary to build various race car components. Upon completion, students should be able to build a racing chassis with the correct geometric angles to racing industry standards.
Prerequisites: Take RCT 121

RCT 255. Racing Sheet Metal Fabrication. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers skills using various tools and equipment necessary to make interior and exterior sheet metal panels. Emphasis is placed on cutting, bending, and shaping sheet metal into the various parts necessary to build a race car. Upon completion, students should be able to fabricate, form, and fit various sheet metal components to racing industry standards.
Religion (REL)

REL 110. World Religions. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the world's major religious traditions. Topics include Primal religions, Hinduism, Buddhism, Islam, Judaism, and Christianity. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied.

REL 111. Eastern Religions. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the major Asian religious traditions. Topics include Hinduism, Buddhism, Taoism, Confucianism, and Shinto. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied.

REL 112. Western Religions. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the major western religious traditions. Topics include Zoroastrianism, Islam, Judaism, and Christianity. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied.

REL 211. Introduction to Old Testament. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a survey of the literature of the Hebrews with readings from the law, prophets, and other writings. Emphasis is placed on the use of literary, historical, archeological, and cultural analysis. Upon completion, students should be able to use the tools of critical analysis to read and understand Old Testament literature.

REL 212. Introduction to New Testament. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a survey of the literature of first-century Christianity with readings from the gospels, Acts, and the Pauline and pastoral letters. Topics include the literary structure, audience, and religious perspective of the writings, as well as the historical and cultural context of the early Christian community. Upon completion, students should be able to use the tools of critical analysis to read and understand New Testament literature.

REL 221. Religion in America. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is an examination of religious beliefs and practice in the United States. Emphasis is placed on mainstream religious traditions and non-traditional religious movements from the Colonial period to the present. Upon completion, students should be able to recognize and appreciate the diversity of religious traditions in America.

Respiratory Care (RCP)

RCP 110. Intro to Respiratory Care. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the respiratory care profession. Topics include the role of the respiratory care practitioner, medical gas administration, basic patient assessment, infection control, and medical terminology. Upon completion, students should be able to demonstrate competence in concepts and procedures through written and laboratory evaluations.
Prerequisites: Take BIO 163 BIO 165 BIO 166 BIO 168 or BIO 169 with a minimum grade of C

RCP 111. Therapeutics/Diagnostics. 5.0 Credits. Class-4.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is a continuation of RCP 110. Emphasis is placed on entry-level therapeutic and diagnostic procedures used in respiratory care. Upon completion, students should be able to demonstrate competence in concepts and procedures through written and laboratory evaluations.
Prerequisites: Take RCP 110

RCP 113. RCP Pharmacology. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the drugs used in the treatment of cardiopulmonary diseases. Emphasis is placed on the uses, actions, indications, administration, and hazards of pharmacological agents. Upon completion, students should be able to demonstrate competence through written evaluations.
Prerequisites: Take BIO 163 BIO 165 BIO 166 BIO 168 or BIO 169 with a minimum grade of C
Corequisites: Take RCP 110, RCP 114, RCP 122 and RCP 123

RCP 114. C-P Anatomy & Physiology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a concentrated study of cardiopulmonary anatomy and physiology essential to the practice of respiratory care. Emphasis is placed on cardiovascular and pulmonary physiology, acid/base balance, and blood gas interpretation. Upon completion, students should be able to demonstrate competence in these concepts through written evaluation.

RCP 115. C-P Pathophysiology. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the etiology, pathogenesis, and physiology of cardiopulmonary diseases and disorders. Emphasis is placed on clinical signs and symptoms along with diagnoses, complications, prognoses, and management. Upon completion, students should be able to demonstrate competence in these concepts through written evaluations.

RCP 122. Special Practice Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides additional laboratory learning opportunities in respiratory care. Emphasis is placed on therapeutic procedures and equipment management. Upon completion, students should be able to demonstrate competence in concepts and procedures through laboratory evaluations.
Prerequisites: Take BIO 163 BIO 165 BIO 166 BIO 168 or BIO 169 with a minimum grade of C
Corequisites: Take RCP 113, RCP 114 and RCP 123

RCP 123. Special Practice Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides additional laboratory learning opportunities in respiratory care. Emphasis is placed on therapeutic procedures and equipment management. Upon completion, students should be able to demonstrate competence in concepts and procedures through laboratory evaluations.
Prerequisites: Take BIO 163 BIO 165 BIO 166 BIO 168 or BIO 169 with a minimum grade of C
Corequisites: Take RCP 113, RCP 114 and RCP 122

RCP 145. RCP Clinical Practice II. 5.0 Credits. Class-0.0. Clinical-15.0. Lab-0.0. Work-0.0
This course provides entry-level clinical experience. Emphasis is placed on therapeutic and diagnostic patient care. Upon completion, students should be able to demonstrate clinical competence in required performance evaluations.
Prerequisites: Take RCP 110
Corequisites: Take RCP 111
RCP 152. RCP Clinical Practice III. 2.0 Credits. Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0
This course provides entry-level clinical experience. Emphasis is placed on therapeutic and diagnostic patient care. Upon completion, students should be able to demonstrate clinical competence in required performance evaluations.
Prerequisites: Take RCP 111

RCP 210. Critical Care Concepts. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides further refinement of acute patient care and underlying pathophysiology. Topics include a continuation in the study of mechanical ventilation, underlying pathophysiology, and introduction of critical care monitoring. Upon completion, students should be able to demonstrate competence in concepts and procedures through written and laboratory evaluations.
Prerequisites: Take RCP 111 RCP 115 RCP 145 RCP 152 MED 120 MAT 140 with a minimum grade of C
Corequisites: Take RCP 222, RCP 235 and RCP 214

RCP 211. Adv Monitoring/Procedures. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course includes advanced information gathering and decision making for the respiratory care professional. Topics include advanced cardiac monitoring and special procedures. Upon completion, students should be able to evaluate, design, and recommend appropriate care plans through written and laboratory evaluations.
Prerequisites: Take RCP 210
Corequisites: Take RCP 247

RCP 214. Neonatal and Pediatric Respiratory Care. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides in-depth coverage of the concepts of neonatal and pediatric respiratory care. Emphasis is placed on neonatal and pediatric pathophysiology and on the special therapeutic needs of neonates and children. Upon completion, students should be able to demonstrate competence in these concepts through written and laboratory evaluations.
Prerequisites: Take RCP 111

RCP 222. Special Practice Lab. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides additional laboratory learning opportunities in respiratory care. Emphasis is placed on therapeutic procedures and equipment management. Upon completion, students should be able to demonstrate competence in concepts and procedures through laboratory evaluations.
Prerequisites: Take RCP 111 RCP 115 RCP 145 RCP 152 with a minimum grade of C

RCP 235. RCP Clinical Practice IV. 5.0 Credits. Class-0.0. Clinical-15.0. Lab-0.0. Work-0.0
This course provides advanced practitioner clinical experience. Emphasis is placed on therapeutic and diagnostic patient care. Upon completion, students should be able to demonstrate clinical competence in required performance evaluations.
Prerequisites: Take RCP 111
Corequisites: Take RCP 210

RCP 247. RCP Clinical Practice V. 7.0 Credits. Class-0.0. Clinical-21.0. Lab-0.0. Work-0.0
This course provides advanced practitioner clinical experience. Emphasis is placed on therapeutic and diagnostic patient care. Upon completion, students should be able to demonstrate clinical competence in required performance evaluations.
Prerequisites: Take RCP 210
Corequisites: Take RCP 211

Selected Topics (SEL)

SEL 191. Selected Topics in ___________. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

SEL 192. Selected Topics in ___________. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore areas of current interest in the specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

SEL 193. Selected Topics in ___________. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

SEL 291. Selected Topics in ___________. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

SEL 292. Selected Topics in ___________. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

SEL 293. Selected Topics in ___________. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

Seminar (SEM)

SEM 196. Seminar in ___________. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore topics of current interest. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.
SEM 197. Seminar in ___________. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore topics of current interest. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

SEM 198. Seminar in ___________. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore topics of current interest. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

SEM 296. Seminar in ___________. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore topics of current interest. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to analyze issues and establish informed opinions.

SEM 297. Seminar in ___________. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore topics of current interest. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

SEM 298. Seminar in ___________. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity to explore topics of current interest. Emphasis is placed on the development of critical listening skills and the presentation of seminar issues. Upon completion, students should be able to critically analyze issues and establish informed opinions.

Simulation & Game Development (SGD)

SGD 111. Introduction to Simulation and Game Development. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides an introduction to simulation and game development. Topics include setting, storytelling, narrative, character design, interface design, game play, internal economy, core mechanics, game genres, AI, the psychology of game design and professionalism. Upon completion, students should be able to demonstrate knowledge of the major aspects of simulation and game design and development.

SGD 112. Simulation and Game Development Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the fundamentals of simulation and game design. Topics include industry standards and design elements for simulation and games. Upon completion, students should be able to design simple simulations and/or games.

SGD 113. Simulation and Game Development Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the fundamentals of programming languages and tools employed in simulation and game development. Emphasis is placed on programming concepts used to create simulations and games. Upon completion, students should be able to program simple games and/or simulations.

SGD 114. 3D Modeling. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the tools required to create three-dimensional (3D) models. Emphasis is placed on exploring tools used to create 3D models. Upon completion, students should be able to create and animate 3D models using 3D modeling tools.

SGD 115. Physically-Based Modeling. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces fundamental physical concepts as applied to the simulation and game design fields. Topics include hands-on programming of vectors, matrices, graphical analyses, forces, laws of motion, work, energy, momentum, properties of matter, and problem-solving methods. Upon completion, students should be able to demonstrate an understanding of the principles studied as applied to the simulation and game design fields.
Prerequisites: Take One: MAT 121 or MAT 171

SGD 116. Graphic Design Tools. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces students to computer-based graphic design tools and their use within the context of simulation and game design. Topics include texture creation, map creation, and introduction to advanced level graphic design techniques. Upon completion, students should be able to competently use and explain industry-standard graphic design software.

SGD 117. Art for Games. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces students to the basic principles of art and how they apply to simulations and games. Emphasis is placed on learning to develop industry quality concept art for characters and other assets, as well as techniques needed to create such art. Upon completion, students should be able to create their own industry standard concept art for use in SGD projects.

SGD 123. Windows and Console Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the concepts of Windows and Console Programming. Emphasis is placed on learning MS Windows, the operating systems of various consoles and programming techniques. Upon completion, students should be able to demonstrate an understanding of Windows and of various consoles’ operating systems.
Prerequisites: Take SGD 113

SGD 124. Massive Multiplayer Online Programming. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the concepts of Massive On-line Programming for simulations and games. Emphasis is on learning Massive Multiplayer On-line simulation and game programming techniques. Upon completion, students should be able to create Massive Multiplayer On-line simulation or game.

SGD 125. Simulation and Game Artificial Intelligence. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the artificial intelligence concepts related to simulation and game development. Emphasis is placed on expert systems. Upon completion, students should be able to describe the basic concepts and procedures related to the development of artificial intelligence systems used in simulation and games.
SGD 126. Simulation and Game Engine Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the techniques needed to design and create a simulation/game engine. Emphasis is placed on learning core techniques used to design and create simulation and/or game engines. Upon completion, students should be able to design and create a simulation or game engine.

SGD 134. SG Quality Assurance. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an introduction to software quality assurance as it relates to simulation and game development. Emphasis is placed on designing testing tools, bug databases, and on learning methodologies required for systematic, detail-oriented testing procedures for the simulation and game industry. Upon completion, students should be able to demonstrate the proper skills to obtain a job as a quality assurance tester in the simulation/game industry.

SGD 135. Serious Games. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides students with an overview of serious games and their applications in immersive learning and education. Emphasis is placed on developing games for education, corporate training, and medical/military simulations. Upon completion, students should be able to design their own serious games.

SGD 158. SGD Business Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the business side of the interactive game industry. Emphasis will be placed on licenses, serious games, psychological profiling, publisher/developer relations, and contract negotiation skills. Upon completion, students should be able to understand how a game evolves from concept to the customer.

SGD 159. SGD Production Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the techniques and methods used in interactive game production and how to manage a project. Emphasis is placed on scheduling, production plans, marketing and budgeting. Upon completion, students should be able to manage a team, track production, and understand the process of project management.

SGD 161. Simulation and Game Animation. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the fundamental principles of animation used in simulation and game development. Emphasis is placed on historical survey of animation, aspects of the animation process and animation techniques. Upon completion, students should be able to produce character sketches, morph simple objects, create walk and run cycles and develop professional storyboards.

SGD 162. Simulation and Game 3-D Animation. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the fundamental principles of 3D animation used in simulation and game development. Emphasis is placed on a historical survey of 3D animation, aspects of the 3D animation techniques. Upon completion, students should be able to produce 3D character sketches, morph simple objects, create walk and run cycles and develop professional storyboards.

SGD 163. Simulation and Game Documentation. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the techniques and methods used to create simulation and game production and design documents. Emphasis is placed on the design document to include scheduling, production plans, marketing and budgeting. Upon completion, students should be able to create design and produce documents for any simulation or game.

SGD 164. Simulation and Game Audio and Video. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces various aspects of audio and video and their application in simulations and games. Topics include techniques for producing and editing audio and video for multiple digital mediums. Upon completion, students should be able to produce and edit audio and video for simulations and games.

SGD 165. Simulation and Game Character Development. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the concepts needed to create fictional personality for use in digital videos, animations, simulations and games. Topics include aspects of character, developing backgrounds, mannerisms and voice. Upon completion, students should be able to develop characters and backgrounds for simulations and games.

SGD 166. Simulation and Game Ethics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces principles of philosophy and ethics as they relate to simulation and game development. Topics include moral philosophy and ethics. Upon completion, students should be able to discuss philosophical and ethical issues related to simulation and game development.

SGD 168. Mobile Simulation and Game Programming I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the mobile simulation and game programming process. Topics include mobile simulation/game programming, performance tuning, animation, sound effects, music, and mobile networks. Upon completion, students should be able to apply simulation/game programming concepts to the creation of mobile simulations and games.

SGD 169. Linux Simulation and Game Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the concepts of Linux programming for use in simulation and game development. Emphasis is placed on Linux programming and tools. Upon completion, students should be able to create a simple game or simulation using Linux.

SGD 170. Handheld Simulation and Game Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the concepts of hand-held simulation and game development. Emphasis is placed on hand-held game API, including stylus input, system buttons, infrared communications, audio/visual creation and the physics of hand-held game API. Upon completion, students should be able to create a simple simulation or game for a hand-held device.

SGD 171. Flash Simulation and Game Programming. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the Flash programming environment for use in simulation and game development. Topics include timeline effects, extensibility layers, alias text, globalization tools, ActionScript and lingo programming. Upon completion, students should be able to create a simple simulation or game using Flash.
SGD 172. Virtual Simulation and Game Environments. 3.0 Credits.  
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course covers the use of virtual reality tools and techniques in simulation and game development. Emphasis is placed on acquiring the skills necessary to create scalable virtual characters and environments for use in simulations and games. Upon completion, students should be able to create a simple game or simulation in a virtual environment.

SGD 173. Lighting and Shading Algorithms. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course introduces the concepts of various lighting and shading algorithms for use in simulation and game development. Topics include various tools used to create light and shadows. Upon completion, students should be able to apply knowledge of various lighting and shading algorithms to the creation of simulation and games.  
Prerequisites: Take SGD 214

SGD 174. Simulation and Game Level Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course introduces the tools used to create levels for real-time simulation and games. Topics include level design, architecture theory, modeling for 3D engines and texturing methods. Upon completion, students should be able to design simple levels using industry standard tools.

SGD 181. Machinima. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course covers machinima techniques in the simulation and game industry. Emphasis is placed on developing movies and animations within industry-standard game engines for simulations and games. Upon completion, students should be able to demonstrate a basic understanding of in-game cinematic creation.

SGD 193. Selected Topics in Simulation & Game Dev. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

SGD 210. 3D Data Capture. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course introduces students to the tools used to capture data in a 3D environment. Emphasis is placed on capturing data from motion capture and/or 3D scanning devices for use in 3D models and animations. Upon completion, students should be able to capture data from a 3D environment and import for use in 3D models, simulations, and animations.  
Prerequisites: Take SGD 114

SGD 212. Simulation and Game Development Design II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course covers the advanced principles of simulation and game design. Topics include advanced design concepts in simulation and game development. Upon completion, students should be able to design an advanced simulation or game.  
Prerequisites: Take SGD 112

SGD 213. Simulation Game Development Programming II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course covers advanced programming concepts used to create simulations and games. Emphasis is placed on acquiring advanced programming skills for use in creating simulations and games. Upon completion, students should be able to program an advanced simulation or game.  
Prerequisites: Take One: SGD 113, CSC 134, CSC 151 or CSC 153

SGD 214. 3D Modeling II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course introduces the tools used to create and animate advanced 3-dimensional models. Emphasis is placed on identifying and utilizing the tools required to create and animate advanced 3D models. Upon completion, students should be able to create and animate advanced 3D models using 3D modeling tools.  
Prerequisites: Take SGD 114

SGD 215. Advanced Physically-Based Modeling. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course is designed to introduce advanced 3D motion and interaction of objects. Emphasis is placed on vector systems, 3D motion calculations using derivatives and integrals through hands-on programming. Upon completion, students should be able to demonstrate an understanding of the principles of 3D simulations.  
Prerequisites: Take SGD 114

SGD 232. Survey of Game Engines. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course provides students with an overview of various types of game engines. Emphasis is placed on learning industry-standard game engines. Upon completion, students should be able to demonstrate a basic understanding of the different types of game engines.

SGD 237. Rigging 3D Models. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course covers the fundamentals of rigging 3D models for animation. Emphasis is placed on learning how to properly weight a model, rig it with a skeleton, and create fluid movement. Upon completion, students should be able to demonstrate the ability to properly rig 3D models.  
Prerequisites: Take SGD 114  
Corequisites: Take SGD 162

SGD 244. 3D Modeling III. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course is designed to expand students' previous knowledge of developing visually compelling 3D models through the use of industry-standard software. Emphasis is placed on learning how to develop accurate textures and normal maps. Upon completion, students should be able to develop industry caliber 3D models.  
Prerequisites: Take SGD 214

SGD 268. Mobile Simulation and Game Programming II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course introduces advanced mobile simulation and game programming processes. Topics include advanced mobile simulation/ game platforms, performance tuning, animation, sound effects, music, and mobile networks. Upon completion, students should be able to apply advanced simulation/game programming concepts to the creation of mobile simulations and games.  
Prerequisites: Take SGD 168

SGD 271. Advanced Flash Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course is designed to expand students' previous knowledge of the Flash programming environment. Emphasis is placed on learning advanced Flash techniques for use in the simulation and game industry. Upon completion, students should be able to create industry-quality simulations or games using Flash.  
Prerequisites: Take SGD 171
SGD 274. Simulation and Game Level Design II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the advanced tools used to create levels for real-time simulations and games. Topics include advanced level guide and architecture theory, concepts related to “critical path” and “flow,” game balancing, playtesting and storytelling. Upon completion, students should be able to design complex levels using industry standard tools.
Prerequisites: Take SGD 174

SGD 285. Simulation and Game Software Engineering. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces object oriented software engineering concepts related to simulation and game development. Topics include systematic approaches to the development, operation and maintenance of simulations and games. Upon completion, students should be able to apply software engineering techniques to the development of simulations and games.
Prerequisites: Take One: SGD 212, SGD 213, or SGD 214

SGD 289. Simulation and Game Development Project. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides students with the opportunity to create a functional simulation or game with minimal instructor support. Emphasis is placed upon verbal and written communication, skill documentation, professional presentation and user training. Upon completion, students should be able to create and professionally present a fully functional simulation or game.
Prerequisites: Take One: SGD 212, SGD 213, SGD 214, or SGD 285

Sociology (SOC)

SOC 210. Introduction to Sociology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the scientific study of human society, culture, and social interactions. Topics include socialization, research methods, diversity and inequality, cooperation and conflict, social change, social institutions, and organizations. Upon completion, students should be able to demonstrate knowledge of sociological concepts as they apply to the interplay among individuals, groups, and societies.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take RED 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 with a minimum grade of C

SOC 213. Sociology of the Family. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the institution of the family and other intimate relationships. Emphasis is placed on mate selection, gender roles, sexuality, communication, power and conflict, parenthood, diverse lifestyles, divorce and remarriage, and economic issues. Upon completion, students should be able to analyze the family as a social institution and the social forces which influence its development and change. This is a writing intensive course.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take RED 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 with a minimum grade of C

SOC 220. Social Problems. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an in-depth study of current social problems. Emphasis is placed on causes, consequences, and possible solutions to problems associated with families, schools, workplaces, communities, and the environment. Upon completion, students should be able to recognize, define, analyze, and propose solutions to these problems.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take ENG 111 with a minimum grade of C
- Take ENG 112 with a minimum grade of C
- Take ENG 113 with a minimum grade of C
- Take ENG 114 with a minimum grade of C

SOC 225. Social Diversity. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a comparison of diverse roles, interests, opportunities, contributions, and experiences in social life. Topics include race, ethnicity, gender, sexual orientation, class, and religion. Upon completion, students should be able to analyze how cultural and ethnic differences evolve and how they affect personality development, values, and tolerance.
Prerequisites: Complete one of the following options:
- Take DRE 098
- Take RED 090 ENG 090 ENG 090A with a minimum grade of C
- Take ENG 095 ENG 095A with a minimum grade of C
- Take EFL 111 EFL 112 with a minimum grade of C
- Take RED 090 ENG 090A EFL 112 with a minimum grade of C
- Take RED 090 EFL 111 with a minimum grade of C
- Take ENG 111 with a minimum grade of C
SOC 234. Sociology of Gender. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course examines contemporary roles in society with special emphasis on recent changes. Topics include sex role socialization, myths and stereotypes, gender issues related to family, work, and power. Upon completion, students should be able to analyze modern relationships between men and women.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take ENG 111 with a minimum grade of C
• Take ENG 112 with a minimum grade of C
• Take ENG 113 with a minimum grade of C
• Take ENG 114 with a minimum grade of C

Spanish (SPA)

SPA 111. Elementary Spanish I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness.
Prerequisites: Complete one of the following options:
• Take DRE 098
• Take RED 090 ENG 090 ENG 090A with a minimum grade of C
• Take ENG 095 ENG 095A with a minimum grade of C
• Take EFL 111 EFL 112 with a minimum grade of C
• Take ENG 090 ENG 090A EFL 112 with a minimum grade of C
• Take RED 090 EFL 111 with a minimum grade of C
• Take ENG 111 with a minimum grade of C
Corequisites: Take SPA 181

SPA 112. Elementary Spanish II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a continuation of SPA 111 focusing on the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate further cultural awareness.
Prerequisites: Take SPA 111
Corequisites: Take SPA 182

SPA 120. Spanish for the Workplace. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course offers applied Spanish for the workplace to facilitate basic communication with people whose native language is Spanish. Emphasis is placed on oral communication and career-specific vocabulary that targets health, business, and/or public service professions. Upon completion, students should be able to communicate at a functional level with native speakers and demonstrate cultural sensitivity.

SPA 181. Spanish Lab 1. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness.
Prerequisites: Take SPA 181

SPA 211. Intermediate Spanish I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.
Prerequisites: Take SPA 112
Corequisites: Take SPA 281

SPA 212. Intermediate Spanish II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a continuation of SPA 211. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.
Prerequisites: Take SPA 211
Corequisites: Take SPA 282

SPA 221. Spanish Conversation. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity for intensive communication in spoken Spanish. Emphasis is placed on vocabulary acquisition and interactive communication through the discussion of media materials and authentic texts. Upon completion, students should be able to discuss selected topics, express ideas and opinions clearly, and engage in formal and informal conversations.
Prerequisites: Take SPA 212

SPA 281. Spanish Lab 3. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.
Prerequisites: Take SPA 182
SAB 282. Spanish Lab 4. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.
Prerequisites: Take SPA 281

Substance Abuse (SAB)

SAB 110. Substance Abuse Overview. 3.0 Credits. Class-3.0.
Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of the core concepts in substance abuse and dependence. Topics include the history of drug use/abuse, effects on societal members, treatment of addiction, and preventive measures. Upon completion, students should be able to demonstrate knowledge of the etiology of drug abuse, addiction, prevention, and treatment.

SAB 120. Intake and Assessment. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course develops processes for establishment of client rapport, elicitation of client information on which therapeutic activities are based, and stimulation of client introspection. Topics include diagnostic criteria, functions of counseling, nonverbal behavior, collaterals and significant others, dual diagnosis, client strengths and weakness, uncooperative clients, and crisis interventions. Upon completion, students should be able to establish communication with clients, recognize disorders, obtain information for counseling, and terminate the counseling process. This course is a unique concentration requirement of the Substance Abuse concentration in the Human Services Technology program.

SAB 125. SA Case Management. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides case management activities, including record keeping, recovery issues, community resources, and continuum of care. Emphasis is placed on establishing a systematic approach to monitor the treatment plan and maintain quality of life. Upon completion, students should be able to assist clients in the continuum of care as an ongoing recovery process and develop agency networking.

SAB 135. Addictive Process. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course explores the physical, emotional, psychological, and cultural aspects of the addictive process. Emphasis is placed on addictions to food, sex, alcohol, drugs, work, gambling, and relationships. Upon completion, students should be able to identify the effects, prevention strategies, and treatment methods associated with addictive disorders.

SAB 140. Pharmacology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the pharmacology of psychoactive drugs and abused chemicals and treatment options. Emphasis is placed on the use of psychoactive drugs and related psychological and social complexities, including models for prevention and treatment. Upon completion, students should be able to understand and identify theories of addiction, major classes of drugs, treatment alternatives, and social repercussions.

SAB 210. Sub Abuse Counseling. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides theory and skills acquisition by utilizing intervention strategies designed to obtain therapeutic information, support recovery, and prevent relapse. Topics include counseling individuals and dysfunctional families, screening instruments, counseling techniques and approaches, recovery and relapse, and special populations. Upon completion, students should be able to discuss issues critical to recovery, identify intervention models, and initiate a procedure culminating in cognitive/behavioral change.
Prerequisites: Take HSE 125 with a minimum grade of C

SAB 220. Group Techniques/Therapy. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a practical guide to diverse methods of group therapy models used in the specific treatment of substance abuse and addiction. Emphasis is placed on the theory and practice of group therapy models specifically designed to treat the cognitive distortions of addiction and substance abuse. Upon completion, students should be able to skillfully practice the group dynamics and techniques formulated for substance abuse and addiction.
Prerequisites: Take HSE 125

SAB 230. Family Therapy. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the theories and models of family systems therapy as designed for families affected by substance abuse and addiction. Emphasis is placed on structures and procedures necessary for successful family therapy, including the needs, types of resistance, and individual family dynamics. Upon completion, students should be able to understand and identify dynamics and patterns unique to families affected by substance abuse and the appropriate model of treatment.

SAB 240. Sab Issues in Client Serv. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces systems of professional standards, values, and issues in substance abuse counseling. Topics include confidentiality, assessment of personal values, professional responsibilities, competencies, and ethics relative to multicultural counseling and research. Upon completion, students should be able to understand and discuss multiple ethical issues applicable to counseling and apply various decision-making models to current issues. This course is a unique concentration requirement of the Substance Abuse concentration in the Human Services Technology program.

SAB 250. Prevention & Education. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course uses various approaches to designing and implementing education programs concerning substance abuse, intervention, and relapse prevention for adolescents and adults. Emphasis is placed on the education of individuals and substance abusers/users and their families. Upon completion, students should be able to present a wide variety of education programs for individuals and substance abusers/users and their families.
Prerequisites: Take SAB 140

SAB 255. Environmental Prevention. 3.0 Credits. Class-3.0.
Clinical-0.0. Lab-0.0. Work-0.0
This course introduces accepted environmental and social approaches in the field of substance abuse prevention. Emphasis is placed on specific environmental prevention strategies focused on changing conditions that contribute to the use of alcohol and other drugs. Upon completion, students should be able to demonstrate understanding of how media, social change and community obligation can help prevent substance use.
Surgery (SUR)

SUR 110. Intro to Surgical Technology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a comprehensive study of peri-operative care, patient care concepts, and professional practice concepts within the profession of surgical technology. Topics include: introductory concepts, organizational structure and relationships, legal, ethical and moral issues, medical terminology, pharmacology, anesthesia, wound healing management concepts, and the technological sciences. Upon completion, students should be able to apply theoretical knowledge of the course topics to the practice of surgical technology.
Corequisites: Take SUR 111

SUR 111. Periop Patient Care. 7.0 Credits. Class-5.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides the surgical technology student the theoretical knowledge required to function in the pre-operative, intra-operative, and post-operative role. Topics include asepsis, disinfection and sterilization, physical environment, instrumentation, equipment, peri-operative patient care, and peri-operative case management. Upon completion, students should be able to apply the principles and practice of the peri-operative team member to the operative environment.
Corequisites: Take SUR 110

SUR 122. Surgical Procedures I. 6.0 Credits. Class-5.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides an introduction to selected basic and intermediate surgical specialties that students are exposed to the first clinical rotation. Emphasis is placed on related surgical anatomy, pathology, and procedures that enhance theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics to the clinical operative environment.
Prerequisites: Take All: SUR 110 and SUR 111
Corequisites: Take One: SUR 123 or STP 101

SUR 123. Sur Clinical Practice I. 7.0 Credits. Class-0.0. Clinical-21.0. Lab-0.0. Work-0.0
This course provides clinical experience with a variety of perioperative assignments to build skills required for complex perioperative patient care. Emphasis is placed on greater technical skills, critical thinking, speed, efficiency, and autonomy in the operative setting. Upon completion, students should be able to function in the role of an entry-level surgical technologist.
Prerequisites: Take SUR 123
Corequisites: Take SUR 134 and SUR 135

SUR 134. Surgical Procedures II. 5.0 Credits. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a comprehensive study of intermediate and advanced surgical specialties that students are exposed to in the second clinical rotation. Emphasis is placed on related surgical anatomy, pathology, and procedures that enhance theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics to the clinical operative environment.
Prerequisites: Take One: SUR 123 or STP 101

SUR 135. SUR Clinical Practice II. 4.0 Credits. Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0
This course provides clinical experience with a variety of perioperative assignments to build skills required for complex perioperative patient care. Emphasis is placed on greater technical skills, critical thinking, speed, efficiency, and autonomy in the operative setting. Upon completion, students should be able to function in the role of an entry-level surgical technologist.
Prerequisites: Take SUR 123
Corequisites: Take SUR 134

SUR 137. Prof Success Prep. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides employability skills and an overview of theoretical knowledge in preparation for certification. Topics include test-taking strategies, resume preparation, interviewing strategies, communication skills, and teamwork concepts. Upon completion, students should be able to prepare a resume, demonstrate appropriate interview techniques, and identify strengths and weaknesses in preparation for certification.
Prerequisites: Take SUR 123
Corequisites: Take SUR 134 and SUR 135

SUR 210. Advanced Sur Clinical Practice. 2.0 Credits. Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0
This course is designed to provide individualized experience in advanced practice, education, circulating, and managerial skills. Emphasis is placed on developing and demonstrating proficiency in skills necessary for advanced practice. Upon completion, students should be able to assume leadership roles in a chosen specialty area.
Prerequisites: Take SUR 135 with a minimum grade of C

SUR 211. Advanced Theoretical Concepts. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers theoretical knowledge required for extension of the surgical technologist role. Emphasis is placed on advanced practice in complex surgical specialties, educational methodologies, and managerial skills. Upon completion, students should be able to assume leadership roles in a chosen specialty area.
Prerequisites: Take SUR 134 with a minimum grade of C

SUR 212. Surgical Clinical Supplement. 4.0 Credits. Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0
This course provides the opportunity to continue mastering the continuum of care in the peri-operative assignment. Emphasis is placed on maintaining and enhancing acquired clinical skills in the peri-operative setting. Upon completion, students should be able to demonstrate mastery of surgical techniques in the role of the entry level surgical technologist.

Surveying (SRV)

SRV 110. Surveying I. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the theory and practice of plane surveying. Topics include the precise measurement of distances, angles, and elevations; bearing, azimuth and traverse computations; topography and mapping. Upon completion, students should be able to use/care for surveying equipment, collect field survey data, perform traverse computations and create a contour map.
Corequisites: Take 1 Set: Set 1: Take MAT 121, Set 2: Take MAT 171, Set 3: Take DMA 060, DMA 070, and DMA 080
SRV 111. Surveying II. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces route surveying and roadway planning and layout. Topics include simple, compound, reverse, spiral, and vertical curves; geometric design and layout; planning of cross-section and grade line; drainage; earthwork calculations; and mass diagrams. Upon completion, students should be able to calculate and lay out highway curves; prepare roadway plans, profiles, and sections; and perform slope staking.
Prerequisites: Take SRV 110

SRV 210. Surveying III. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces boundary surveying, land partitioning, and calculations of areas. Topics include advanced traverses and adjustments, preparation of survey documents, and other related topics. Upon completion, students should be able to research, survey, and map a boundary.
Prerequisites: Take SRV 110
Corequisites: Take CEG 151;

SRV 220. Surveying Law. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the law as related to the practice of surveying. Topics include surveyors' responsibilities, deed descriptions, title searches, eminent domain, easements, weight of evidence, riparian rights, and other related topics. Upon completion, students should be able to identify and apply the basic legal aspects associated with the practice of land surveying.
Prerequisites: Take SRV 110

SRV 240. Topo/Site Surveying. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers topographic, site, and construction surveying. Topics include topographic mapping, earthwork, site planning, construction staking, and other related topics. Upon completion, students should be able to prepare topographic maps and site plans and locate and stake out construction projects.
Prerequisites: Take SRV 110

SRV 250. Advanced Surveying. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers advanced topics in surveying. Topics include photogrammetry, astronomical observations, coordinate systems, error theory, GPS, GIS, Public Land System, and other related topics. Upon completion, students should be able to apply advanced techniques to the solution of complex surveying problems.
Prerequisites: Take SRV 111

SRV 260. Field & Office Practices. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers surveying project management, estimating, and responsibilities of surveying personnel. Topics include record-keeping, starting and operating a surveying business, contracts, regulations, taxes, personnel management, and professional ethics. Upon completion, students should be able to understand the requirements of operating a professional land surveying business.

Sustainability Technologies (SST)

SST 110. Introduction to Sustainability. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces sustainability issues and individual contributions toward environmental sustainability. Topics include management processes needed to maximize renewable/non-renewable energy resources, economics of sustainability, and reduction of environmental impacts. Upon completion, students should be able to discuss sustainability practices and demonstrate an understanding of their effectiveness and impacts.

SST 120. Energy Use Analysis. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the principles of analyzing energy use, energy auditing tools and techniques, conservation techniques, and calculating energy savings. Topics include building system control theory, calibrating digital controls, energy loss calculations, and applicable conservation techniques. Upon completion, students should be able to demonstrate an understanding of energy use, audits, and controls in the analysis of energy consumption.

SST 130. Modeling Renewable Energy. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces software and other technologies used for modeling renewable energy systems. Topics include renewable energy modeling software applications, data analysis, renewable energy sources, and cost of renewable energy systems. Upon completion, students should be able to use appropriate technology to model the effectiveness of renewable energy systems.

SST 140. Green Building and Design Concepts. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to introduce the student to sustainable building design and construction principles and practices. Topics include sustainable building rating systems and certifications, energy efficiency, indoor environmental quality, sustainable building materials and water use. Upon completion, students should be able to identify the principles and practices of sustainable building design and construction.

SST 210. Issues in Sustainability. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the long-term impacts and difficulties of applying sustainability concepts in an organization, business, or society. Topics include the application of sustainable technologies and the analysis of affordability, efficiencies, recycling, and small and large-scale design. Upon completion, students should be able to recognize the possible limitations of sustainable technologies and be prepared to reconcile such conflicts.
Prerequisites: Take SST 110

SST 250. Sustainability Capstone Project. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces an integrated team approach to a sustainability topic of interest to students, faculty, or professional community. Topics include problem identification, proposal preparation, conceptual design, and an effective project work schedule. Upon completion, students should be able to integrate the many facets of a topic based on environmental sustainability into a completed project.
Prerequisites: Take SST 110
Transportation Technology (TRN)

TRN 110. Introduction to Transport Technology. 2.0 Credits. 
Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers workplace safety, hazardous materials, environmental regulations, hand tools, service information, basic concepts, vehicle systems, and common transportation industry terminology. Topics include familiarization with major vehicle systems, proper use of various hand and power tools, material safety data sheets, and personal protective equipment. Upon completion, students should be able to demonstrate appropriate safety procedures, identify and use basic shop tools, and describe government regulations regarding transportation repair facilities.

TRN 120. Basic Transportation Electricity. 5.0 Credits. 
Class-4.0.
Clinical-0.0. Lab-3.0. Work-0.0
This course covers basic electrical theory, wiring diagrams, test equipment, and diagnosis, repair and replacement of batteries, starters, and alternators. Topics include Ohm's Law, circuit construction, wiring diagrams, circuit testing, and basic troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair basic wiring, battery, starting, charging, and electrical concerns.

TRN 120A. Basic Transportation Electrical Lab. 1.0 Credit. 
Class-0.0. 
Clinical-0.0. Lab-3.0. Work-0.0
This course provides a lab that allows students to enhance their understanding of electrical components and circuits used in the transportation industry. Topics include inspection, diagnosis, and repair of electrical components and circuits using appropriate service information for specific transportation systems. Upon completion, students should be able to diagnose and service electrical components and circuits used in transportation systems.

TRN 140. Transportation Climate Control. 2.0 Credits. 
Class-1.0. 
Clinical-0.0. Lab-2.0. Work-0.0
This course covers the theory of refrigeration and heating, electrical/electronic/pneumatic controls, and diagnosis and repair of climate control systems. Topics include diagnosis and repair of climate control components and systems, recovery/recycling of refrigerants, and safety and environmental regulations. Upon completion, students should be able to diagnose and repair vehicle climate control systems.

TRN 140A. Transportation Climate Control Lab. 2.0 Credits. 
Class-1.0. 
Clinical-0.0. Lab-2.0. Work-0.0
This course provides experiences for enhancing student skills in the diagnosis and repair of transportation climate control systems. Emphasis is placed on reclaiming, recovery, recharging, leak detection, climate control components, diagnosis, air conditioning equipment, tools and safety. Upon completion, students should be able to describe the operation, diagnose, and safely service climate control systems using appropriate tools, equipment, and service information.

TRN 145. Advanced Transportation Electronics. 3.0 Credits. 
Class-2.0. 
Clinical-0.0. Lab-3.0. Work-0.0
This course covers advanced transportation electronic systems including programmable logic controllers, on-board data networks, telematics, high voltage systems, navigation, collision avoidance systems and electronic accessories. Topics include interpretation of wiring schematics, reprogramming PLC?s, diagnosing and testing data networks and other electronic concerns. Upon completion, students should be able to reprogram PLC?s, diagnose and test data networks and other electronic concerns, and work safely with high voltage systems. 
Prerequisites: Take TRN 120

TRN 170. Pc Skills for Transportation. 2.0 Credits. 
Class-1.0. 
Clinical-0.0. Lab-2.0. Work-0.0
This course introduces students to personal computer literacy and Internet literacy with an emphasis on the transportation service industry. Topics include service information systems, management systems, computer-based systems, and PC-based diagnostic equipment. Upon completion, students should be able to access information pertaining to transportation technology and perform word processing.

TRN 180. Basic Welding for Transportation. 3.0 Credits. 
Class-1.0. 
Clinical-0.0. Lab-4.0. Work-0.0
This course covers the terms and procedures for welding various metals used in the transportation industry with an emphasis on personal safety and environmental health. Topics include safety and precautionary measures, setup/operation of MIG equipment, metal identification methods, types of welds/joints, techniques, inspection methods, cutting processes and other related issues. Upon completion, students should be able to demonstrate a basic knowledge of welding operations and safety procedures according to industry standard.

TRN 180A. Basic Welding for Transportation Lab. 1.0 Credit. 
Class-0.0. 
Clinical-0.0. Lab-3.0. Work-0.0
This course provides a laboratory experience for enhancing student skills in welding and cutting procedures associated with the transportation industry. Emphasis is placed on safety and precautionary measures, setup/operation of MIG equipment, metal identification, welds/joints, techniques, inspection of welds/joints, cutting processes and other related topics. Upon completion, students should be able to demonstrate a basic knowledge of welding operations and safety procedures according to industry standards.

Turfgrass Management (TRF)

TRF 110. Introduction Turfgrass Cultivation & Id And Identification. 4.0 Credits. 
Class-3.0. 
Clinical-0.0. Lab-2.0. Work-0.0
This course covers the principles of reproduction, growth development, species characteristics, establishment and maintenance of golf courses and sports fields, and lawns. Topics include principles of reproduction, growth development, species characteristics, establishment and maintenance of golf courses and sports fields, and lawn applications. Upon completion, students should be able to identify turfgrass species and develop an establishment and maintenance plan for high quality turf areas in accordance with sustainable practices.

TRF 120. Turfgrass Irrigation and Design. 4.0 Credits. 
Class-2.0. 
Clinical-0.0. Lab-4.0. Work-0.0
This course covers the basic techniques involved in the design, layout, installation, and use of water-wise turfgrass irrigation systems. Topics include types of irrigation systems, components of the systems, materials available for use, and economic considerations. Upon completion, students should be able to complete a functional design for a turfgrass irrigation system according to sustainable practices.

TRF 125. Turfgrass Computer App. 2.0 Credits. 
Class-1.0. 
Clinical-0.0. Lab-3.0. Work-0.0
This course introduces basic computer applications for the turfgrass industry. Emphasis is placed on computer software applications for irrigation design, management, and budget planning for turfgrass applications. Upon completion, students should be able to use appropriate software for various turfgrass management applications.
### TRF 130. Native Flora ID. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers identification of selected native ground covers and woodland trees by summer and/or winter characteristics. Emphasis is placed on mature age, fall colors, site adaptability, and habit of growth for special turf-related areas. Upon completion, students should be able to identify native plants by size and leaf, bud, twig, and limb formation.

### TRF 152. Landscape Maintenance. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the tasks of landscape maintenance. Emphasis is placed on lawns, shrubs, trees, flowers, and ground covers. Upon completion, students should be able to maintain a landscape area on a year-round schedule.

### TRF 210. Turfgrass Eqmt Mgmt. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers the operation and maintenance of specialized turfgrass management equipment. Topics include small engine use and repair; operation, maintenance, and repair of turfgrass equipment; organization of shop areas; and safety considerations. Upon completion, students should be able to operate and maintain turfgrass management equipment.

### TRF 220. Turfgrass Calculations. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the specific math concepts and calculations necessary in the turfgrass industry. Emphasis is placed on calibration of equipment used in the application of fertilizers and pesticides and calculation of solid materials used in construction. Upon completion, students should be able to correctly perform basic calculations and calibrations and estimate materials needed in specific professional turfgrass management situations.

### TRF 230. Turfgrass Mgmt Apps. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces specific sports field design, installation, and maintenance. Topics include natural grass croquet courts and baseball, soccer, and football fields. Upon completion, students should be able to perform specific tasks in layout, field marking, and preparing for tournament play.

### TRF 240. Turfgrass Pest Control. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers detection and identification of turfgrass pests with emphasis on methods of sustainable management. Topics include pest identification with an understanding of pesticides used, application procedures, and costs involved in sustainable management programs. Upon completion, students should be able to identify turfgrass pests, select the proper pesticide, develop pest management programs, and/or use integrated pest management.

### TRF 250. Golf /Sport Field Const. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides information for layout, materials, and construction of special recreational applications. Emphasis is placed on site selection, equipment, safety regulations, drainage, turfgrass species, and irrigation needs. Upon completion, students should be able to locate construction reference sites and develop drainage and irrigation plans from their own blueprints and topo map designs.

### TRF 260. Adv Turfgrass Mgmt. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the principles and practices involved in turfgrass management. Topics include choosing the best management practice in mowing, pest control, fertilization, irrigation, traffic control, air control, budgeting, and materials procurement. Upon completion, students should be able to demonstrate knowledge of the principles covered and select and apply the best practices in turfgrass management.

**Prerequisites:** Take TRF 110

### Web Technologies (WEB)

**WEB 110. Internet/Web Fundamentals. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0**
This course introduces World Wide Web Consortium (W3C) standard markup language and services of the Internet. Topics include creating web pages, search engines, FTP, and other related topics. Upon completion, students should be able to deploy a hand-coded website created with mark-up language, and effectively use and understand the function of search engines.

**WEB 115. Web Markup and Scripting. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0**
This course introduces Worldwide Web Consortium (W3C) standard client-side Internet programming using industry-established practices. Topics include JavaScript, markup elements, stylesheets, validation, accessibility, standards, and browsers. Upon completion, students should be able to develop hand-coded web pages using current markup standards.

**WEB 110. Introduction to Internet Multimedia. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0**
This is the first of two courses covering the creation of internet multimedia. Topics include internet multimedia file types, file-type conversion, acquisition of digital audio/video, streaming audio/video and graphics animation plug-in programs and other related topics. Upon completion, students should be able to create internet multimedia presentations utilizing a variety of methods and applications.

**WEB 125. Mobile Web Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0**
This course introduces students to web design for mobile devices. Topics include planning an effective mobile Web site, industry standard Mobile Markup Language, CSS3, multimedia, m-commerce, social media, testing and publishing. Upon completion, students should be able to plan, develop, test, and publish Web content designed for mobile devices.

**WEB 141. Mobile Interface Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0**
This course covers current design standards and emerging approaches related to the design and development of user interfaces for mobile devices. Emphasis is placed on research and evaluation of standard and emerging practices for effective interface and user experience design. Upon completion, students should be able to design effective and usable interfaces for mobile devices.
WEB 151. Mobile Application Development I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces students to programming technologies, design and development related to mobile applications. Topics include accessing device capabilities, industry standards, operating systems, and programming for mobile applications using an OS Software Development Kit (SDK). Upon completion, students should be able to create basic applications for mobile devices.

WEB 179. JAVA Web Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the development of dynamic, database-driven web applications using the JAVA programming languages. Topics include Object Oriented Programming JAVA Server Pages, servlets, database interactions, and form handling. Upon completion, students should be able to create and modify JAVA-based internet applications.
Prerequisites: Take CSC 151

WEB 180. Active Server Pages. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces active server programming. Topics include HTML forms processing and other issues related to developing active web applications. Upon completion, students should be able to create and maintain a dynamic website.
Prerequisites: Take CIS 115

WEB 210. Web Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces intermediate to advanced web design techniques. Topics include customer expectations, advanced markup language, multimedia technologies, usability and accessibility practices, and techniques for the evaluation of web design. Upon completion, students should be able to employ advanced design techniques to create high impact and highly functional web sites.
Prerequisites: Take WEB 110

WEB 214. Social Media. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces students to social media for organizations. Topics include social media, marketing strategy, brand presence, blogging, social media analytics and technical writing. Upon completion, students should be able to utilize popular social media platforms as part of a marketing strategy, and work with social media analytics tools.

WEB 215. Advanced Markup and Scripting. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers advanced programming skills required to design Internet applications. Emphasis is placed on programming techniques required to support Internet applications. Upon completion, students should be able to design, code, debug, and document Internet-based programming solutions to various real-world problems using an appropriate programming language.
Prerequisites: Take WEB 115

WEB 220. Advanced Multimedia. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This is the second of two courses covering internet multimedia. Topics include use of advanced internet multimedia applications. Upon completion, students should be able to create interactive Internet multimedia presentations.
Prerequisites: Take WEB 120

WEB 250. Database Driven Websites. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces dynamic (database-driven) website development. Topics include the use of basic database CRUD statements (create, read, update and delete) incorporated into web applications, as well as in software architecture principles. Upon completion, students should be able to design and develop database driven web applications according to industry standards.
Prerequisites: Take DBA 110

WEB 251. Mobile Application Development II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers advanced applications and custom programming to develop applications for mobile devices. Topics include device capabilities, OS specific Software Development Kits (SDK), scripting for functionality and designing interactivity. Upon completion, students should be able to demonstrate effective programming techniques to develop advanced mobile applications.
Prerequisites: Take WEB 151

Welding (WLD)

WLD 110. Cutting Processes. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces oxy-fuel and plasma-arc cutting systems. Topics include safety, proper equipment setup, and operation of oxy-fuel and plasma-arc cutting equipment with emphasis on straight line, curve and bevel cutting. Upon completion, students should be able to oxy-fuel and plasma-arc cut metals of varying thickness. This course introduces Oxy-fuel and Plasma-arc cutting systems. Topics include safety, proper equipment setup, and operation of Oxy-fuel and Plasma-arc cutting equipment with emphasis on straight line, curve and bevel cutting. Upon completion, students should be able to Oxy-fuel and Plasma-arc cut metals of varying thickness.

WLD 111. Oxy-Fuel Welding. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the oxy-fuel welding process. Topics include safety, proper equipment setup, and operation of oxy-fuel welding equipment with emphasis on bead application, profile, and discontinuities. Upon completion, students should be able to oxy-fuel weld fillets and grooves on plate and pipe in various positions.

WLD 112. Basic Welding Processes. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces basic welding and cutting. Emphasis is placed on beads applied with gases, mild steel fillers, and electrodes and the capillary action of solder. Upon completion, students should be able to set up welding and oxy-fuel equipment and perform welding, brazing, and soldering processes.

WLD 115. SMAW (Stick) Plate. 5.0 Credits. Class-2.0. Clinical-0.0. Lab-9.0. Work-0.0
This course introduces the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, students should be able to perform SMAW fillet and groove welds on carbon plate with prescribed electrodes.
WLD 116. SMAW (stick) Plate/Pipe. 4.0 Credits. Class-1.0. Clinical-0.0. Lab-9.0. Work-0.0
This course is designed to enhance skills with the shielded metal arc (stick) welding process. Emphasis is placed on advancing manipulative skills with SMAW electrodes on varying joint geometry. Upon completion, students should be able to perform groove welds on carbon steel with prescribed electrodes in the flat, horizontal, vertical, and overhead positions.
Prerequisites: Take WLD 115

WLD 121. GMAW (MIG) FCAW/Plate. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces metal arc welding and flux core arc welding processes. Topics include equipment setup and fillet and groove welds with emphasis on application of GMAW and FCAW electrodes on carbon steel plate. Upon completion, students should be able to perform fillet welds on carbon steel with prescribed electrodes in the flat, horizontal, and overhead positions.

WLD 122. GMAW (MIG) Plate/Pipe. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course is designed to enhance skills with the gas metal arc (MIG) welding process. Emphasis is placed on advancing skills with the GMAW process making groove welds on carbon steel plate and pipe in various positions. Upon completion, students should be able to perform groove welds with prescribed electrodes on various joint geometry.
Prerequisites: Take WLD 121

WLD 131. GTAW (TIG) Plate. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the gas tungsten arc (TIG) welding process. Topics include correct selection of tungsten, polarity, gas, and proper filler rod with emphasis placed on safety, equipment setup, and welding techniques. Upon completion, students should be able to perform GTAW fillet and groove welds with various electrodes and filler materials.

WLD 132. GTAW (TIG) Plate/Pipe. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course is designed to enhance skills with the gas tungsten arc (TIG) welding process. Topics include setup, joint preparation, and electrode selection with emphasis on manipulative skills in all welding positions on plate and pipe. Upon completion, students should be able to perform GTAW welds with prescribed electrodes and filler materials on various joint geometry.
Prerequisites: Take WLD 131

WLD 141. Symbols and Specifications. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the basic symbols and specifications used in welding. Emphasis is placed on interpretation of lines, notes, welding symbols, and specifications. Upon completion, students should be able to read and interpret symbols and specifications commonly used in welding.
Prerequisites: Take DMA 010 DMA 020 DMA 030

WLD 143. Welding Metallurgy. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the concepts of welding metallurgy. Emphasis is placed on basic metallurgy, effects of welding on various metals, and metal classification and identification. Upon completion, students should be able to understand basic metallurgy, materials designation, and classification systems used in welding.

WLD 145. Thermoplastic Welding. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the thermoplastic welding processes and materials identification. Topics include filler material selection, identification, joint design, and equipment setup with emphasis on bead types and applications. Upon completion, students should be able to perform fillet and groove welds using thermoplastic materials.

WLD 151. Fabrication I. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces the basic principles of fabrication. Emphasis is placed on safety, measurement, layout techniques, cutting, joining techniques, and the use of fabrication tools and equipment. Upon completion, students should be able to perform layout activities and operate various fabrication and material handling equipment.
Prerequisites: Take WLD 110 WLD 116 WLD 121 WLD 131 WLD 141

WLD 215. SMAW (stick) Pipe. 4.0 Credits. Class-1.0. Clinical-0.0. Lab-9.0. Work-0.0
This course covers the knowledge and skills that apply to welding pipe. Topics include pipe positions, joint geometry, and preparation with emphasis placed on bead application, profile, and discontinuities. Upon completion, students should be able to perform SMAW welds to applicable codes on carbon steel pipe with prescribed electrodes in various positions.
Prerequisites: Take One: WLD 115 or WLD 116

WLD 221. GMAW (MIG) Pipe. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers the knowledge and skills that apply to welding pipe. Topics include pipe positions, joint geometry, and preparation with emphasis placed on bead application, profile, and discontinuities. Upon completion, students should be able to perform GMAW welds to applicable codes on pipe with prescribed electrodes in various positions.
Prerequisites: Take WLD 122

WLD 231. GTAW (TIG) Pipe. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers gas tungsten arc welding on pipe. Topics include joint preparation and fit up with emphasis placed on safety, GTAW welding technique, bead application, and joint geometry. Upon completion, students should be able to perform GTAW welds to applicable codes on pipe with prescribed electrodes and filler materials in various pipe positions.
Prerequisites: Take WLD 132

WLD 251. Fabrication II. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers advanced fabrication skills. Topics include advanced layout and assembly methods with emphasis on the safe and correct use of fabrication tools and equipment. Upon completion, students should be able to fabricate projects from working drawings.
Prerequisites: Take WLD 151

WLD 261. Certification Practices. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers certification requirements for industrial welding processes. Topics include techniques and certification requirements for prequalified joint geometry. Upon completion, students should be able to perform welds on carbon steel plate and/or pipe according to applicable codes.
Prerequisites: Take All: WLD 115, WLD 121, and WLD 131
WLD 262. Inspection & Testing. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces destructive and non-destructive testing methods. Emphasis is placed on safety, types and methods of testing, and the use of testing equipment and materials. Upon completion, students should be able to understand and/or perform a variety of destructive and non-destructive testing processes.

WLD 265. Automated Welding/Cutting. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces automated welding equipment and processes. Topics include setup, programming, and operation of automated welding and cutting equipment. Upon completion, students should be able to set up, program, and operate automated welding and cutting equipment.
Prerequisites: Take All: WLD 110 and WLD 121

WLD 270. Orbital Welding TIG/Pipe. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces automated tungsten inert gas (TIG) welding hardware, equipment, and processes required to apply specific, accurate, automated, and consistently repetitive pipe welds. Emphasis is placed on proper identification of automated welding process variables, how each relates to the functionality of orbital equipment and components, and how changes in variables directly influence weld quality. Upon completion, students should be able to produce quality pipe welds through the appropriate operation and control of automated TIG welding equipment.

Wheels of Learning (WOL)

WOL 110. Basic Construction Skills. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the student to basic safety, tools, and skills commonly found in the construction related trades. Topics include safety, basic math, blueprints, hand and power tools, and rigging. Upon completion, students should have successfully completed the Core Curricula as identified by the National center for Construction Education and Research.

Corporate and Continuing Education Courses

Academic Related (ACA)

ACA 8118. College Study Skills for Non-Native Speakers. 0.0 Hours. Class-48.0. Clinical-0.0. Lab-0.0. Work-0.0

ACA 8200. Preparing for the SAT I. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to give the student an understanding of the SAT and how it is scored. This course will also provide strategies on how to take the SAT and how to answer specific types of questions. Emphasis will be placed on general strategies for the entire test, along with specific strategies for all types of math and verbal questions.

Accounting (ACC)

ACC 7001. Cash Flow Analysis. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of the cash flow process - the inflow and outflow of cash within a company. Students will acquire a basic understanding of business financial statements, as well as a general overview of what affects cash flow within a company, accruals and deferrals, the cash conversion cycle, net income ratios, monthly cash expenses ratios, depreciation, and net operating losses.

ACC 7003. Fundamentals of Accounting for Non-Financial Managers. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
No matter how effective your management methods or how innovative you are, your company's results will be measured in dollars and cents. Explore the basics of the accounting process. Learn how transactions are recorded in the accounting system of your organization and how to interpret your company's financial statements and annual reports.

ACC 7005. Cost Accounting and Management. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Review the principles and objectives of cost accounting, production control, and inventory control, as they relate to management decision making and control processes within a company. Topics covered are Cost Accounting Fundamentals, Balancing of the 3 Factors - Cost, Volume & Profit, Concept of Relevant Information & Decision Making, Activity Based Costing, Cost Allocation Techniques, and Cost Variances & Control.

ACC 7006. Introduction to Peachtree Accounting 2012. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Handle accounting tasks quickly and easily with Peachtree Accounting 2012! With the help of hands-on activities and step-by-step instructions, you'll quickly master all the skills you need to handle your routine accounting needs. First, you'll learn to set up accounts for vendors, customers, and inventory items. Next, you'll master the simple steps for creating invoices, collecting payments, paying bills, and printing checks. After that, you'll find out how to make journal entries and create trial balances. And what about those tedious end-of-month procedures? With Peachtree, as you'll see, they're a snap. Finally, you'll discover how to produce detailed financial reports that put the information you need right at your fingertips. If you find day-to-day accounting a struggle, Peachtree is the perfect solution for you. With the power of this software on your side, you'll breeze through those routine accounting chores you used to dread! Offered in partnership with ed2go.
ACC 7009. Administrative Assistant Applications. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Discover how time management, accounting, business law, organizational behavior and management affect administrative assistant responsibilities and activities. Learn the basics of accounting, including the general ledger and key accounting terms, and see how financial statements and controls help keep your organization moving in a positive direction. Understand the fundamentals of business law, contracts and the principal-agency relationship; discover ethics and organizational politics; and understand the basics of human resources management. Offered in partnership with ed2go.

ACC 7201. Certified Internal Auditor (CIA) Exam Prep - Part 1 Internal Audit Basics. 0.0 Hours.  Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Prepare for Part 1 of the Certified Internal Auditor Exam, utilizing The Institute of Internal Auditors CIA Learning System. This instructor-led course is designed to provide a comprehensive overview of the topics covered on Part 1 of the 3-part CIA exam. During this course, you will be able to discuss difficult topics with subject matter experts and peers, obtain study tips to help you stay on track and work through practice exam questions. Additional study time outside of class is necessary to prepare for the exam.

ACC 7202. Certified Internal Auditor (CIA) Exam Prep - Part 2 Internal Audit Practice. 0.0 Hours.  Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Prepare for part two of the Certified Internal Auditor Exam, using The Institute of Internal Auditors CIA Learning System. Exam topics include: managing the internal audit function via the strategic and operational role of the internal audit and establishing a risk-based plan; the steps to manage individual engagements (planning, supervision, communicating results and monitoring outcomes); and fraud risks and controls. Additional study time outside of class is necessary to prepare for the exam.

ACC 7203. Certified Internal Auditor (CIA) Exam Prep - Part 3 Internal Audit Knowledge. 0.0 Hours.  Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Prepare for part three of the Certified Internal Auditor Exam, using The Institute of Internal Auditors CIA Learning System. Exam topics include: governance and business ethics; risk management; organizational structure, including business processes and risks; communication; management and leadership principles; information technology and business continuity; financial management; and the global business environment. Additional study time outside of class is necessary to prepare for the exam.

Air Cond, Heating, and Refrig (AHR)

AHR 7000. Introduction to Brazing. 0.0 Hours.  Class-36.0. Clinical-0.0. Lab-0.0. Work-0.0  
AHR 7001. Heating & Air Conditioning for Home Owners. 0.0 Hours.  Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0  
This class provides home owners a basic understanding of home heating and air conditioning systems. Basic maintenance and operations are covered. This course covers gas furnaces, electric furnaces, heat pumps and central air conditioning systems. These systems will be demonstrated in the lab. No tools are required. This course is not intended to enable home owners to perform service on their systems other than basic maintenance. Servicing of HVAC systems should only be performed by qualified contractors and service technicians.

AHR 7010. Air Conditioning Systems. 0.0 Hours.  Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Upon completion of this course students will understand the basic fundamentals of environmental control systems for HVAC and will apply this knowledge to troubleshoot a cooling system.

Alternative Energy Technology (ALT)

ALT 7200. Introduction to Alternative Energy. 0.0 Hours.  Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Students will learn the concepts of solar energy, wind energy, biofuels, geothermal energy, tidal energy, and solar thermal energy.

American Institute of Banking (AIB)

AIB 7412. Supervision and Personnel Administration. 0.0 Hours.  Class-45.0. Clinical-0.0. Lab-0.0. Work-0.0  
AIB 8970. Design in Operations of Building Systems Part II. 0.0 Hours.  Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0  
Due to increasing demand for economy and energy conservation property and facility managers must develop and maintain efficient building environment with a workin knowledge of building systems their care and maintain.

Appraisal (APP)

APP 7144. The Uniform Standards of Professional Appraisal Practice (USPAP). 0.0 Hours.  Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
This National Uniform Standards of Professional Appraisal Practice (USPAP) course fulfills the 15-hour requirement as established by the Appraiser Qualification Board (AQB) and The Appraisal Foundation. Those seeking to become a Registered Trainee must complete APP 7201 and APP 7202 prior to taking this course.

APP 7145. National USPAP Update (7 Hour). 0.0 Hours.  Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
This 7-hour course focuses on the changes to the 2005 edition of the Uniform Standards of Professional Appraisal Practice (USPAP). It also addresses sections of USPAP that have not been changed but have been identified as problem areas. This course is intended to fulfill the 7-hour requirement as established by the Appraisal Qualifications Board (AQB) of The Appraisal Foundation.

APP 7201. Basic Appraisal Principles. 0.0 Hours.  Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Explore the appraisal process through discussion of appraisal principles and practical examples. This course meets the pre-qualifying criteria, as established by the North Carolina Appraisal Board. This is the first course in the appraisal pre-licensing series and must be taken first.

APP 7202. Basic Appraisal Procedures. 0.0 Hours.  Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Enhance your basic appraisal knowledge with the various approaches to property valuation through practical application of appraisal procedures. This course meets the pre-qualifying criteria, as established by the North Carolina Appraisal Board. Those seeking to become a Registered Trainee must complete APP 7201 prior to taking this course.
APP 7203. Market Analysis and Highest and Best Use. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Students will gain the tools needed to properly collect and analyze market data and determine a property’s highest and best use. This course meets the pre-qualifying criteria, as established by the North Carolina Appraisal Board. Those seeking to become a Registered Trainee must complete APP 7201 and APP 7202 prior to taking this course.

APP 7205. Residential Sales Comparison and Income Approach. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course offers a basic understanding and knowledge of the residential sales comparison and income approaches to appraisal. It includes the valuation principles and procedures applicable to both approaches. With the aid of case studies, students will develop and apply the techniques for market analysis, including the application and use of matched pairs and capitalization rates and gross rental multipliers. There is a discussion on cash and finance equivalency. Students will learn how to apply and defend the rationale behind market adjustments. The course includes a discussion of current Fannie Mae and Freddie Mac Guidelines and relevant USPAP requirements, and introduces students to the methods of appraising income properties. A combination of theory and hands-on examples provides practical applications of real estate appraisal procedures. A calculator is recommended.

APP 7206. Supervisory Appraiser / Trainee Appraiser. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This four-hour course will address the national minimum requirements, responsibilities, and expectations for Trainee Appraisers and Supervisory Appraisers as set by the Appraiser Qualifications Board.

APP 7301. Commercial Appraisal Review Process. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed for lenders and loan originators who must review appraisals of commercial properties.

Architecture (ARC)

ARC 7000. Construction Document Analysis. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

Automotive (AUT)

AUT 7120. Steering and Suspension. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0

AUT 7253. Automotive Electrical Fundamentals. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

AUT 7254. Automotive Electrical Fundamentals. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

AUT 7255. Mechanical Brake Systems Ac Delco. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

AUT 8500. Automotive New Product Training. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

AUT 8700. Automotive Air Brush Techniques. 0.0 Hours. Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a beginners level course covering the basics in air brush techniques, color matching, tinting, and graphics for painting freehand designs on automobiles.

Baking and Pastry Arts (BPA)

BPA 7001. Baking and Pastry Arts Information Session. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is for students needing information on the baking program which includes field trips.

Biology (BIO)

BIO 7000. Introduction to Biology. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Are you interested in learning more about living things, or perhaps beginning to train for a career in the healthcare or medical professions? This course will help you understand the structure and function of the human body at the level of your tiniest living components-your cells. You'll also learn about DNA-what it is, what it does, and even a little bit about how forensic scientists use it to solve crimes. The knowledge you'll gain from this course is essential to understanding the fundamental causes of human disease, and will prepare you for more advanced courses in human anatomy and physiology.

Blueprint Reading (BPR)

BPR 7000. Basic Blueprint Reading. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0

BPR 7002. Residential Blueprint Reading and Estimating. 0.0 Hours. Class-48.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the fundamentals of reading and interpreting residential blueprints and estimating the quantities of materials and labor required to construct a house.

BPR 7007. Blueprint Reading for General Construction. 0.0 Hours. Class-32.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed for construction supervisors and others currently working in the industry. It includes a comprehensive review of those sections of the North Carolina Residential Building Code applicable to Mecklenburg County residential construction. The class also includes a review of applicable state and local code interpretations, and Mecklenburg County's code inspection procedures. A County Code Enforcement Official(s) will observe each class, and will conduct an inspection field trip where students will observe an actual code inspection, and have an opportunity to ask questions regarding the inspection and to discuss their concerns.

BPR 7013. Blueprint Rdn & Nc Residential Bldg Code For Carpenters. 0.0 Hours. Class-36.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed specifically for current residential carpenters who want a better understanding of plan reading, the building codes, and the industry standards that govern carpentry operations. Competency testing is required for certification in blueprint reading (NCCER Wheels of Learning Module # 00105 and 27201-98). Approximately 28 hours of this course is about blueprints, with the remainder focused on code.

BPR 7017. Blueprint Reading for General Construction (Spanish). 0.0 Hours. Class-48.0. Clinical-0.0. Lab-0.0. Work-0.0
Este curso es diseñado para enseñar a aprendices de Construcción Commercial, como leer planos de construcción en general. curso básico y se enseñ?a en espa?ol.
BPR 8000. Introduction to Blueprint Reading. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover the basics of blueprint reading and will review the following topics: Components of a blueprint, how to use a scale of construction, abbreviations, symbols and keynotes; using gridlines to identify plan locations and dimensions. Upon completion students will be able to recognize and identify basic blueprint terms, components and symbols, relate information on blueprints to actual locations on the prints, recognize different classifications of drawings and interpret and use drawing dimensions. Students will also become familiar with Charlotte-Mecklenburg Land Development and NCDOT standard drawings.

Business (BUS)

BUS 7002. Leadership Training - BLUM. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Leadership training for supervisors and managers. This class will cover all areas of leadership: Leadership Generalities, Communication, Leadership Styles, Conflict Management, Intercultural Communication, Teamwork, Time Management, Continuous Improvement.

BUS 7005. Statistical Analysis for Research Methodology. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Using statistical analysis to better understand and present research methods for management analysts.

BUS 7012. Business Writing. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to provide instruction in effective writing for business purpose.

BUS 7018. Getting Things Done- Managing Time. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will help participants evaluate personal styles of organization and time management preferences while suggesting practical techniques for application to make better use of time and space. Purchase book, "How to Make the Most of Your Workday," in the CPCC bookstore prior to attending the first class.

BUS 7036. Statistical Process Control Module 2. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
This one-day course is designed to provide the communication tools to assist participants in establishing and maintaining successful personal and professional relationships by building communication skills through listening and speaking. Discussion points will include the importance and perception of the communication based on the communicator's body language and other non-verbal cues, how to make your office more customer friendly, how to become more effective communicator, and much more.

BUS 7117. Electronic Notary Certification. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will instruct existing North Carolina notaries public in the newly legislated procedure required to exercise electronic notarial acts as set forth by North Carolina's Secretary of State. Participants must hold a valid commission as a North Carolina notary public to qualify for this certification. The course will cover the N.C. E-Notary Act, eligibility and registration, E-notary processes, technology solutions and providers, ethics reg. E-notarizations, consequences of misconduct, security standards, best practices and departmental recommendations.

BUS 7200. How to Plan and Book Meetings and Seminars. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will teach Administrative Professionals to plan and book meetings outside their workplace with greater confidence and the expertise of a seasoned meeting planner. Students will be taught meeting planning techniques including site selection, lodging arrangements, credit and billing procedures, meal selection and room set up. Participants will also gain insight into the perils and pitfalls that can await an unprepared meeting planner.

BUS 7301. Executive Overview Workshop for Implementing Lean Six Sigma. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Customized workshop will be designed to help the clients' leadership team gain a basic understanding of the Lean and Six Sigma methodologies, explore case studies from different industries and learn what it takes to get started with a Lean or Six Sigma deployment.

BUS 7305. Improving Communication through Listening and Speaking. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will instruct existing North Carolina notaries public in the newly legislated procedure required to exercise electronic notarial acts as set forth by North Carolina's Secretary of State. Participants must hold a valid commission as a North Carolina notary public to qualify for this certification. The course will cover the N.C. E-Notary Act, eligibility and registration, E-notary processes, technology solutions and providers, ethics reg. E-notarizations, consequences of misconduct, security standards, best practices and departmental recommendations.

BUS 7307. Basic, Basic Telephone Skills. 0.0 Hours. Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0
The single greatest way to a company can distinguish itself from its competition is by the level of service it offers and the higher the level of service your organization offers, the more successful it will be. This module will give the learner basic knowledge of telephone etiquette and how to appropriately answer the telephone for a business.

BUS 7308. Professional Telephone Techniques. 0.0 Hours. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will give the learner basic knowledge of telephone etiquette and how to appropriately answer the telephone for a business.

BUS 7310. Listening: Did You Say What I Heard?. 0.0 Hours. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
Learn how to identify and overcome barriers to listening and develop effective listening skills. Purchase book, "Listen Up! Hear What's Really Being Said," at the CPCC Bookstore prior to class.

BUS 7311. Service Mentality. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The single greatest way a company can distinguish itself from its competition is by the level of service it offers and the higher the level of service your organization offers, the more successful it will be. This module will give the learner basic knowledge of customer service and how to understand a service mentality.
BUS 7314. Presentation Success. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This beginning level course will help participants gain confidence in their public speaking ability. Participants will plan, develop and deliver short presentation during class. Each presenter will receive feedback from the instructor and students regarding presentation style, content organization, length, and other topics discussed in class (if applicable). Materials included.

BUS 7315. Assertiveness Without Fear. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
Learn the skills to become more assertive in both personal and professional life in just one day. Purchase the book, "Assertiveness Skills," in the CPCC bookstore prior to attending the first class.

BUS 7316. Tricks, Traps and Intelligent Responses. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a 3-hour participant centered seminar that provides strategies for social workers to effectively respond to "traps" (obstacles) encountered when dealing with difficult clients, family, and community members by using appropriate "tricks" (skills) and intelligent responses.

BUS 7317. Dealing with Conflict and Negotiation. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
Join us for this action packed day class on managing conflict. You will learn some positive facts about conflict along with a discussion on how habits are formed. Time will be spent examining and practicing negotiation skills along with 5 ways to manage conflict. Participants will identify basic needs and how they relate to the subject of the conflict resolution. Tips on becoming better managers will be shared along with an analysis of effective communication skills. Attending this day session will result in your being a more effective manager of conflict situations in the workplace and in other life settings. Materials included.

BUS 7319. Dealing with Difficult People. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
This one-day course is designed to provide tools in dealing with difficult people such as learning what triggers certain behaviors, taking ownership of your own behavior, choosing how to respond, and much more. Dealing with Difficult People is intended to help you assess your behaviors, particularly those displayed during conflict. Examine some strategies for putting yourself in charge, instead of letting someone else's emotions control you and your reactions. One of the objectives is to assist you in becoming a better manager of your day-to-day relationships both at work and at home.

BUS 7321. Handling Change & Negativity in our Day To Day World. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
This one-day workshop will focus on the change process. Beginning with a range of beliefs about change, participants will have the opportunity to examine their perception of change. Time will be spent studying the components of managing the change process. Attendees will review changes occurring in the workplace and their role in identifying the components that are working for or against change. In addition, personal goals related to the change process will be examined. Assumptions about change and key concepts from Spencer Johnson's book, "Who Moved My Cheese", will be reviewed. Attendees will be better able to understand the change process and apply their learning to changes in their personal and professional lives. Purchase the book, "Who Moved My Cheese", at CPCC bookstore.

BUS 7322. Keeping Positive in a Negative World. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
During this one-day workshop, attendees will have the opportunity to examine the affects of negativity in their lives. Negative energy producers will be discussed, along with the physical and psychological impacts of negativity. Negativity in the workplace and in one's personal life will be analyzed. Ideas will be presented on how to cope with this force which drains us at work and in our personal relationships. Participants will leave with the necessary skills in dealing with negative types and how to prevent us from getting consumed by the negativity.

BUS 7328. Managing Projects for Results. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
Learn strategies to manage projects effectively in just one day. Materials included.

BUS 7332. Innovation Skills. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Provides a practical approach to leaders and their teams to think differently about how they work. Learn to help generate new ideas that add value to your organizations and customers. Work together to advocate for the innovation and ensure that valuable new ideas are not lost.

BUS 7334. MBTI Workshop Understanding Personality Types. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The workshop utilizes the Meyers Briggs Type Indicator to interpret the results for better self-understanding in personal and professional life. The results from the assessments will be discussed in the workshop to better understand different personality types in the workplace.

BUS 7345. Increasing Self-Understanding With Myers Briggs. 0.0 Hours. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
Participants will take the Myers Briggs Inventory and learn to interpret results for better self-understanding in personal and professional life. Materials included.

BUS 7348. Teambuilding with Myers Briggs. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The workshop utilizes the Meyers Briggs Type Indicator to interpret the results for better self-understanding in personal and professional life. The results from the assessments will be incorporated in the teambuilding workshop to help build better working relationships.

BUS 7349. Siemens Diversity. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to help participants engage in continuous awareness and evaluation of one's own values and experiences as they affect perceptions of others. Look beyond our obvious differences (culture, status, ethnicity, disability), to cultivate and enhance positive working relationships: *Seeking to understand others' viewpoints, norms, and styles. *Demonstrating and understanding of differences and similarities. *Recognizing and addressing culturally biased behaviors to resolve conflict, solve problems and increase individual, team, and organizational performance.
BUS 7355. MBTI Assessment Feedback for Supervisors. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
The workshop utilizes the Myers Briggs Type Indicator for supervisors to better understand their team and work environment.

BUS 7356. Being Your Best (emotional intelligence). 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
The ability to express and control our own emotions is important, but so is our ability to understand, interpret, and respond to the emotions of others. Learn more about what emotional intelligence is and how it works.

BUS 7360. Replacing Body Language in an E-mail World. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
E-mail, Facebook, Twitter, Linkedin is this the way we communicate? 55% of communication is body language, 35% is tone of voice, and only 10% of communication is done with words. How to deal in an email and text world giving up on two forms of the way we communicate. Learn how to communicate in a multicultural and diverse workplace.

BUS 7365. Are You Running Your Life? Or Is Your Life Running You?. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Understand time and how to best optimize its use. Learn how to analyze your use of time and cover your distractions and interruptions and learn how to manage them. Introduction to delegation as a tool to clear time from your busy schedule. Why do people procrastinate? Answer: They don't have a system. Participants will leave the class with a very detailed action plan to improve their use of time both in the workplace and at home.

BUS 7370. Mathematical Models for Process Improvement. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
This training is designed to give participants a review of basics, such as simple calculations and rounding in preparation for specific instruction in percentages to allow them to calculate percent, ratio, formulas, statistics, and control charts.

BUS 7374. Intro to Leadership. Setting the Stage. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
The workshop is designed to prepare students for the upcoming leadership courses. The workshop will be interactive and fun with the goal of helping participants know what to expect from the leadership series.

BUS 7375. Leadership in the Workplace. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Students will learn to understand their own personal behavioral styles as well as their leadership styles and how these two styles influence how they lead and what areas of leadership should be improved. Students will also use this learning to deflect potential conflict and resolve existing conflict in a multi-cultural work environment.

BUS 7380. Mentor Training - Train the Trainer. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Operations trainers have the responsibility of ensuring that their trainees learn all the required steps and details of the tasks being trained so that they can meet the safety, quality and efficiency requirements of the job. Trainers/mentors must be able to communicate the information effectively and verify that the trainees have understood and internalized what they have learned and can demonstrate ability to perform the trained tasks. Mentors must also act as leaders and role models in training, communicating and demonstrating critical behaviors and attitudes. This course provides training and practice in tools and methods to drive consistency of training methodology and to elevate performance as a trainer/leader.

BUS 7385. Intercultural Awareness Training. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Increase the level of knowledge and understanding of the similarities and difference involved in working with individuals from a different country of origin. Communicating and working with other cultures.

BUS 7400. Making the Transition to Management. 0.0 Hours.  
Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course is designed to meet universal needs of new supervisors making the transition to management. Topics addressed will include the role of the manager, understanding basic needs of employees, setting expectations with employees, providing recognition and feedback, and making the shift from "doing" to "managing." Purchase book, "Managers as Mentors," in the CPCC bookstore prior to attending the first class:.

BUS 7405. Problem Solving and Decision Making. 0.0 Hours.  
Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

BUS 7406. Leadership: Inspiring Commitment. 0.0 Hours.  
Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0

BUS 7407. Problem Solving and Decision Making. 0.0 Hours.  
Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0

BUS 7408. Planning and Critical Path Method. 0.0 Hours.  
Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0

BUS 7409. Delegating and Monitoring. 0.0 Hours.  
Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0

BUS 7410. Branding, Marketing for Not for Profit & Association Mgmt. 0.0 Hours.  
Class-10.0. Clinical-0.0. Lab-0.0. Work-0.0  
This 10-hour course is designed for individuals from non-profits and associations. Participants will have a better understanding of: "Positioning & Branding": what it means for your organization, how to strategically plan for your organization around it's purpose, and how to treat your organization like a business for maximum results.

BUS 7411. Process Management. 0.0 Hours.  
Class-21.0. Clinical-0.0. Lab-0.0. Work-0.0  
This blended 21-hour course requires 12 hours in class and nine hours of individual online activity (out of class) and is designed to help participants develop a road map that will enable process owners and teams to identify, define, manage and improve their business processes. The class will address both current and new processes and participants will learn how to ensure they meet business performance objectives.

BUS 7412. Balancing the Mission and Financial Requirements of Your Organization. 0.0 Hours.  
Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course will provide participants with a basic understanding of the importance of linking the mission of not-for-profit organizations with the financial budget in order to ensure the organization is mission-driven with appropriate financial disciplines. The course is designed to give participants practical tools for budget/ financial management.

BUS 7413. Developing an Effective Not-For-Profit Business Plan. 0.0 Hours.  
Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course will provide participants of not-for-profit organizations with the tools necessary to develop an effective business plan. Each participant will develop his/her own business plan in class.

BUS 7414. Partnering & Collaboration. 0.0 Hours.  
Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0  
Partnering and collaboration is essential for survival in a not-for-profit organization. Participants will learn how to obtain funds and sponsorships, write grants, partner with other agencies, conduct a program evaluation and more.
BUS 7415. Call Center Team Manager. 0.0 Hours. Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0

BUS 7416. Tapping Your Board's Potential. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to help participants understand board and staff roles and responsibilities, policy development, succession planning, how to make board and committee meetings work, new board orientation and more.

BUS 7420. Call Center Skills. 0.0 Hours. Class-35.0. Clinical-0.0. Lab-0.0. Work-0.0
Students will learn the basics of Word, Excel, Access, PowerPoint and internet. There will be a brief introduction to typing.

BUS 7430. Lean Six Sigma Green Belt Certification. 0.0 Hours. Class-77.0. Clinical-0.0. Lab-0.0. Work-0.0
After completing the course, students will obtain Green Belt Certification and have the requisite knowledge and skills to lead project teams and complete Lean Six Sigma projects. Green Belt training is an excellent way to enhance the effectiveness of both process owners and team members as they learn to apply the tools and methods used in the Lean Six Sigma methodology. Green Belts need to be able to implement all of the appropriate tools of Lean and Six Sigma and to lead independent local projects when necessary. They work with cross-functional teams to define and measure problems, analyze the root causes, implement improvements, and establish control at new levels. This course is comprised of two components, which create a blended learning process of online and classroom education. A Lean Six Sigma project with appropriate reporting is required to demonstrate the methodology acquired from the course.

BUS 7431. Six Sigma Green Belt Orientation Seminar. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This 4 hour seminar is designed to give the participant an introduction to the Six Sigma program.

BUS 7432. Introduction to Six Sigma - Employee Awareness (white Belt). 0.0 Hours. Class-10.0. Clinical-0.0. Lab-0.0. Work-0.0
Students will be given an awareness and general understanding of the Six Sigma methodology to become Six Sigma conversational. Students will learn how to use Mini-tab software to summarize and interpret graphical display of data. This course is designed for those employees who are often referred to as "White Belts" in Six Sigma nomenclature. This course blends classroom instruction with required on-line assignments. Actual participant on-line hours may vary based on experience and knowledge.

BUS 7433. Six Sigma Basics - Team Member (Yellow Belt). 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
Students will be taught a working knowledge of DMAIC methodology used in Six Sigma for process improvement. Participants will learn how to apply statistical, quality, and decision-making tools in a team environment as applied to Six Sigma projects. Students will learn how to use Mini-tab software to summarize data, interpret graphical display of data, and perform capability analysis of a process for both continuous and discrete data. This course is designed for those employees who are often referred to as "Yellow Belts" in Six Sigma nomenclature. This course blends classroom instruction with required on-line assignments. Actual participant on-line hours may vary based on experience and knowledge.

BUS 7434. Six Sigma Application - Team Leader (green Belt). 0.0 Hours. Class-22.0. Clinical-0.0. Lab-0.0. Work-0.0
Upon successful completion of this course, participants will be locally certified as Six Sigma Green Belts. Six Sigma Green Belts work directly with cross-functional project leaders, to carry out identified improvement projects. As such, Green Belts need to be able to implement all of the appropriate tools of Six Sigma and to lead independent local projects when necessary. They work with these cross-functional teams to define and measure problems, analyze the root causes, implement improvements, and establish control at new levels. This course blends classroom instruction with required on-line assignments. Actual participant on-line hours may vary based on experience and knowledge.

BUS 7435. Lean Six Sigma Black Belt Certification. 0.0 Hours. Class-240.0. Clinical-0.0. Lab-0.0. Work-0.0
Become better prepared to provide an organization with leadership and knowledge expertise of a certified Six Sigma Black Belt. Course content is built around the American Society for Quality?'s (ASQ) Body of Knowledge. Black Belts lead cross-functional project teams to carry out identified improvement projects, implement all appropriate tools of Six Sigma and provide statistical expertise for project teams. Black Belts work with, lead and mentor cross-functional teams to define and measure problems, analyze root causes, implement improvements and establish control at new levels. To achieve certification, students must successfully complete all online modules, pass an in-class certification exam, demonstrate proficiency of data analysis techniques using Mini-tab, and demonstrate proficiency in applying the Six Sigma skills by documentation of a completed Six Sigma project.

BUS 7436. Lean Six Sigma Executive Overview Course. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
After successful completion of this course, participants will have an understanding of the Lean Six Sigma methodology. Participants will understand how Lean Six Sigma projects are selected, measured and monitored to ensure successful completion within an organization.

BUS 7438. Celgard Six Sigma Yellow Belt. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class introduces some of the basic concepts of Lean Six Sigma. Using online modules, participants will learn tools that will help them identify waste, understand basic statistical concepts, assess process capability, interpret and use control charts, and organize and present data. This course is not intended to develop subject matter experts.

BUS 7440. Mini-tab Introduction. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
Students will learn how to navigate the various windows, toolbars, and customization features used in Mini-tab to increase their efficiency in performing basic exploratory data analysis. Learn how to import various types of data (Excel, text, etc.), export data and output between MINITAB and various software packages, and how to create, manipulate, and restructure data for specific tasks.

BUS 7445. Lean Six Sigma Yellow Belt. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Lean Six Sigma professionals are very much in demand for continuous process improvements initiatives in all organizations. This course is a blend of ~6 hours of on-line training and 12 hours of classroom instructions spread out over 4 weeks. As Lean Six Sigma tools are learned they will be applied to students' work examples and classroom simulations. Yellow Belt certification requirements include active classroom attendance/participation, passing all on-line modules' post-tests, and a final exam.
BUS 7522. Essentials of Professional Selling. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed for people who need to have a knowledge and understanding of statistical process control (SPC). Students will learn how to interpret and use control charts to monitor a process for stability. Students will learn about the different types of data and which control chart is the appropriate type of chart to use for a specific situation. Students will be taught how to create and analyze control charts using a statistical software package, Mini-tab.

BUS 7460. Failure Mode and Effects Analysis and Control Plans. 0.0 Hours. Class-480.0. Clinical-0.0. Lab-0.0. Work-0.0
A basic overview of potential failure mode and effects analysis (FMEA) and the relationship of FMEA to Control Plans. The relationship of FMEA and Control Plans to QS-9000 Quality Management System and related AIAG requirements such as APQP and PPAP will be explained.

BUS 7500. The Rainmaker School of Professional Sales Development. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
This 24-hour course is offered in partnership with national sales trainer, Landy Chase. In only 6 class sessions, participants can improve their personal selling skills for life. Topics include: selling value vs. selling price, competitive selling strategies, business development skills, dynamic presentation skills, managing meetings effectively, client-focused closing skills, and more! Materials included.

BUS 7511. Business to Business Sales 101. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Business to Business Sales 101 teaches participants to use a repeatable process based on best sales practices that takes them through the sales cycle from initial contact to closing the sale.

BUS 7512. Essential Skills for Sales Success. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Sales is a deliberate process, and Essential Skills for Sales Success leads participants through a comprehensive study of the essentials of sales success. From identifying unique buying behaviors, to prospecting, needs assessment, presenting solutions, and closing, participants learn the skills necessary to achieve success in today’s fast-paced selling environment.

BUS 7520. Client-Focused Closing Skills. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
The closing process is composed of three separate, yet critical components: presenting pricing property, handling final objections and concerns, and asking professionally for the business. Most sales people think they know to close properly. In reality, however, few really know what to do in response to statements such as "your price is too high" or "let us discuss it with our committee and we’ll get back with you." And, truth be told, few sales people ever actually ask for the order - not because of an ability issue, but simply because they don’t know how. Landy takes all of these issues and, many others, head on in this pratical, cutting-edge seminar.

BUS 7522. Essentials of Professional Selling. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course number may be used to report any occupational extension course that is funded with receipts, and that will not generate budget FTE.

BUS 7530. How to Find, Hire and Train Outstanding Salespeople. 0.0 Hours. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This 3-hour course is designed for sales managers and business owners. Participants can learn the secrets of finding, hiring, and training top sales performers from a nationally recognized expert in the field of sales force development, Landy Chase. Topics include: where to find outstanding salespeople, power questions to ask during an interview, how to avoid making bad hiring decisions, how to sell a top candidate on the opportunity at your company, and more! Materials included.

BUS 7575. Designed Sales Strategies for Six Sigma. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
Designed Sales Strategies for Six Sigma (DSS-Six Sigma) is a sales strategy development training course. The course is designed to help managers design a common sales process that results in increased productivity in the sales organization. DSS-Six Sigma is designed to integrate the Six Sigma (DMAIC) components into a company’s selling and marketing effort.

BUS 7700. Zodiak, the Business of Manufacturing. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
This 8-hour simulation developed by Paradigm Learning gets people to learn and use critical financial management and strategic decision-making skills in a creatively designed team exercise. Players run a fictional company on a game board and gain first-hand understanding of the big picture of how their organization makes money and answers to shareholders. They will see the factors - including their personal performance - that impact profitability. Importantly, they will have a chance to discuss applying the concepts in their own organizations. Zodiak is especially relevant in training non-financial people.

BUS 7970. Telephone Doctor. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Telephone Doctor Customer Service Training seeks on improving the way your organization communicates with your customers.

BUS 7975. Challenge of Change. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Change is inevitable personally and professionally. Learn tools on how to deal with change successfully.

BUS 7976. Professional Workplace Boundaries. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Leadership and Professional Boundaries course is a participative workshop designed to increase the awareness and understanding of managers and supervisors of their key leadership role and responsibility in reinforcing company values and principles and maintaining a productive workplace for all employees. Case studies are used to review the responsibilities that managers and supervisors have in reinforcing the Standards of Conduct and Behavior and to increase awareness of the influence and impact that managers and supervisors have on people in their organization throughout their daily actions and words. The course emphasizes that respect and trust are main ingredients for a high quality workplace.

BUS 7977. Empowering Employees. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Have you ever walked out of a meeting or a one-on-one and thought, "I would have like to said this." We are offering a workshop on Empowerment in the Workplace. Learn your preferred and natural style of communication utilizing an online assessment. Strengths. Challenges. Communicating with Confidence.

BUS 7980. What's Next, Retirement?. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Join us to explore options for a fulfilling retirement or semi-retirement.
BUS 8100. Medication Training for Unlicensed Personnel. 0.0 Hours.
Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is based on section 1 of the DHR approved manual, "Medication Training for Unlicensed Personnel." It incorporates basic training in the monitoring and clinical practices needed to safely administer medications.

BUS 8115. 7 Habits of Highly Effective People. 0.0 Hours. Class-24.0.
Clinical-0.0. Lab-0.0. Work-0.0

BUS 8116. Project Management Fundamentals. 0.0 Hours. Class-88.0.
Clinical-0.0. Lab-0.0. Work-0.0
This project management course is designed to provide the skills and experience needed to successfully manage projects from initiation to completion. The certification program highlights skill areas of: targeting end objectives, project staffing, the 9 skills of successful project management, project time management, project quality management, project accounting, advanced project management tools. The course will be delivered via instructor-led and computer-based training and includes exercises that allow students to practice the application of knowledge and skills learned during the course. Additionally, the course will include an introduction to Microsoft Project, which will familiarize students with project management software.

BUS 8200. Project Countdown!. 0.0 Hours. Class-440.0. Clinical-0.0.
Lab-0.0. Work-0.0
Project Countdown is an extremely realistic project management simulation in a "discovery" learning format. Each participant is an employee of a company, called to work on a cross-functional project team, who will be analyzing information, making decisions and managing Countdown to a successful conclusion. The simulation is an intense "nine month" project, with information coming from voice mail, memos, e-mail, phone calls and from the project manager.

BUS 8205. Business E-mail Etiquette. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
Do your emails make a professional impression? What do your business emails communicate about you and your message? Now is a good time to assess your email effectiveness and learn ways to make this online form of communication work better for you.

BUS 8210. Be Your Own Editor. 0.0 Hours. Class-440.0. Clinical-0.0.
Lab-0.0. Work-0.0
Have you ever asked yourself, "Did I get my point across in that e-mail? Did my report clearly communicate what we accomplished?" Good writing is a product of clear and logical thinking. The higher you go in the organization, the more your job requires the ability to write in an effective and professional manner. In order to gain credibility you must be able to write concisely yet allow your point of view to be communicated clearly. This workshop is designed to help you learn to craft well-written communication through self-editing techniques. Investing in your writing skills will have long-term payoff in your career.

BUS 8220. Building Leadership Trust & Credibility. 0.0 Hours.
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course interactively teaches the importance of trust and credibility in leadership within an organization and how it directly relates to optimal workplace production.

BUS 8300. Essentials of Project Management. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
This class will meet the Project Management deliverables of: initiating, planning, executing, controlling, and closing. Essentials of roles and responsibilities, tracking progress, communicating, scope, budget, resources, and schedule. This session will also include a project simulation and online work to enhance the elements of project management.

BUS 8310. Time Management Workshop. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
Learn how to optimize your time on the job and complete projects on time. Understand how to prioritize tasks and activities to accomplish your goals.

BUS 8311. Hand and Power Tool Safety Training. 0.0 Hours.
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Upon completion of this course participants will be able to safely operate various tools including manual hand and stationary power versions. Students will also be able to determine which task each tool should be used for and how these tools will aid them in their job.

BUS 8312. ARC Flash Electrical Safety. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
ARC Flash Electrical Safety introduces new users to the basics of electrical safety. Participants will learn how to avoid powered tool hazards and apply appropriate controls when working with electrical components.

BUS 8315. Training: TDM System User. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
This 2-day course builds on existing knowledge of the TDM System. For example, the course members learn how to structure and configure tool data into classes and groups. The target of this training course is to enable course members to configure and manage TDM on their own.

BUS 8400. Technical Writing. 0.0 Hours. Class-440.0. Clinical-0.0.
Lab-0.0. Work-0.0
Upon completion of the learning modules, students in the training will have an understanding and application knowledge of how to write effective instructions, utilize correct sequence and order in instructional tools, and incorporate graphics for visual effect and assistance within a technical document.

BUS 8881. Writing Effective Investigations. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
In this course, you will assess your current technical writing skills and learn specific techniques to improve your style. Emphasis is on organization and appropriate choice of language, primarily for investigations. Content also applies to regulatory documents, email, memos, SOPs, batch records and other technical communications.

Carpentry (CAR)

CAR 7000. Carpentry I, Part I. 0.0 Hours. Class-96.0. Clinical-0.0.
Lab-0.0. Work-0.0
This course is an introduction to the carpentry trade for apprentices and others wanting to enter the trade. Topics covered include construction math, safety, blueprint reading, use of basic hand and power tools, and an introduction to framing methods.

CAR 7001. Carpentry I, Part II. 0.0 Hours. Class-96.0. Clinical-0.0.
Lab-0.0. Work-0.0
This course is a general introduction to construction carpentry utilizing the wheels of learning curriculum. Topics covered include an orientation to the trade; nails, fasteners, and adhesives, woodbuilding materials; and the fabrication of floor, wall, and roof systems.
This the second course in the commercial carpentry apprenticeship program utilizing the wheels of learning curriculum.

**CAR 7030. Drywall Installation Procedures. 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces the methods, materials, tools, and techniques necessary to correctly install drywall covering.

**CAR 7031. Drywall Finishing Procedures. 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is the sequel to drywall installation procedures. It covers the materials, tools, methods and techniques necessary to finish the surfaces of installed drywall in preparation for painting.

**CAR 7040. Qualified Framer. 0.0 Hours.** Class-528.0. Clinical-0.0. Lab-0.0. Work-0.0

Want to learn the skilled craft of carpentry? The Qualified Framer Class allows candidates to learn carpentry and framing skills in short term with this competency and worksite based program. Through cooperation with the local construction industry students are taught the construction fundamentals cluster (CIX 7005) as well as floor, wall, ceiling, & simple roof framing techniques on live work site labs (70%) and in the classroom (30%). Competency testing is required for area certification & will be both written and practical. Additional advanced carpentry certification may be attempted depending on schedule and student. Upon completion, graduates can use our Career Center registry of licensed local contractors and employers who have listed jobs for trained and certified graduates.

**CAR 7041. Residential Framing II. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers beginner level general sciences and practices specific to infection control, sanitation, bacteriology, first aid, shampooing, draping, anatomy, disorders of the hair and scalp, and client consultation. Advanced level applications are specific to styles and techniques of natural hair styling including twisting, wrapping, extending, locking, blow dry and hot iron; and business management and professional ethics and other related topics.

**CAR 7101. Home Construction Methods and Details. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

A course designed to assist the inexperienced builder to identify and evaluate information and procedures pertaining to home construction such as lot surveys, drainage, excavation and foundation construction, foundation wall, floor, wall and roof framing; appraising prefabricated walls and roof trusses, various types of duct work, heating and plumbing rough-in and electrical wiring; comparing and selecting exterior wallcoverings, plumbing-lighting-electrical fixtures and devices and hardware; and evaluating the application of the construction materials and techniques.

**CAR 7130. Residential Contractor’s Exam Review. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a review of the laws, codes and procedures covered by the General Contractor's License Examination for residential and light construction. This classification includes construction of all one-and two-family dwellings covered by the N.C. Residential Code.

**CAR 7131. Commercial Contractor’s Exam Review. 0.0 Hours.** Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is a review of the laws, codes and procedures covered by the General Contractor's License Examination for commercial construction. This classification includes the construction of all commercial, industrial, individual, multi-family and residential construction. The financial requirements for the Commercial/Building classification are the same for the Residential classification.

**Construction (CST)**

**CST 7461. Industrial Motor Control I. 0.0 Hours.** Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0

This course is intended to give the basic understanding of how electrical control systems operate, also to give a working knowledge of how relays, timers, contactors, and starters work. Explain the requirements of the national electric code as far as motors, generators, and control are concerned.

**CST 7468. 24 Hr. Hazwoper Training. 0.0 Hours.** Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0

Upon completion of the course, students should be able to develop a complete job plan using smartcam software, and develop tool path geometry and part geometry to produce accurate machine tool information.

**CST 7646. Basic Soldering Skills. 0.0 Hours.** Class-7.5. Clinical-0.0. Lab-0.0. Work-0.0

**CST 7652. Lean Training for Manufacturing Council. 0.0 Hours.** Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0

**CST 7653. Water Cooled Chillers. 0.0 Hours.** Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0

**CST 7700. Basic Motor Controls. 0.0 Hours.** Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0

**Cosmetology (COS)**

**Cosmetology (COS)**

**COS 7000. Natural Hair Care Certification. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers beginner level general sciences and practices specific to infection control, sanitation, bacteriology, first aid, shampooing, draping, anatomy, disorders of the hair and scalp, and client consultation. Advanced level applications are specific to styles and techniques of natural hair styling including twisting, wrapping, extending, locking, blow dry and hot iron; and business management and professional ethics and other related topics.

**COS 7000. Natural Hair Care Certification. 0.0 Hours.** Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers beginner level general sciences and practices specific to infection control, sanitation, bacteriology, first aid, shampooing, draping, anatomy, disorders of the hair and scalp, and client consultation. Advanced level applications are specific to styles and techniques of natural hair styling including twisting, wrapping, extending, locking, blow dry and hot iron; and business management and professional ethics and other related topics.
COS 7001. Interactive Teaching for Cosmetology Instructors. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed specifically for licensed cosmetic art instructors. At the end of this lesson, the attendee will have an understanding of interactive activities to engage students, develop teaching skills to retain students, and provide activities for students to stay motivated throughout their cosmetology education. In addition, this class will learn to blend technology with teaching. The attendee will be provided updated information on the state board rules and regulations to maintain student passing scores.

COS 7002. Mathematical Solutions for the Beauty Industry. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is designed for licensed Cosmetologists in North Carolina. At the end of this lesson, the attendee will have an understanding of the basic mathematical functions used in the beauty industry. The attendee will learn to recognize the four mathematical operations and their relevance in day to day operations. In addition, the attendee will know how to incorporate these mathematical solutions to problem-solving in their career in the beauty industry. In this class, attendees will learn how to schedule clients and the importance of appointment planning. Attendees will learn proper budgeting and reporting in the beauty industry. In this class, attendees will learn how to schedule clients and the importance of appointment planning. Attendees will learn proper budgeting and reporting and the importance of appointment planning. Attendees will learn proper techniques to controlling inventory and management. The importance of pricing products to determine profit margins will be discussed in this class. In addition, this class will cover topics such as budgeting and reporting in the beauty industry.

COS 7003. Sculpture, A Designer's Approach. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The purpose for this educational session is to help participants learn to see and think about the shapes and forms of a sculpture and then practice creating sculptures using a step-by-step sculpting procedure and specialized sculpting techniques.

COS 7100. Introduction to Computers in Spanish. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Introduction to the Computer course is intended for students who have never used a computer or who have very little experience using the computer. This course will be offered in Spanish. This course will help students prepare for taking the GED test on the computer and give students the skills necessary to use the computer to assist them in future studies.

Culinary (CUL)

CUL 7000. Buffet Centerpiece Presentations. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
In this course, your passion for Dessert and Confectionary knowledge and skills will be applied to creating profitable and appetizing buffets with instructor, Chef Geoff Blount. You will learn to improve the taste of the food you serve and then how the layout of platter placement on the buffet table enhances food presentation. Space is limited to 8 students.

CUL 7010. Modern Ice Creams and Sorbets. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
In this course, your passion for Confectionary knowledge and skills will be applied to creating profitable and appetizing frozen creations with instructor, Chef Geoff Blount. You will learn to improve the taste and stability of the frozen confections you serve and then how the menu development enhances food sales. Space is limited to 8 students.

CUL 7020. Hot and Cold Dessert Presentation. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
In this course, your passion for Dessert and Confectionary knowledge and skills will be applied to creating profitable and appetizing desserts with instructor, Chef Geoff Blount. You will learn to improve the taste of the food you serve and then how the layout of plate placement enhances food presentation. Space is limited to 8 students.

CUL 7200. Charcuterie, Smokehouse and Condiment Workshop. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Is your menu lacking in variety? In this course, you will focus on procedures for making common charcuterie items that can be prepared easily in most kitchens. Join chef, Dan Cheatham, for the preparation of sausages, as well as curing methods, including salt curing, brining and both cold and hot smoking.

CUL 7300. Chef's in the Kitchen. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Plan. Organize. Execute. With this course on the basics of catering and event management, you will have the critical tools you need to plan, establish and manage a profitable catering business.

CUL 7600. Become a Professional Personal Chef. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Turn your culinary skills into a business opportunity as you learn the basics of becoming a personal chef. This class will give you the skills you need to provide hungry customers with meals in the comfort of their own home. As you learn more about this growing industry, you will review meal planning, costing and proper techniques in preparation, handling and storage of food. Additionally, you’ll learn tips for success in marketing and running a home-based business.

CUL 7800. How To Work Effectively With The News Media. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This dynamic, interactive, and highly beneficial seminar is a must for any culinary professional or student who will, wants, or needs to work with the news media.

CUL 8600. ServSafe? Essentials. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The ServSafe? program is the industry standard in food safety training and provides accurate, up-to-date information for every level of employee on all aspects of handling food, from receiving and storing to preparing and serving. Online exam will be administered at the end of class.

CUL 8602. ServSafe Recertification Exam Only. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This ServSafe option purchases the two hour re-certification exam with a certified proctor. The class is for those currently working in the food industry that need to renew ServSafe certification. This class meets NC health code requirements.

CUL 8604. ServSafe Recertification Review Course and Exam. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This ServSafe option purchases the four hour re-certification review class. This class is for those currently working in the food industry that want to review changes to the NC health code requirements. The instructor will bring to class the exam voucher.
CUL 8997. Capoeira de Angola. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will teach students technique and tradition in the training and
performance of Capoeira de Angola, which include elements of African
and Brazilian culture.

CUL 8998. International Travel Information. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Travel is recognized as one of life’s most impactful learning experiences.
International travel adds the dimension of experiencing foreign lands,
cultures and new ways of doing things. Intercultural learning broadens
our perspective towards the rest of the world and how we interact with it.
The American image will change as we change our own attitudes and as
our appreciation of others and their traditions expand. Our economy has
become a global one; it is our responsibility to know our world in order
to promote mutual understanding and to compete. Students will receive
useful information to travel abroad.

CUL 8999. Capoeira, a Brazilian Art Form. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Capoeira is a fascinating Afro-Brazilian art form, which transcends the
traditional disciplinary boundaries of dance, martial arts, music, and
singing with cultural history, language and philosophy. More than simply
a great stress-relieving workout and venue for social interaction, it is
widely practiced for its application in everyday life; that of live presentation,
reading situations, and improvisational problem solving or the ability to
think on one’s feet.

Cyber Crime Technology (CCT)

CCT 8240. ACE Prep Part 1. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is part 1 of the AccessData Certified Examiner (A.C.E)
certification training.

CCT 8241. ACE Prep Part 2. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is Part 2 of the A.C.E. certification training.

CCT 8242. Accelerated ACE Prep. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Accelerated AccessData Certified Examiner class provides the
knowledge and skills necessary to install, configure and effectively use
FTK Imager, Forensic Toolkit, Password Recovery Toolkit, Registry
Viewer. Participants will also use AccessData products to conduct forensic
investigations on various systems and locate forensic artifacts. This course
operates under a shorter time frame to allow a more expeditious complete
of the ACE certification.

CCT 8251. Internet Forensics 1. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The CCT8251 course is intended to build on the knowledge acquired
by students in the digital forensics program. Part 1 of this 3 part course
focuses on the recovery of digital artifacts left behind during the use of
common web browsers and other internet enabled applications. The
course will teach students how to recover, interpret, and report internet
evidence. Prerequisites: Take CCT 240 or CCT 241

CCT 8252. Internet Forensics 2. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The CCT8252 course is intended to build on the knowledge acquired
by students in the digital forensics program. Part 2 of this 3 part course
focuses on the discovery and documentation of digital artifacts left behind
during the use of today’s popular internet enabled applications. The course
will teach students how to recover, interpret, and report internet evidence.
Prerequisites: Take CCT 8251 with a minimum grade of S

CCT 8253. Internet Forensics 3. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The CCT8253 course is intended to build on the knowledge acquired
by students in the digital forensics program. Part 3 of this 3 part course
focuses on the discovery and documentation of digital artifacts left behind
during the use of today’s popular web browsers and internet
enabled applications. The course will give students the ability to practice
recovering, interpreting, and reporting of internet evidence.
Prerequisites: Take CCT 8252 with a minimum grade of S

CCT 8261. Mobile Device Forensics 1. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The CCT8261 course is part one of the Mobile Devices course series
intended to build on the knowledge acquired by students throughout
the digital forensics program. The course focuses on the discovery and
documentation of digital artifacts from today’s mobile devices. The course
series will teach students how to recover, interpret, and report evidence.

CCT 8262. Mobile Device Forensics 2. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The CCT8262 course is part two of the Mobile Devices course series
intended to build on the knowledge acquired by students throughout
the digital forensics program. The course focuses on the discovery and
documentation of digital artifacts from today’s mobile devices. The course
series will teach students how to recover, interpret, and report evidence.

CCT 8263. Mobile Device Forensics 3. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The CCT8263 course is part three of the Mobile Devices course series
intended to build on the knowledge acquired by students throughout
the digital forensics program. The course focuses on the discovery and
documentation of digital artifacts from today’s mobile devices. The course
series will teach students how to recover, interpret, and report evidence.

CCT 8271. Mac Forensics Module 1. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is the first of a three-part series of Macintosh forensics. This
first module introduces the Apple Mac OS X user interface and operating/file
system function. Topics include OS X interface basics such as using
Finder, creating user accounts, using File Vault and installing/uninstalling
applications. GPT disk structure and date and time acquisition will be
covered along with the extensible firmware interface.

CCT 8272. Mac Forensics Module 2. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is the second of a three-part series of Macintosh forensics. This
second module introduces the steps taken to image a Mac from static
to live Linux CD acquisitions. This module also covers finding evidence
in the directory structure in addition to recovering user logon passwords.
Specific Mac application artifacts will be covered from Safari, iChat and
Apple Mail.

CCT 8273. Mac Forensics Module 3. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is the third of a three-part series on Macintosh forensics. This
final module ties together the knowledge obtained from the prior classes in
a practical assessment.
CCT 8274. Applied Decryption and Advanced Password Recovery I. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The CCT8274 course is the first of a three part series of Applied Decryption and Advanced Password Recovery. This first module introduces the theory of applied decryption. Topics include the history of encryption, the complexity of algorithms, and advanced concepts such as hashing, salting, and encryption enhancing features. We will cover all of the basic and advanced password encryption and hashing algorithms as well as learn about the people responsible for developing them.

CCT 8275. Applied Decryption and Advanced Password Recovery II. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The CCT8275 course is the second of a three part series of Applied Decryption and Advanced Password Recovery. This module introduces the tools necessary in applied decryption. Topics include the difference between dictionary attacks, brute-force attacks, and rainbow tables. The use of advanced decryption tools such as PRTK, Passware, Aircrack, and SSLStrip.

CCT 8276. Applied Decryption and Advanced Password Recovery III. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The CCT8276 course is the third of a three part series of Applied Decryption and Advanced Password Recovery. This module combines the theory and the practical application of applied decryption. Topics include decrypting password hashes, decrypting salted password hashes, decrypting wireless encryption, and decrypting common network encryption.

CCT 8277. Distributed Processing Module 1. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Distributed Processing Module 1 is the first of a 3 part sequence that allows users to leverage the processing power of multiple computers to process and index massive volumes of digital evidence faster than any other solution available today. When analyzing digital evidence, investigators must process the captured data to break out compound files and index documents and email, so they can be searched effectively. Distributed Processing can leverage up to four processing workers, one on the local examiner computer and three distributed computers. This allows them process terabytes of computer evidence in a fraction of the time it would take normally.

CCT 8278. Distributed Processing Module 2. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Distributed Processing Module 2 is the second of a three part sequence that allows users to leverage the processing power of multiple computers to process and index massive volumes of digital evidence faster than any other solution available today. When analyzing digital evidence, investigators must process the captured data to break out compound files and index documents and email, so they can be searched effectively. Distributed Processing can leverage up to four processing workers, one on the local examiner computer and three distributed computers. This allows them process terabytes of computer evidence in a fraction of the time it would take normally.

CCT 8279. Distributed Processing Module 3. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Distributed Processing Module 3 is the third of a three part sequence that allows users to leverage the processing power of multiple computers to process and index massive volumes of digital evidence faster than any other solution available today. When analyzing digital evidence, investigators must process the captured data to break out compound files and index documents and email, so they can be searched effectively. Distributed Processing can leverage up to four processing workers, one on the local examiner computer and three distributed computers. This allows them process terabytes of computer evidence in a fraction of the time it would take normally.

CCT 8371. Registry Forensics 1. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The CCT8371 course is the first of a three-part series on Windows Registry Forensics. This first module introduces the Windows Registry in various versions of Microsoft Windows systems. Topics include static and dynamic registry files, registry hives and structure and operating system specific implementations. Students will utilize registry specific tools to view registry files in the file system.

CCT 8372. Registry Forensics 2. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The CCT8372 course is the second of a three-part series on Windows Registry Forensics. This second module introduces specific evidentiary artifacts located in the Windows Registry and how to obtain registry files from a static or live acquisition. This module covers the artifacts located within the five key registry files of Windows XP and subsequent Microsoft operating system as well as the two key registry files of the Windows 9x operating systems.
Prerequisites: Take CCT 8371 with a minimum grade of S

CCT 8373. Registry Forensics 3. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The CCT8373 course is the third of a three-part series on Windows Registry Forensics. This final module ties together the knowledge obtained from the prior classes in a practical assessment.
Prerequisites: Take CCT 8373 with a minimum grade of S
Economics (ECO)

ECO 8051. Introduction to Stock Options. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Learn how to evaluate, buy, sell, and profit with investment tools that were once thought to be only for the pros. This course will teach you how to protect your portfolio and profit in a down market, an up market, or even a flat market. Learn to leverage your investment dollars for potential profits that surpass those possible with stocks. Offered in partnership with ed2go.

ECO 8052. Stocks, Bonds, and Investing: Oh My!. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Join us for this step-by-step online course in the basics of stocks, bonds, finance, and investing. We’ll cover the stock markets, 401k plans and preparing for retirement, all while taking the time to explain concepts in the detail you want and need. You’ll leave this course with a comprehensive and thorough education in personal finance and investment. And you will have given yourself the independence, confidence and peace of mind you’ll need to make your own investment decisions. Full of solid advice and good common sense, this course is bound to make life just a little easier for you. Offered in partnership with ed2go.

ECO 8053. The Analysis and Valuation of Stocks. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Analysis and Valuation of Stocks is a comprehensive course designed to provide you with conventional and advanced techniques in researching and valuing stocks. Starting off with the basics, you will learn how to read financial statements and calculate financial ratios, and then move on to perform industrial comparisons, value stocks, and conduct economic and industrial research. This course is taught in a manner that uses everyday language, simple, yet insightful analogies, and a just the facts attitude that you will understand and appreciate. By the end of this course, you will have a strong foundation in the analysis and valuation of stocks. Offered in partnership with ed2go.

ECO 8100. Intro to Geometric Dimensioning and Tolerancing. 0.0 Hours. Class-27.0. Clinical-0.0. Lab-0.0. Work-0.0

ECO 8101. Let the Buyer Beware. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
If it sounds too good to be true, it usually is. This course is a must for savvy consumers. Learn how to protect yourself and your family from rip-offs, bogus deals, and other consumer headaches. This course will give - you - the buyer, the tools needed to make wise decisions in today’s marketplace. Topics cover most major expenses, from buying a new car to buying a home, paying for college, or booking a cruise. Participants will receive a copy of the GSA Consumer Action Handbook.

ECO 8201. Money Smart - Part I. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Financial education fosters financial stability for individuals and for the entire community. The more you know about credit and banking services, the more likely you are to increase your savings, buy a home and improve your overall financial health and well-being. FDIC’s Money Smart curriculum helps individuals build financial knowledge, develop financial confidence and use banking services effectively. Part I is an introduction to banking services, credit, checking accounts, budgeting and tracking your money effectively and the importance of savings. This course is a must for anyone who wants to establish sound financial practices. Materials are included in the cost of the course.

ECO 8202. Money Smart - Part II. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Financial education fosters financial stability for individuals and for the entire community. The more you know about credit and banking services, the more likely you are to increase your savings, buy a home and improve your overall financial health and well-being. FDIC’s Money Smart curriculum helps individuals build financial knowledge, develop financial confidence and use banking services effectively. Part II covers your rights as a consumer, how credit history affects credit future, credit cards, borrowing basics, and buying a home, perhaps the biggest investment of your life. This course is a must for anyone who wants to become financial savvy in today’s world. Materials are included in the cost of the course.

ECO 8203. Money Smart - Part III. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

ECO 8204. Identity Theft: Prevention & Survival. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Identity Theft claimed over 10 million victims last year. Law-enforcement authorities call it the fastest growing crime in our country today. For a criminal, identity theft is a relatively low-risk, high-reward endeavor. Consequently, most victims don’t even know how it happened or who stole their financial information. Find out what steps you need to take to keep from becoming a statistic and what recourse you have if you are a victim. Arm yourself with knowledge and take control of your personal information.

ECO 8205. Retirement Planning Today. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
You have many options for financing your retirement, but have you taken the time to plan how you will live during your retirement years? Without a clear plan, it is difficult to prepare financially for the next chapter of your life. Understand not only the traditional retirement plans, but explore the new view of retirement with additional opportunities and responsibilities. This course is appropriate for individuals just starting out in their careers, as well as those considering retirement.

ECO 8206. Self-Help: Credit Repair Workshop. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Credit plays an important role in our society. It is often misunderstood and misused, which can have a negative impact on our lives for many years. The purpose of this class is to provide a basic understanding of credit reports. Participants will learn about important credit legislation and the truth about credit counseling, debt management, and bankruptcy program. Participants will also learn the right way to correct and restore their credit.
ECO 8207. Self-Help: Improving Your Credit Score. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Credit scores are utilized by creditors, insurance companies, employers and even licensing agencies as a tool to determine a person's creditworthiness and character. Unfortunately, many people do not fully understand the importance of this three-digit number. This class will examine credit scores and their potential impact on someone's future. Participants will learn to improve and maintain good credit scores.

ECO 8210. Understanding Credit and Credit Scores. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Your credit score. It's just three numbers, but it dictates whether you'll get credit and what interest rate you will pay. Insurers use it to set premiums. Landlords use it to make renting decisions. Discover how credit and credit scores affect many aspects of your life.

ECO 8211. Using Credit Wisely: Credit Cards, Personal Loans, Buying a House/Car. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Credit is a necessity in today's world, yet many consumers are not knowledgeable about using credit wisely. Misinformation or credit abuse may lead to financial stress including collections, judgments, foreclosure, and bankruptcy, which can all have a negative impact on one's financial future.

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Risks are found in all aspects of daily living. This course will focus on three major areas that may affect our financial success. Many consumers do not fully understand insurance policies available for financial security. Participants will learn how to protect themselves from various financial risks.

ECO 8215. Budgeting Basics for Paying Off Debt. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
It's never too late to gain control of your finances. Are you living paycheck to paycheck without knowing where each dollar is spent? Understand debt and gain the knowledge to create a workable financial budget that will put you back in control of your finances.

ECO 8216. Where Does All My Money Go?. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Do you have trouble saving money? Do you wish you had financial security? Discover how to make conscious decisions about spending and saving. Find out where your money goes and learn how to make informed choices about where you want it to go. Learn how to fund your dreams and how to save money. If you have ever felt lost about where to start working on your finances, this course is for you. Offered in partnership with ed2go.

ECO 8220. Becoming An Educated Consumer. 0.0 Hours.  
Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0  
Identity theft...Internet shopping...Scams and Frauds... Today's headlines require us to be a Smart Shopper. This course will help you become an educated and informed consumer within the marketplace. Whether purchasing a service or a product, this course will offer important tools to use when making buying and spending decisions. Vital information on ways to avoid becoming a victim of frauds and scams will be included.

ECO 8230. Social Security and Medicare: Where do I begin?. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Are you a Baby Boomer, confused on how to get started with Social Security and Medicare? This information session will simplify the puzzle by examining each component of these programs in a step-by-step, easy to understand approach. Learn what benefits are provided and how to plan for and utilize the benefits to their greatest value. Specific topics will include Social Security limitations and benefits and Medicare Part A through D (benefits, costs and limitations). You will take home a handy resource book to help you navigate the Social Security and Medicare systems with confidence.

ECO 8244. Income Tax Preparation Workshop. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
It's that time of year again! Are you curious about credits or deductions you might be entitled to? This tax workshop is especially designed for individuals who wish to prepare their own income tax return. Participants will gain a better understanding of tax rules and become more organized with their personal income tax preparation. Taught by a CPA, the course covers the latest information and changes related to preparing your federal and state returns. Planning and time saving tips for future income tax preparation are also included.

ECO 8265. Investing 102: Turning Your Retirement Nest Egg Into a Monthly Income. 0.0 Hours.  
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
Over the past five to 10 years, stocks, mutual funds and 401(k) investments have not led to the financial freedom so many seek. Discover the answers to questions about achieving financial independence by investing in other areas, besides these traditional investments. Understand the alternative investments that are available and how they might provide financial solutions without the roller coaster ride of the stock market and the low interest rates of traditional bank deposits.

ECO 8520. Spend Yourself Rich. 0.0 Hours.  
Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0  
Can you spend your way to wealth? YES! Discover your spending personality and learn to spend in ways that support your values and goals. Many practical ways to save on both small and large purchases will be discussed. Use the savings to pay off debts or fund other financial goals. Required textbook is $10, available from instructor.

Education (EDU)

EDU 7002. Effective Teaching. 0.0 Hours.  
Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0  
A training program to introduce information needed for teachers to increase their effectiveness with students.

EDU 7017. Classroom Management Strategies. 0.0 Hours.  
Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0  
This online course will acquaint the student with the concepts and methods of classroom organization, discipline strategies, and behavior management techniques. Practical applications will be provided for anyone intervening with students with discipline issues. A clear, systematic approach to guidance and discipline will be examined, while case studies and online personal reflections will provide a basis for implementation of the student's discipline plan.
EDU 7018. Teaching the Learning Disabled Student in the Regular Classroom. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will acquaint the student with the history, characteristics, treatment and understanding of students classified as exceptional children. Practical applications will be provided for anyone teaching or interacting with exceptional children. Students will examine various classifications of exceptional children in detail ranging from students including, but not limited to, students with ADHD, learning disabilities, behavior disorders and gifted students.

EDU 7021. Introduction to Attention Deficit Disorder. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This course helps participants develop an understanding of attention deficit disorders (ADHD), how these affect class work and personal relationships as well as learning to adapt strategies for classroom use. Purchase materials in class. 2.0 CEU's.

EDU 7033. Motivating Students. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
Based on current theories of motivation from the field of Educational Psychology, this course will discuss underachievers and uninterested students as well as key concepts of personal and external factors that influence a student's motivation to learn. Participants will develop practical classroom applications for individual learners at all grade levels.

EDU 7034. Motivating Students Education. 0.0 Hours. Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0
Based on current theories of motivation from the field of educational psychology, this course will discuss underachievers and uninterested students as well as key concepts of personal and external factors that influence a student's motivation to learn. Participants will develop practical classroom applications for individual learners at all grade levels.

EDU 7038. Learning Centers in the Classroom. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
Explore a variety of uses for learning centers: as practice areas, for use with group activities, having student generated materials, reinforcement of content, as an extension of the curriculum. Procedures for setting up and running centers and evaluating student success at centers.

EDU 7091. Teaching the Learning Disabled Student in the Regular Classroom. 0.0 Hours. Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0
This online course will introduce students to the history, characteristics, treatment and understanding of students classified as exceptional children. Practical applications will be provided for anyone teaching or interacting with exceptional children. Students will examine various classifications of exceptional children in detail including, but not limited to, students with ADHD, learning disabilities, behavior disorders and gifted students.

EDU 70101. Stress Management. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
Experience a multitude of ways to manage your stress. This two and one-half day class is filled with practical ways to handle the daily stresses of teaching and life. Purchase book in CPCC Bookstore prior to first class. 1.5 CEUs.

EDU 7103. First Aid & CPR for Teachers. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
New - Learn first aid and CPR for infants, child and adults using the American Red Cross First Aid Program. Purchase American Red Cross text and pocket mask prior to class. Card fee upon completion. 1.5 CEUs.

EDU 7105. Introduction to the Gifted. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
Recommended for educators, specialists and parents. Designed to support regular classroom teachers and gifted teachers. Explore characteristics, behaviors, strategies and techniques every teacher can use to meet the academic needs of the gifted and talented. Purchase text prior to class, 2.0 CEUs.

EDU 7109. Critical & Creative Thinking Skills. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide experiences in teaching and learning strategies for developing critical and creative thinking skills. Major models and strategies for thinking and questioning will be utilized for creating an active learning atmosphere. 1.5 CEU's.

EDU 7110. Higher Level Thinking Skills Across the Curriculum. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will explore strategies which promote higher level thinking skills across the curriculum. Processes and application of problem solving, creative and critical thinking are emphasized. Purchase book in CPCC bookstore prior to first class. 1.5 CEU's.

EDU 7113. Curriculum Compacting. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will present the various roles of curriculum compacting in helping academically gifted students reach their potential. A variety of curriculum compacting styles will be examined with their appplication for meeting ag students, needs in both a "regular" classroom and ag resource pull-Out program.

EDU 7115. Learning Styles and Unit Plans. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide a framework for developing integrated unit plans which incorporate student-centered learning, a variety of teaching models, all learning styles, and higher order thinking skills. Clear objectives, criterion referencing, integration of content areas and learning styles will be essential components. Purchase materials in class. 1.5 CEUs.

EDU 7126. Introduction to Multiple Intelligences And Learning Styles. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
Using Multiple Intelligence, this course explores theory and classroom practices for understanding how students learn. Experience how to access and teach to individual student learning styles. Develop lessons, activities and assessment tools to reach and teach all students.

EDU 7127. Differentiating Instruction for All Students. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to provide participants with examples and strategies to use in today's increasingly diverse classrooms. Teachers will learn how to differentiate or structure lessons at every grade level and content area.

EDU 7129. Dimensions of Learning. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
Explore a learner centered approach to education. This course will explain how learning experiences can help students form positive attitudes about school, acquire and integrate knowledge, and use knowledge meaningful. Purchase text in CPCC bookstore. 2.0 CEUs.

EDU 7132. Issues and Trends in Gifted Education. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will focus on a discussion of current theories of intelligence and curriculum design for gifted learners. Current research by David Sternberg, David Coleman and others form the basis for seminar and discussion.
EDU 7135. Alternative Assessments. 0.0 Hours. Class-10.0.
Clinical-0.0. Lab-0.0. Work-0.0
To introduce teachers to alternative methods of assessments other than traditional paper/pencil tests.

EDU 7148. Accelerated Learning Using Quantum Teaching. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
Learn how to orchestrate student success. Focus on how to facilitate learning artfully and purposefully, regardless of the subject matter. Purchase book in CPCC book store prior to first class. 1.5 CEU'S.

EDU 7157. Discipline Strategies Necessary. 0.0 Hours. Class-30.0.
Clinical-0.0. Lab-0.0. Work-0.0
This workshop will focus on the management of conflict in the classroom. Various discipline models will be identified. Participants will leave with specific strategies to assist them in their day-to-day as professionals. 10 contact hours = 1 CEU.

EDU 7163. MS Publisher for Educators. 0.0 Hours. Class-15.0.
Clinical-0.0. Lab-0.0. Work-0.0
Using MS Publisher students will create newsletters, flyers, brochures, banners and stationery. This comprehensive course covers various publisher tools: how to insert various forms of pictures and worksheets, and incorporate stylistic art forms and watermarks. Textbook is optional.

EDU 7164. Microsoft Word for Teachers. 0.0 Hours. Class-18.0.
Clinical-0.0. Lab-0.0. Work-0.0
Microsoft Word for Teachers is an introductory class in which the student will be able to demonstrate a working knowledge of Word for Windows. The student will learn paragraph and document formatting as well as basic work processing techniques. Purchase text at the CPCC Bookstore prior to first class. 2.0 CEUs Prerequisite: EDU7198 (Windows 98) or equivalent experience with software applications using Windows.

EDU 7167. Using the Internet to Strengthen Curriculum. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will introduce learners to the use of the Internet to develop lessons that will enhance curriculum and student learning.

EDU 7169. Introduction to Excel. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
(Windows 98) or equivalent experience with software applications using Windows. This entry level course is designed to introduce the student to the basics of operating Microsoft Excel. Students will use this application software program to create electronic spreadsheets, graphics, and databases. Purchase text at CPCC Bookstore prior to first class. 3.0 CEUs. Prerequisite: EDU7198 (Intro to Windows 98).

EDU 7171. Intro to HTML for Educators. 0.0 Hours. Class-10.0.
Clinical-0.0. Lab-0.0. Work-0.0
This course will introduce students to the basic theories and techniques needed to write proper documents using the Hypertext Markup Language.

EDU 7173. Learning Access for Teachers. 0.0 Hours. Class-20.0.
Clinical-0.0. Lab-0.0. Work-0.0
Educators will explore possible classroom application of database software and students will learn to create tables and learn to design simple forms using Microsoft Access. 2.0 CEUs'. Purchase required text in bookstore prior to first class. Prerequisite: Introduction to Windows and Microsoft Word.

EDU 7187. Introduction to Powerpoint. 0.0 Hours. Class-20.0.
Clinical-0.0. Lab-0.0. Work-0.0
This course will introduce the capabilities of Microsoft PowerPoint as a powerful multimedia presentation software application. Participants will create, edit, format, save, and print presentations using Microsoft PowerPoint. Text is optional. 10 contact hours=1 CEU.

EDU 7188. Creating Web Pages for Educators. 0.0 Hours. Class-20.0.
Clinical-0.0. Lab-0.0. Work-0.0
Join the educational community and create your own website to communicate with parents and peers. Under guided instruction you will develop Web pages using HTML and CSS that incorporate text, tables and images. Topic areas include developing structure and content, basic formatting using Cascading Style Sheets, navigation techniques, incorporating graphics and writing for the web. Instructor will provide all materials. 2.0 CEUs.

EDU 7190. MS Office for Educators Office for Teachers. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
For novice or advanced participants review and practice components of MS Office, Word, Excel, and PowerPoint. Textbook optional. 2.0 CEUs.

EDU 7197. Integrating Technology Into the Classroom. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will explore practical and efficient ways to integrate technology resources and technology-based methods into everyday curriculum-specific practices. This class will present the fundamentals of computers and educational technology in an easy-to-understand format.

EDU 7198. Windows for Teachers. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed for those with little or no prior PC experience. Personal computer user will discover the basics of computer technology utilizing the Windows 98 operating system. Purchase text in CPCC bookstore prior to first class. 2.0 CEUs No prerequisites.

EDU 7202. Somewhere Between Workshops and Worksheets. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
Discover creative ways to present curriculum using a variety of instructional strategies designed to maximize learning. 1.5 ceus.

EDU 7205. Teaching Thinking Skills. 0.0 Hours. Class-20.0.
Clinical-0.0. Lab-0.0. Work-0.0
This course will introduce and practice the seminar approach to teaching with an emphasis on music to generate understanding and aid in retention. Teachers will participate in a process to create stimulating environments where they and their students can develop through reading, listening, speaking and writing. 3.0 CEUs.

EDU 7208. Reading with Children's Literature. 0.0 Hours. Class-30.0.
Clinical-0.0. Lab-0.0. Work-0.0
This course will integrate children's literature into the elementary school curriculum. Students will examine author themes, styles and purpose.

EDU 7210. Middle School Learner. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
Explore the characteristics of the middle level learner with an emphasis on physical, psychological, and intellectual development. Analyze various strategies for meeting the unique learning needs of the middle school student and develop transferable teaching methods for use in middle school classrooms. This is a state approved Lateral Entry course. Purchase text prior to class. 3.0 CEUs.

EDU 7212. Developing Real-Life Theme Based Units. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed for elementary teachers to develop integrated theme-based units using an umbrella-style plan. Units will include a focus on literature with integration of other subject areas of math, social studies, and science. 1.5 CEUs.
EDU 7215. Literacy Strategies for Middle School. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This course explores the latest approaches to teaching, reading and writing to students in the middle grades. The course will present an overview of learning strategies needed by these students.

EDU 7218. Vocabulary Strategies for Content Reading. 0.0 Hours. Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0
This online course will support regular classroom teachers, reading teachers and literacy facilitators. Participants will explore vocabulary strategies and techniques that every teacher can use to meet the academic needs of the students in their schools and classrooms. Teachers will use text as a guideline for online participation. 10 contact hours = 1 CEU.

EDU 7219. Effective Writing Strategies, 6-12. 0.0 Hours. Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will expand the capacity of all 6-12 teachers to use writing in their classrooms. Teachers of all content areas will learn about brainstorming, revising and editing strategies as well as developing writing workshops in your own classroom. Participants will also practice ideas for helping 6-12 students improve their writing based on the type of writing assigned! This course will be effective for both Language Arts and other content area teachers.

EDU 7222. Strategies for Block Scheduling. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
New-Explore instructional strategies and effective activities for classrooms using Block Scheduling. Topics include Multiple Intelligence, Brain Research, Centers, Active Learning, Higher Level Thinking Skills and more. Experience activities and develop new ideas for use in your classroom.

EDU 7223. Enriching Reading Through Creative Strategies. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
This course focuses on bringing creative strategies to teachers' daily literacy instruction. It presents ideas and techniques that can be used in the elementary classroom in order to enrich reading practices and stimulate a passion for reading among students. Strategies are meant to support and engage children while teaching them about the various genres of literature, decoding, fluency and comprehension strategies, as well as strengthening the connection between reading and writing. Specific techniques are presented that are helpful when encouraging struggling or reluctant readers and writers, and may be taken immediately back to the classroom to increase student success.

EDU 7227. Using Multiple Intelligences in Lesson Design. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will give participants an opportunity to plan lessons using the Multiple Intelligences. 1.5 CEUs.

EDU 7229. Brain Compatible Teaching Strategies. 0.0 Hours. Class-21.0. Clinical-0.0. Lab-0.0. Work-0.0
Explore and experience concepts on brain research to help engage students, stimulate their learning and keep them motivated. Learn teaching tips and strategies which support the ways students' brains work. Purchase text in CPCC Bookstore. 2.1 CEUs.

EDU 7231. Discovering Your Educational Philosophy. 0.0 Hours. Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will help educators understand and trace the issues, theories, and trends in the educational world. Teachers will discover their own personal educational philosophies and realize how those philosophies have been influenced by historical and modern theories. Learn how personal beliefs influence the way a classroom is managed and how information is disseminated. 10 contact hours = 1 CEU.

EDU 7232. Behavior Disorders. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will focus on the characteristics, causes, and treatment for various behavioral disorders. Participants will develop strategies and adaptations to ensure these students greater success in the classroom.

EDU 7233. Effective Parent Communication. 0.0 Hours. Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will give educators invaluable tools for working with parents. Teachers will discover new ways to involve parents, gain support, and communicate effectively. Many important issues and problem solving techniques will be discussed, including how to build trust, how to handle an "angry parent," and how to keep parents adequately informed without spending an inordinate amount of time writing letters or typing emails. 10 contact hours=1 CEU.

EDU 7238. Strategies to Improve Academic Performance. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will identify key principles of learning that will enhance academic performance. Participants will examine how the role of the teacher and the classroom environment impact learning.

EDU 7241. Best Practices in Early Childhood Education. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
The course will include theory, practical application, and insights, enabling the early childhood educator to incorporate developmentally appropriate practices into their classroom. Areas of focus include: identifying major benefits and the need for developmentally appropriate practices; increasing student initiated involvement through developmentally appropriate activities; assessing and modifying curriculum to better serve the needs of Pre-k children.

EDU 7253. Planning Integrated Curriculum: The Big Picture. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to help participants see how it is possible to integrate curriculum. Then participants will practice planning integrated lessons/units to utilize in the classroom. 10 contact hours = 1 CEU.

EDU 7257. Discipline with Dignity. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will focus on promoting student responsibility through social development rather than coercing students into making constructive changes in their behavior. Marvin Marshall's "Discipline Without Stress Punishments or Rewards" details theories behind the importance of reducing irresponsible behavior by viewing misbehavior as an academic difficulty and an opportunity to teach and learn. This approach creates a classroom in which students feel safe, enjoy learning and care for each other.

EDU 7260. Successful and Effective Teaching. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is recommended for all teachers and substitute teachers. This course utilizes the textbook "The First Days of School: How To Be An Effective Teacher" by Harry K Wong. Topics of the course include: instructional design, classroom management, motivating students, student diversity and professional development.

EDU 7261. Successful and Effective Teaching. 0.0 Hours. Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0
Recommended for all teachers and substitute teachers, this course utilizes the textbook "The First Days of School: How To Be An Effective Teacher" by Harry K Wong. Topics of the course include: instructional design, classroom management, motivating students, student diversity and professional development.
EDU 7262. Creating a Positive Classroom Environment. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will focus on strategies to enhance learning and student achievement by creating a positive, stimulating environment.

EDU 7266. Utilizing Gradebook and Test Template in Microsoft Works. 0.0 Hours. Class-25.0. Clinical-0.0. Lab-0.0. Work-0.0
Explore the possibilities of more efficient record-keeping and test creation with the Gradebook and the Gradebook and Test Template features of Microsoft Works. This will make your life as a teacher much easier and more efficient if you are accustomed to traditional methods of recording grades in a grade-book. Discover the tremendous tool in Test Template, and bring a test of your own to try out the features of this component of Microsoft Works. 1.0 CEUs. Prerequisite: Windows Experience.

EDU 7301. Hot Topics in Education. 0.0 Hours. Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will have a number of topics that revolve from semester to semester. Topics will be chosen for their timeliness and appropriateness to K-12 teachers. Topics will include issues like: the Minds of Boys, Impacts of NCLB, books from noted education authors, etc. Each term will be an exciting chance to learn and engage in current trends and issues that arise quickly in the field of education.

EDU 7308. Authors of Current Children's Literature II. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
Greater focus on inspiring Authors of Current Children's Literature. New authors will be explored in depth at each session. Powerful teaching strategies will be discussed, demonstrated and developed for use in lesson plans and classroom activities. 1.5 CEUs.

EDU 7309. Spanish for Educators. 0.0 Hours. Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0
School administrators, teachers, counselors and support staff will build skills to communicate in Spanish with Hispanic students, parents and visitors. No prior Spanish necessary. 10 contact hours=1 CEU.

EDU 7310. Conflict Resolution for Educators. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
Explore necessary skills for managing conflict and diffusing conflict situations in school settings. Participants will develop lesson plans for curriculum infusion assuring successful management of conflict situations in their classrooms. 1.5 CEUs.

EDU 7311. Strategies for Struggling Readers. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide practical strategies in every content area for struggling readers in grades 3 through 5. The course will focus on strategies for comprehension skills and innovative ideas for decoding words.

EDU 7312. Technology to Work Smarter...Not Harder. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will concentrate on using technology to maximize student assessment and accountability. Lesson plan templates, homework hotline, gradebook text banks, and PLATO assessment will be some of the creative ways presented to integrate instruction and technology. Prerequisite: Windows experience. 1.5 CEUs.

EDU 7313. Integrating Music Into K-12 Classrooms To Enhance Learning. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
Experience ways to increase student achievement and motivation through the use of music in the classroom. 10 contact hours = 1 CEU.

EDU 7314. Making the Most of Tutoring. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will explore techniques designed around the Learning Strategies Model for effective tutoring and is designed to give participants ideas and strategies to improve tutoring.

EDU 7315. Teacher Talk. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
New - Teachers will meet on a monthly basis to discuss current issues in the education profession in an informal peer group setting. Possible discussion topics include curriculum, parental involvement, professional stress, diversity and other issues as decided upon by the participants. Guest speakers are available for each of the chosen topics. No text required. 1.5 CEUs.

EDU 7316. Implementing Guided Reading in the K-2 Classroom. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
New - Explore multiple components of Balanced Literacy with an emphasis on Guided Reading. Participants will learn the role of a teacher and the role of a student within the framework of a Balanced Literacy Program.

EDU 7317. Interactive Writing Techniques for K-2. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
New - Experience strategies to support developing readers and writers from preK-2nd grade, as well as small groups of 2nd or 3rd graders who need stronger support in early writing skills. Examine the technique of “sharing the pen” while viewing teacher demonstrations.

EDU 7318. Teaching Students Who Speak Other Languages. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will assist classroom teachers to discover the richness of cultural differences and address the academic needs of students who speak other languages. Topic areas include: multicultural instructional strategies, addressing individual uniqueness and cultural diversity, building relationships with students and parents, resources (community, local and state), and enhancing classroom interaction between all students.

EDU 7319. Teacher Resources. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide teachers with resources available to them at the local, state, and national levels. Community programs, non-profit organizations, published materials, and webbased sources will be addressed in the areas of curriculum design, social services, incentive programs, and educating students with special needs. Purchase materials in class.

EDU 7320. T.R.E.E.S-Training Resources for Early Childhood Educators. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
New - Professionals working with pre-schoolers - 2nd grade, will learn to help at-risk children develop their interpersonal and social skills, while reducing inappropriate behaviors of individual students in group settings. 1.5 CEUs.

EDU 7321. C.C.C - Creative Career Connections. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
New - Educators in any field will experience professional and personal growth while expanding their creative abilities and working through blocks that contribute to career burnout. This interactive course will build on concepts from "The Artist's Way" and other sources. 1.5 CEUs.

EDU 7322. Exploring Expressive Arts. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
New - Engage in a variety of expressive art & creative mediums and explore their application in teaching multiple concepts to children and adolescents. No artistic experience is required as the focus is on the revolving process rather than the end product. 2.0 CEUs.
EDU 7323. Celebrating Classroom Diversity. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
New - Provides educators with the tools to celebrate diversity, and help reduce racial, religious, ethnic and social prejudice in their classrooms. Activities for personal bias, valuing self, conflict management, communication strategies, and team building will be provided. Purchase text in CPCC bookstore. 2.0 CEU.

EDU 7324. Accommodating Diverse Learners. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is for teachers of diverse learners across grade levels and content areas. Learn strategies for teaching, reading, writing, math, science and social studies; and developing, selecting and modifying curriculum, Concrete examples and recommendations will be provided.

EDU 7325. PRAXIS II. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
A 10-hour comprehensive review of information on the Praxis II Test for Elementary Education.

EDU 7326. Building Community Through Inclusion. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
The focus of this course is the design and assessment of teaching and learning models that promote effective practices for the full integration of all students as productive members of classroom learning communities. Participants will review current special education legislation; discuss teacher roles and collaborative responsibilities with parents, colleagues, and community agencies; and reflect on their own competence in promoting positive social interaction among students. Course emphasis is on the development of accommodation strategies that are an integral part of the classroom structure and are based on curricular expectations as well as the abilities and needs of individual students. Course content will also include teacher-generated case studies and research-based recommendations that address the learning needs and well-being of all students.

EDU 7327. Writers Workshop K-4. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will assist your teaching to turn students into enthusiastic writers and make teaching - and learning-creative writing a welcome part of the school day. Explore teaching strategies for implementing a writing workshop approach in your classroom. The instructor will provide helpful, practical skills and advice pertaining to: writing development, inventive spelling, topic selection, writing rehearsal and reinforcing the joy of writing. Purchase text prior to class, 3.0 CEUs.

EDU 7328. Integrating Technology and Children’s Literature. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will explore the use of technology as an essential component in studying Children's Literature and the new paradigm that goes beyond paper. 10 contact hours = 1CEU.

EDU 7329. Spanish for Educators II. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This course continues to build Spanish vocabulary, with emphasis on teacher-pupil relationships and classroom management. Additional topics for discussion will include communicating with adults, attending to emergencies, and community resources. 10 contact hours = 1 CEU.

EDU 7330. Preparing for the Praxis I Test. 0.0 Hours. Class-10.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will review pre-professional skills in reading, writing and mathematics in preparation for the Praxis I exam. 10 contact hours = 1 CEU.

EDU 7331. Students As Presentors & Speakers. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
New - Classroom exercises and activities for creating masterful speakers, presenters and storytellers. Ideas to help assist students overcome their fear of public speaking and flourish in front of an audience. Purchase text in CPCC bookstore. 1.5 CEUs.

EDU 7332. Taking Care of the Counselor. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
New - Current ideas for dealing with the diversity of roles, budgets, populations and expectations are presented. Professional resources and materials are shared. No text. 2.0 CEUs.

EDU 7333. Reading, Writing and Technology in Upper Grades, 6-12. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
This course offers strategies for teaching reading and writing across the curriculum, using technology as a tool to enhance learning.

EDU 7334. Using Socratic Seminar to Improve Classroom Discussion. 0.0 Hours. Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0
Recommended for educators and designed to help students foster dialectic relationships by participating in Socratic Seminars. Teachers will learn the principles of Socratic Seminar, the types of questions facilitators ask during these seminars, and will learn and practice techniques to engage all students in the discussion. In the end, teachers will know how to incorporate Socratic Seminars in their curricula to help students better understand the subject matter. Purchase text prior to class, 2.0 CEUs.

EDU 7341. Strategies for Struggling Readers II. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
New - Part two of our Strategies for Struggling Readers, with a greater focus on current reading techniques and more creative classroom activities. Purchase text in CPCC bookstore. 2.0 CEUs.

EDU 7343. Elementary Social Studies. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
New - This course will demonstrate teaching strategies for Elementary Social Studies K-4. Topic areas include: culture and diversity, global historic perspectives, geographic communities, global connections, and North Carolina geography and history. Participants will develop lesson plans and activities aligned with North Carolina Standard Course of Study K-4. No text required, purchase materials in class. 2.0 CEUs.

EDU 7344. Understanding The Learner. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
Course addresses physical, emotional, and cognitive development from early childhood through late adolescence. Textbook required. 3.0 CEUs.

EDU 7345. Teaching Creative Math, Grades 6-12. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will explore creative Mathematical Thinking and Learning. Topic areas include: looking at math through the students eyes, effective teaching strategies to assure all students are successful in math and creative ideas to reach reluctant learners. This class is intended for instructors who teach grades 6-12.

EDU 7346. Elementary Science Made Easy K-4. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
New - This course will demonstrate teaching strategies for Elementary Science K-4. Topic areas include; teaching and understanding science principles, the scientific method, inquiry-centered science, and hands-on exploratory science. Participants will develop lesson plans and activities aligned with NC Standard Course of Study. No textbook required, purchase materials in class, 1.5 CEUs.
EDU 7347. Intermediate Writing for Grades 3-5. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
New-Learn practical and effective strategies to support writing instruction for grades 3-5. Explore the influence of instructional language on teaching writing, from specific materials to fine teaching points. Learn how writing can be used as a tool for inquiry across the curriculum - in content areas as well as in Literature. Purchase text prior to class. 1.5 CEUs.

EDU 7349. Character Education in the Classroom. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
Topic areas include: history and theory of integrating character education across the curriculum in any grade level, and review of current best practices for classroom implementation. 10 contact hours = 1 CEU.

EDU 7350. Super Teaching Methods. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
Methods for developing effective lesson plans that incorporate learning styles, curriculum integration, and differentiating instruction are explored and shared. Learn to create a stimulating classroom environment. No textbook required. 3.0 CEUs.

EDU 7351. GAMES - Group Applying Meaningful Engaging Skills. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
Natural learning develops through using games in classrooms. Games provide a foundation for developing social skills, enhancing academics, increasing attention, motor skills and emotional skills. Participants will experience numerous games and evaluate practical application and modifications needed for implementation in their classroom. Purchase materials in class. 2.0 CEUs.

EDU 7352. Captivate, Activate and Energize Students. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
Explore research-based classroom strategies to arouse curiosity, promote participation, facilitate transitions, boost confidence and enhance understanding and retention. Participants will discuss and actively engage in more than 50 activities.

EDU 7353. Reading in Elementary Classrooms. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
Elementary reading presents successful approaches for teaching elementary reading across the curriculum. Topic areas include: phonics, comprehension skills, vocabulary building and reading for pleasure, as well as approaches to addressing reading difficulties. Participants leave with a wealth of knowledge and an action plan they can use in their classroom. 10 contact hours = 1 CEU.

EDU 7360. Effective Teacher Assistants. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will acquaint teachers, teacher assistants and support staff with effective teacher techniques. Topic areas include characteristics of effective teachers, classroom management, teaching for lesson mastery, child development and addressing the needs of exceptional children. Activities, videos and practical applications will be provided and suggestions for usage in any classroom. Purchase text prior to class. 3.0 CEUs.

EDU 7370. Reaching and Teaching Teenage Students. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is recommended for teachers, counselors, and families of adolescence students. Together we will take a journey into the heart of American adolescence. Topic areas include the physical, cognitive, moral and social development of adolescence. Textbook required. 3.0 CEUs.

EDU 7380. Integrating Art, Health and PE in Elementary Education. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
Developed in conjunction with Blumenthal Performing Arts Center's Education Institute, this course models theory and applications for integrating Art, Health, and PE in elementary education classrooms. Participants will develop lesson plans and activities aligned with NC Standard Course of Study. No textbook required. 3.0 CEUs.

EDU 7381. Work Based Learning Organizations. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
New-This course addresses issues in work-based learning programs, such as developing integrated academic and vocational curricula and supervising and evaluating students' work-based learning experiences. No text required. 3.0 CEUs.

EDU 7390. The Basics of Computers and Microsoft Office for Educators. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
Basic components of Microsoft Office 2007, Word, Excel, and PowerPoint with practical applications for classroom use are introduced. Personal software required: Microsoft Word, Excel, and PowerPoint (Microsoft Office 2007). 10 contact hours = 1 CEU.

EDU 7391. Preparing for the Praxis I Test. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will review pre-professional skills in reading, writing, and mathematics in preparation for the Praxis I exam. 10 contact hours = 1 CEU.

EDU 7392. PRAXIS II. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
A ten hour comprehensive review of information on the PRAXIS II Test for Elementary Education.

EDU 7393. Integrating Technology Into the Classroom. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will explore practical and efficient ways to integrate technology resources and technology base methods into everyday curriculum-specific practices. This class will present the fundamentals of computers and educational technology in an easy-to-understand format. 10 contact hours = 1 CEU.

EDU 7394. Vocabulary Strategies for Content. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This online course will support regular classroom teachers, reading teachers and literacy facilitators. Participants will explore vocabulary strategies and techniques that every teacher can use to meet the academic needs of the students in their schools and classrooms. Teachers will use text as a guideline for online participation. 10 contact hours = 1 CEU.

EDU 7395. Discipline with Dignity. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will focus on promoting student responsibility through social development rather than coercing students into making constructive changes in their behavior. Marvin Marshall's "Discipline Without Stress? Punishments or Rewards" details theories behind the importance of reducing irresponsible behavior by viewing misbehavior as an academic difficulty and an opportunity to teach and learn. This approach creates a classroom in which students feel safe, enjoy learning and care for each other.
EDU 7396. Balanced Literacy Overview. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Teachers will learn the framework behind and the goals of Balanced Literacy. During the class teachers will focus on the Big Five of Literacy (phonemic awareness, phonics, vocabulary, fluency, and comprehension) and their implementation in the classroom. Teachers will receive an overview of some of the balanced literacy components which may include reading aloud, shared reading, guided reading, independent reading, shared writing, interactive writing, guided writing or writing workshop and independent writing.

EDU 7397. Student Engagement Techniques. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Would you like to gain a better understanding of the distinctions between student engagement, motivation and active learning? As a teacher, how do you strive to reach and maintain engagement and motivation levels that lead to successful learning experiences for all students? Join us to explore techniques and challenges for engagement.

EDU 7399. 99 Instructional Strategies. 0.0 Hours. Class-25.0. Clinical-0.0. Lab-0.0. Work-0.0
New- Participate in over 99 instructional strategies, applicable for teaching any subject, any grade. Strategies will cover areas of introducing a lesson, student mastery, cultivating activities and assessment. This course is designed around best practices from Marzano S.E.R.V.E, Gardner and other sources. Purchase materials in class, 2.0 CEUs.

EDU 7400. Steps to Success in an Online Course. 0.0 Hours.
Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
Take an online course with confidence. This course will access and enhance your current technology skills, allow you to experience a Blackboard online course environment, and learn proven strategies to successfully complete your online course. Topic areas include: e-learning vocabulary, navigating through and online course, virtual communication, submitting assignments, online assessments, time management, exposure to several online learning environments, and general characteristics common to most online environments. This is a web enhanced class, email and internet access required.

EDU 7401. Key Train - Work Keys. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This is an open lab with software available for training to assist paraprofessionals in meeting quality standards required for the classroom. The Computer Based Instruction provides hours of practice before the work-keys test is administered.

EDU 7411. Leadership Challenges. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
Increase your own leadership effectiveness and strengthen relationships with students, parents and colleagues. This comprehensive course covers five key leadership skills: encouraging, enabling and empowering others, challenging the process, and modeling the way. The format is interactive; you’ll evaluate your current leadership skills, discuss leadership challenges, and complete a reflective application assignment in the context of your organization.

EDU 7412. Communication. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
For leaders, good communication is imperative. This course provides practical suggestions and application scenarios on ways to enhance your speaking, writing and interpersonal skills. Topic areas include; oral and written communication, the art of listening, presentations and mentoring. All participants complete a reflective application assignment in the context of their organization. This course blends classroom instruction with required 5 hours on-line assignments. Internet access and an email account are required. Purchase text books prior to class. 1.5 CEUs.

EDU 7413. Project Management. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
With accelerated schedules driving most leaders today, project management is a necessary tool. This course emphasizes how to plan and manage projects, how to keep control of priorities and deadlines, and how to establish time management skills for you and your staff. You'll learn the basic skills of how to create a plan, delegate and implement it, monitor the progress and deliver as anticipated. All participants complete a reflective application assignment in the context of their organization. This course blends classroom instruction with required 5 hours on-line assignments. Internet access and an email account are required. Purchase materials in class. 10 contact hours = 1 CEU.

EDU 7414. Personnel. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
Building and maintaining positive employee relationships are important in achieving organizational goals. This course emphasizes resolving conflict, creating positive cultures, facilitating discussions, dealing with performance issues, building teams, and understanding legal aspects. All participants complete a reflective application assignment in the context of their organization. This course blends classroom instruction with required 5 on-line assignments. Internet access and an email account are required. Purchase text books prior to class. 1.5 CEUs.

EDU 7415. Diversity. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course assists the participant in analyzing issues related to our multi-cultural community. Participants will identify, analyze and work toward an understanding of the possible solutions associated with serving in an administrative capacity in a diverse workplace, school, etc. This course is a hybrid course, email and internet access required. 1.5 CEUs.

EDU 7416. Community Relations. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course assists the participant in developing the capacity to facilitate effective meetings, build community alliances and create productive relationships with professional organizations in order to maintain productive relationships. This course is a hybrid course, email and internet access required. 1.5 CEUs.

EDU 7417. Conflict Resolution for Administrators. 0.0 Hours. Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0
This course assists administrators in learning how to diffuse escalation situations, reduce conflict between staff members, parents and students. Topics will include conflict management styles, hints on dealing with difficult people and decreasing conflict school-wide.
EDU 7418. Special Education Law for Administrators. 0.0 Hours.
Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0
This course assists administrators who are working to better understand the needs of those with disabilities. Special Education issues and laws will comprise the bulk of the course discussion. This course will help administrators keep current on issues of law and compliance within the ever-changing setting of students with disabilities. The course will add an emphasis on appropriate discipline practices with special education students. See www.cpcctraining.org/teacher for text information.

EDU 7501. Teaching Smarter with SMART Boards. 0.0 Hours.
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
SMART Boards are revolutionizing today’s classroom. Using these exciting interactive whiteboards, you can create multimedia lessons that engage learners and address their diverse needs. In this class, you’ll discover how to create outstanding presentations with SMART Board and SMART Notebook technology. Offered in partnership with ed2go.

EDU 7502. Solving Classroom Discipline Problems. 0.0 Hours.
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Why do some teachers enjoy peaceful, orderly classrooms while others face daily discipline battles? The answer is that some teachers know the secrets to solving discipline problems. This course reveals those secrets and presents a step-by-step approach to effective, positive classroom discipline. Offered in partnership with ed2go.

EDU 7503. Empowering Students with Disabilities. 0.0 Hours.
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Teaching students with disabilities is a rewarding challenge, and this course gives you the tools you'll need to succeed. No matter what grade level you teach—from preschool through high school—you'll learn powerful strategies you can put to work immediately in your classroom. In addition, you'll gain the knowledge you need to understand and cope with the most common disabilities you'll encounter. Offered in partnership with ed2go.

EDU 7504. Common Core Standards for English Language Arts K-5. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Discover the Common Core State (CCSS) standards for English language arts, and gain confidence in applying them to the K-5 classroom. In this course you'll explore the basic elements of the standards-strands, anchor standards, and grade articulations—and you'll see how they relate to each other. We'll discuss the roles of technology, homework, curricula, and assessments in the classroom. And you'll be inspired by loads of easy-to-use, practical examples of CCSS-aligned lessons that you can use with your own students.

EDU 7505. Guided Reading and Writing: Strategies for Maximum Student Achievement. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Learn to improve student literacy as an accomplished teacher shares the secrets of turning guided reading strategies into opportunities for teaching writing. You’ll study the reasons reading and writing are so difficult for students, then the total literacy framework based on guided reading lessons. With a framework in place, we’ll investigate ways to modify this basic recipe for a variety of K-12 circumstances that result in good writing habits and the traits of a productive writing conference.

EDU 7506. Teaching Students With Autism: Strategies for Success. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Just 20 years ago, we didn’t see students with autism in our classrooms. But today, we teach children with high-functioning autism and Asperger’s Syndrome right alongside their neurotypical peers. Reaching and teaching these students requires a delicate balancing act: understanding how their brains are wired, helping them turn challenges into opportunities, and learning to enjoy the rich perspective they bring to the classroom. We’ll discover the neurobiology behind these disorders and the way it affects students’ behavior, learning, and thinking. Most important, you’ll learn creative, easy, low-budget strategies to help these kids succeed in the classroom and beyond. Offered in partnership with ed2go.

EDU 7507. Homeschool with Success. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Homeschooling can be a bit of a mystery if you’re new to the topic. In this course, we’ll start at the beginning, delving into the history of homeschooling and examining its status across the U.S. During class, you’ll learn what you need to know to homeschool your children, discover how to make their transition to homeschooling both fun and effective, learn how to choose the best type of homeschooling for your child, and much more. When you finish this course, you’ll have the information and guidance you need to plot your homeschooling course for years to come. Offered in partnership with ed2go.

EDU 7508. Differentiated Instruction in the Classroom. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Differentiated instruction (DI) is becoming a mainstay in classrooms across the country as educators are starting to see the ways that the traditional classroom setting limits their ability to reach diverse learners. Join us on this journey through 10 practical DI integration strategies! Count on at least three sample integration lessons on each strategy, and just think of all the ways that you can apply them to improve learning outcomes for your students. This course is a must for today’s teachers who often have to differentiate quickly, and with a minimum of resources. Offered in partnership with ed2go.

EDU 8000. Conflict, Bullies, and Just Plain Difficult Students. 0.0 Hours. Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will help teachers and classroom assistants learn to be more effective with all students. The course will focus on the role of teachers in dealing with difficult students, those students who challenge authority, and those who offer great challenge to the teaching environment. By understanding the issues surrounding these students, strategies can be developed for effectively working with them. Purchase book before class begins.

EDU 8023. Learning Disabilities and ADHD. 0.0 Hours. Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will offer an introductory perspective on specific learning disabilities and attention deficit disorders. The class will explore the definition of a learning disability, the characteristics of ADHD, various areas of academic deficit and difficulty, and the lifelong nature of learning disabilities and attention deficit disorders. A brief overview of strategies for academic support and success will be offered. This introductory-level course is appropriate for educators and professionals instructing students in regular classrooms, persons supporting students in tutorial situations and other situations in which learning struggles are evident. "10 contact hours = 1 CEU".
EDU 8024. Introduction to Special Education. 0.0 Hours. Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0
This course supports educators in the general education setting who do not have basic understanding of disabilities, special education issues and laws. This course will help them understand how to plan for and work with students with disabilities and provide a variety of teaching strategies as well as collaboration strategies to use with students, parents and special education teachers. See www.cpcctraining.org/teacher for text information. 10 contact hours = 1CEU.

EDU 8121. iTeach Drive in Conference. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Dazed? Confused? Ever wonder what your students are talking about when they mention wiki’s, iPods, YouTube, My Space, etc? Join us for a one day seminar exploring this, and go back to school and show them you are really cool! We will discuss “millenium” students, what they expect and how to meet their educational needs. As a bonus, we will provide a special presentation that showcases quick tips and tricks using Microsoft Office 2007.

EDU 8122. Character Education With Kohlberg and Piaget. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course compares and contrasts the theories of Kohlberg and Piaget as they relate to character education.

EDU 8351. GAMES Groups Applying Meaningful Engaging Skills. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Natural learning develops through using games in classrooms. Games provide a foundation for developing social skills, enhancing academics, increasing attention, motor skills and emotional skills. Participants will experience numerous games and evaluate practical application and modifications need for implementation in their classroom. Purchase materials in class.

EDU 8500. Teaching the Language Arts: Content And Strategies. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an opportunity for elementary and middle grade teachers to review and to extend their content knowledge of each of the six language areas that inform language arts instruction. Teachers will design and assess instructional models that represent effective strategies for integration within the language arts curriculum and across other content areas. Course content will also include the analysis of teacher-generated case studies and a survey of current research-based recommendations for integrative strategies that address the learning needs and styles of all students in culturally and linguistically diverse classrooms. Course content and objectives are aligned with national and state professional standards and guidelines for language arts and literacy instruction.

EDU 8501. Teaching Informational Texts: Grades K-6. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The focus of this course includes a survey of both current research and effective instructional practice in the area of content literacy for students in grades K-6. Participants will analyze, plan and evaluate a variety of reading and writing strategies that build on the relationship between a child's linguistic development and proficiency in content reading and writing. Course content also includes a review of classroom teaching vignettes that illustrate instructional modes such as practices for vocabulary development, inquiry and cueing strategies, student-generated study guides and content organization strategies. Course content is aligned with the North Carolina Standard Course of Study, International Reading Association and the National Council of Teachers of English.

EDU 8502. Integrating Instruction in Science, Math, Technology, K-8. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The focus of this course is to discuss and assess an integrated model for teaching science, math and technology in a cooperative learning environment. A crucial course component is the concept of the learner as actively connecting content knowledge and engaging in problem-solving across subject areas. Course content also includes a review and selection of technology resources that contribute to the development of critical, creative thinking strategies in science and math. Participants will have the opportunity to assess current classroom practice and to design integrated activities and curriculum materials that are aligned with the National Council of Teachers of Mathematics Standards and the National Science Education Standards.

EDU 8503. Creativity and Learning: Methods and Techniques for Integrating the Arts in Curriculum. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course explores the role of the arts in meaningful learning from preschool to high school. Topic areas include an overview of the history of arts in education, connections between the arts and learning styles and methods and strategies for integrated drama, art, dance and music into the curriculum and a review of successful programs.

Electrical (ELC)

ELC 7007. Troubleshooting and Safety - Lead Free Soldering. 0.0 Hours. Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will teach general maintenance personnel basic troubleshooting procedures as well as safety practices to follow when working with electrically powered equipment. Students will practice troubleshooting following specific services in a practical setting and utilizing hands-on training aids.

ELC 7014. Basic Electricity and Electronics. 0.0 Hours. Class-55.0. Clinical-0.0. Lab-0.0. Work-0.0
Designed as an introductory course, this course is intended to provide an overview of the principles of electricity and electronics, components, circuits, and instruments. Topics include static electricity, Ohm’s law, DC circuits, magnetism, elementary concepts of alternating current, indicators, transformers, capacitors, and electronic components.

ELC 7101. Industrial Communication and Control Networks I. 0.0 Hours. Class-336.0. Clinical-0.0. Lab-0.0. Work-0.0
This course surveys the use of industrial network and fieldbus technologies currently used in industry and focuses on the use of Foundation Fieldbus. Upon completion, students should understand the terminology and advantages of Foundation Fieldbus systems used in industry.

ELC 7102. Industrial Communication and Control Networks II. 0.0 Hours. Class-336.0. Clinical-0.0. Lab-0.0. Work-0.0
This course surveys the use of industrial network and fieldbus technologies currently used in industry and focuses on the use of DeviceNet, ASI and HART. Upon completion, students should understand the terminology and advantages of DeviceNet, ASI, and HART systems used in industry.

ELC 7103. Industrial Communication and Control Networks III. 0.0 Hours. Class-336.0. Clinical-0.0. Lab-0.0. Work-0.0
This course surveys the use of industrial and fieldbus technologies currently used in industry and focuses on the use of PROFIBUS and Modbus. Upon completion, students should understand the terminology and advantages of PROFIBUS and Modbus systems used in industry.
ELC 7104. Industrial Communication and Control Networks IV. 0.0 Hours. Class-330.0. Clinical-0.0. Lab-0.0. Work-0.0
This course surveys the use of industrial and fieldbus technologies currently used in industry and focuses on the use of Industrial Ethernet, Interbus, P-Net and RS422/485. Upon completion, students should understand the terminology and advantages of Industrial Ethernet, Interbus, P-Net and RS422/485 systems used in industry.

ELC 7400. Introduction to Plc. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

Electronics (ELN)

ELN 7104. Troubleshooting Programmable Logic Controllers. 0.0 Hours. Class-64.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide students with an introduction to the different series of Programmable Logic Controllers to include the following: learning programming functions, program preparation, saving programs, loading programs, and hands-on programming. Students will also learn to read ladder logic and how to install and troubleshoot the PLC's.

Engineering (EGR)

EGR 7000. Introductions to Robotics. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is an overview of fundamentals of robotics. Topics include goal setting, ethics, safety, the engineering method and design process, written and oral communication, interpersonal and team building skills. Upon completion, students should be able to demonstrate understanding of the fundamentals of robotics by designing, constructing and testing a function robot. In addition, students should be able to work in a multi-discipline team for a common goal.

EGR 7001. Basic Robotics. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is an overview of the fundamentals of robotics. Topics include basic goal setting, ethics, basic safety, the engineering method and design process for basic design, written and oral communication, and interpersonal and team building skills. Upon completion, students should be able to demonstrate a basic understanding of the fundamentals of robotics by designing, constructing and testing a functional robot. In addition, students should be able to work in a multi-discipline team for a common goal.

EGR 7010. Engineering Summer Camp. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The camp will introduce students to science and engineering concepts and principles. The camp will provide participants a clear understanding of how math, science and engineering converge and complement one another. Through "contextual learning" activities and projects participants will build, analyze, and test their own machines such as a quadcopter or 3D printer while learning fundamental concepts of electrical, mechanical, and computer engineering disciplines. This will instill confidence in students that their creativity can be used to develop useful products.

EGR 7011. Engineering Summer Camp: Build Your Own 3D Printer. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The camp will introduce students to science and engineering concepts and principles. The camp will provide participants a clear understanding of how math, science and engineering converge and complement one another. Through "contextual learning" activities and projects participants will build, analyze, and test their own 3D printer while learning fundamental concepts of electrical, mechanical, and computer engineering disciplines. This will instill confidence in students that their creativity can be used to develop useful products.

EGR 7020. Workshop: Build Your Own Quadcopter. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Construct your very own autonomous quadcopter! The workshop will introduce students to the world of quadcopters. Students work their own quadcopters in a friendly, cooperative, and open environment guided by the instructor. Whether you are taking your first steps into this world or have been flying for years. By the end of the workshop you can have your quadcopter built, calibrated and ready to fly. Welcome to the future come build and fly.

EGR 7022. Workshop: Build Your Own 3D Printer. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Construct your very own 3D Printer! The workshop will introduce students to the world of 3D Printers. Students work their own 3D Printers in a friendly, cooperative, and open environment guided by the instructor. Whether you are taking your first steps into this world or have been building with 3D printers for years. Now take steps to build your own. By the end of the workshop you can have your 3D Printer built, calibrated and ready to 3D print your own creations and/or download others. Welcome to the future come build and print.

EGR 7023. AutoCAD 2D Training. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the graphical tools for engineering and design communications. Emphasis is placed upon using multiple 2D tools within AutoCad to communicate engineering and design concepts.

EGR 7024. Application Software for Technicians. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces personal computer software and teaches students how to customize software for technical applications. Emphasis is placed on the use of common office applications software such as spreadsheets, word-processing, graphics and Internet access. Upon completion, students should be able to demonstrate competency in using applications software to solve technical problems and communicate the results in text and graphical formats.

English (ENG)

ENG 7002. Business English. 0.0 Hours. Class-75.0. Clinical-0.0. Lab-0.0. Work-0.0
This is an individualized, self-paced course designed to meet the needs of any student who lacks the background to complete college level transfer/technical/trade English.
ENG 7090. Composition Strategies - Abridged. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Fast Track ENG 7090 is a fast-paced, intensive abridgement of Composition Strategies in a standard instructor-student format. The prerequisite for the course is successful completion of ENG 080 or the appropriate placement-test score. After successful completion of the course, which includes a retaking of the Sentence-Skills placement test, a student may advance to ENG 111, provided that the additional prerequisite of RED 090 with a grade of "C" or higher or the appropriate Reading-Comprehension placement-test score has been met.
Prerequisites: Complete one of the following options:
• Take ENG 080
• Take ENG 085 ENG 085A

English As a Foreign Language (EFL)

EFL 8024. Academic ESL Communication I. 0.0 Hours. Class-66.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide instruction in integrated academic and professional language skills. Upon completion of the course, students should be able to complete specific listening, discussion, reading, and writing tasks at an intermediate level.

EFL 8025. Academic ESL Communication II. 0.0 Hours. Class-66.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide instruction in integrated academic and professional language skills. Upon completion of the course, students should be able to complete specific listening, discussion, reading, and writing tasks at an intermediate level.

EFL 8030. Practical English for Business Situations I. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide instruction in academic and professional language for non-native speakers of English. Emphasis is placed on development of integrated language use for English situations.

EFL 8031. Practical English for Business Situations II. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide instruction in academic and professional language for non-native speakers of English. Emphasis is placed on development of integrated language use for English situations.

EFL 8050. TOEFL Preparation I. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide instruction in academic skills for non-native speakers of English. Emphasis is placed on specific reading, writing, listening, and speaking skills needed for the TOEFL.

EFL 8051. TOEFL Preparation II. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide instruction in academic skills for non-native speakers of English. Emphasis is placed on specific reading, writing, listening, and speaking skills needed for the TOEFL.

EFL 8055. Academic ESL Grammar for Communication I. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides non-native speakers of English with a variety of basic grammatical concepts that enrich academic communication.

EFL 8056. Academic ESL Grammar for Communication II. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides high-intermediate non-native speakers of English with a knowledge of grammatical structures that improve academic communication.

EFL 8060. IELTS Preparation I. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide instruction in academic skills for non-native speakers of English. Emphasis is placed on specific reading, writing, listening, and speaking skills needed for the IELTS. The IELTS is the International English Language Testing System. Its purpose is to assess the English proficiency level of people who want to study or work in English-speaking environments.

Environmental Science (ENV)

ENV 7100. What's Your Carbon Footprint?. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
As the scientific community now agrees that global warming is taking place, the question arises as to what impact humans are having on this environmental change and the increase of CO2 levels in the earth's atmosphere. Our "carbon footprint" is a measurable indication of our personal impact. The average consumer today may be overwhelmed with information but unsure as to how their personal choices contribute to the equation. This class will offer general discussions on CO2, the human factor, and how our daily choices directly and indirectly affect the environment.

ENV 7101. Urban Ecosystems. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Creating biodiversity begins with one yard - yours. Participants will learn how to provide the four elements of a wildlife habitat, food, water, shelter and places to raise young, using a variety of manmade and natural products. Topics covered include sustainable gardening, planting with native plants, soil and water stewardship, reducing lawn size and reducing chemical usage.

ENV 7102. Sustainable Housing and Building Green: What Agents Should Know. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Sustainable Housing and Building Green teaches students how to understand sustainability in homes, to recognize green features, to give clients information on green mortgages and to understand cost savings in tax breaks, rebates and incentives. This course is approved by the North Carolina Real Estate Commission (NCREC) for four hours of CE credit.

ENV 7103. Greening the Home Step-By-Step on a Budget. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Greening the Home teaches the student how to make cost effective, eco-friendly choices to improve the quality of the home environment. Students will be able to create a step-by-step plan within a budget for continuing this greening process in their own homes.
ENV 7104. Consumer’s Guide to Building a Green Home. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
There are many things you can do as an individual and as a family, when planning a new Green home, which will make an impact in reducing your new homes carbon footprint. The actual construction of homes tends to require a lot of energy and resources. By pre-planning the necessary steps in the process, typically at minimal to no cost beginning in the design stage, a homeowner can gain significant benefits to the 3 P’s: People, Planet and Pocketbook. Start by getting your family on board with the idea, then your design and building team and the transition will be a lot easier and much more fun.

ENV 7105. Worms In Your Garden: Home Vermicomposting. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Participants will learn the huge benefits of composting with worms over regular garden composting. This method can be done indoors in a small apartment, condo, or where outdoor composting is not possible. Participants will each build a simple low maintenance worm composting bin that can be taken home and, with kitchen scraps and paper, used to produce free, earth friendly and superior plant fertilizer for home and garden use. Instructions will be given in the care and continuance of the bin and worms.

ENV 7106. Ways to Live Greener at Home. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Participants will learn about energy efficiency and effective ways to lessen impact on our environment, beginning with our own homes. We will address recycling beyond paper and plastic, saving energy at home through new technologies, ways to remodel homes to save energy and money, and what to look for in a contractor. We will discuss tax incentives available, different organizations that promote green living and building such as the LEED rating system, Energy-Star and others. Discussion will include what we need to do in our communities to update neighborhood association by-laws to allow some of these more efficient systems.

ENV 7107. Home Energy Audits. 0.0 Hours. 
Class-528.0. Clinical-0.0. Lab-0.0. Work-0.0
You can easily conduct a home energy audit yourself. With a simple but diligent walk-through, you can spot many problems in any type of house. This class will teach you how and give you the tools you need.

ENV 7108. Endangered Species of the Carolinas. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
In this course, students will learn the fundamentals the US Endangered Species Act of 1973, the North Carolina Endangered Species Act of 1976, and the South Carolina Nongame and Endangered Species Conservation Act of 1974. Students will explore the different ecosystems that allowed species to adapt to their environments. Topics include observation and identification of threatened endangered species, along with coordination with local, state and federal agencies. Upon completion, students should be able to perform an endangered species survey.

ENV 7110. Preparing for the Green Workforce. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides the information and strategies for people looking for a new career in the green economy. This includes alternative energy, skilled trades, environmental health, sustainability professionals, engineering and much more. Topics include career choices, professional goals, CPC sustainable technologies degree, interest assessment. Upon completion, students should be able to clearly state their personal, academic, and professional goals and have a feasible plan of action to achieve those goals.

ENV 7135. Environmental Bio Diesel Production. 0.0 Hours. 
Class-528.0. Clinical-0.0. Lab-0.0. Work-0.0
ENV 7135 provides a survey of the bio fuel industry and will cover biofuel production. This class is extremely relevant to students who want to make their own fuel, including the basic chemistry and time spent in the lab making and testing fuel. This class focuses primarily on biodiesel and straight vegetable oil use with a survey of other biofuels.

ENV 7200. Solar Photovoltaics for the New Clean Energy Economy. 0.0 Hours. 
Class-528.0. Clinical-0.0. Lab-0.0. Work-0.0
Upon completion of this course the students shall understand the detailed functionality of Photovoltaic system components, and all common solar systems from straight water pumping to stand alone battery based systems, and grid tie PV with and without batteries. Students will be able to design and size these systems. They will see what is involved with interconnection to the utility. This course prepares students to enter the workforce as a valuable resource to a company.

Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is for the homeowner considering an investment in a solar electric system who wants to be well informed. You’ll learn a lot about this topic and we’ll help you understand the basics of how a solar electric system works, how to establish how many solar panels you’ll need in your array and the approximate costs. We will discuss: photovoltaic (solar electric) technology, energy storage, energy efficiency, site requirements for PV, installation considerations, PV system sizing, PV system costs, rebates and tax incentives and working with an installer.

ENV 8000. Common Sense Buildings. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Common Sense Buildings is a one day workshop is an introduction to the key components of practical buildings and how those are best integrated into a holistic approach to construction. The course will cover the basic science behind building construction and performance. We will discuss effective building assemblies and sustainable green building best practices. Participants receive a certificate of completion at the end of the program that states professional licensure and eligibility requirements for the LEED Green Associate exam.

ENV 8001. Selling Green Building without Greenwashing. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This half day workshop will share marketing strategies with its participants and assist them in developing their own strategies. Participants will learn the appropriate terminology and use of information related to the LEED rating system and green building in general. The course will explore modern forms of marketing such as social networking. Participants receive a certificate of completion at the end of the program that states professional licensure and eligibility requirements for the LEED Green Associate exam.
ENV 8002. USGBC Core Concepts and Strategies. 0.0 Hours.
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This workshop is intended for anyone who wants more than a basic understanding of LEED, including those with a stake in their company's or community's building practices, those directly involved in green building projects, and those pursuing GBCI's LEED Green Associate credential. The workshop provides essential knowledge of sustainable building concepts that are fundamental to all LEED Rating Systems. It begins with an introduction to the benefits and integrative approach to green building, and a brief background on the U.S. Green Building Council and LEED, including basics of the building certification process. The core of the workshop presents LEED intents and concepts at the credit category level, across building types and rating systems, touching on strategies, synergies, and specific examples that are reinforced by real project cases. Key LEED metrics and LEED referenced standards are addressed throughout the workshop. Interactive activities within the course keep you engaged and reinforce what you've learned.

ENV 8003. Green Associate Study Group. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
Designed for candidates seeking the USGBC Green Associate credential, this facilitated study group builds on core green building and LEED knowledge as outlined in the Green Associate Candidate Handbook. Instructor will facilitate preparation through engaged group and directed individual study. Participants receive a certificate of completion at the end of the program.

ENV 8004. Physics of Green Building. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
This one day workshop covers the science behind building and building performance. Participants will learn the concepts and interactions between air, moisture and heat transfer in buildings, all critical in the proper functionality of homes. Participants receive certificate of completion at the end of the program.

ENV 8005. Residential Energy Efficiency Methods. 0.0 Hours.
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This one day workshop is an introduction to the key components of energy efficient buildings and how they are best integrated. Participants receive a certificate of completion at the end of the program.

ENV 8006. Advanced Sustainable Building: Residential. 0.0 Hours.
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This one day workshop is intended to convey practical, effective green building strategies. Participants will learn green building details and strategies that emphasize durability, energy efficiency and other green building principles. Participants will learn how to design or build better, greener buildings. Participants receive a certificate of completion at the end of the program.

ENV 8007. Green House Design and Construction. 0.0 Hours.
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This workshop is intended for professionals who are familiar with the basic concepts of the LEED for New Construction and Major Renovations Rating System, but new to implementing it on projects or looking to brush up on implementation best practices. It is appropriate for new LEED APs, as well as those pursuing GBCI's LEED AP Building Design + Construction credential.

ENV 8008. LEED AP for Homes Study Group. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
Designed for candidates seeking the USGBC LEED AP Homes credential, this facilitated study group builds on core green building and LEED knowledge as outlined in the LEED AP Homes Candidate Handbook. Instructor will facilitate preparation through engaged group and directed individual study. Participants receive a certificate of completion at the end of the program.

ENV 8500. Building Performance Institute (BPI) Building Analyst and Envelope Professional Combination Training and Certification. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course combines BPI's Building Analyst and the advanced Envelope Professional training and certification in a single week. Building Analyst is an entry certification for becoming an energy auditor or trade professional, while Envelope Professional is a specialized certification for measuring shell performance and offering solutions. These two designations can qualify your organization for BPI Company Accreditation upon application to the Institute. Ability to perform basic math and geometry calculations (a math and geometry primer is available upon request). Experience in construction trades is helpful. Instructor recommends purchasing and reading Residential Energy by John Krigger and Chris Dorsi prior to class. Students are required to register for their field exams directly with Green Collar Crew, Inc. prior to class. Exams are scheduled on a first-registered first-served basis. Email Instructor at info@greencollarcrewws.com for more information.

ENV 8700. Central Carolinas Master Naturalist Certification Program. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Central Carolinas Master Naturalist Program is a certification intended for lifelong learners, biology and science graduates, retirees, environmental science educators, advanced high school and home school students, as well as science teachers. This certification training course includes basic classroom and field instruction in natural history, conservation and management, teaching and research skills led by local experts.

ENV 8701. National Wildlife Foundation Habitat Steward Training. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a National Wildlife Federation program which teaches the intricacies of creating wildlife habitats in backyards, schools, businesses and places of worship; soil and water conservation; legislative and environmental challenges in a specific area; native and invasive plants and their roles in the environment; and much more. You will learn a lifetime of conservation facts from a number of topic experts. This information will change the way you view the natural world and give you all the tools you need to make a real difference in your landscape and in shaping our community’s future. Graduates will be asked to donate time to a special project in Charlotte, it’s NWF Community Wildlife Habitat Certification.

ENV 8904. Wetlands Delineation with GIS. 0.0 Hours. Class-200.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover the following; Creating & Integrating Data for Natural Resource Applications, Learning ArcGIS 9, Cartographic Design Using ArcGIS 9, and working with ArcPad 7. These applications will be used for acquiring, evaluating, creating, manipulating, and integrating data in preparation for analysis and map creation.

Fire Protection (FIP)

FIP 7120. Response to Hazardous Materials (Level I). 0.0 Hours.
Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
This course presents the awareness level material to the student. It is based on the NFPA 472 standard on hazardous materials.
FIP 7121. Fire Prevention, Public Fire Education & Fire Cause (Level I). 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the cause of fires and how to prevent it. The course also deals with the importance of inspections and education programs and how to conduct a public fire education program.

FIP 7122. Fire Fighter Recruit Training, 0.0 Hours. Class-84.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will meet the requirements to comply with the 1997 edition of NFPA 1403 Interior Live Burn Standard. The course will cover the 88 different subjects that are required for a firefighter to participate in a live fire training event.

FIP 7125. Hazardous Materials Awareness & Terrorism Level I. 0.0 Hours. Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is an awareness course designed to cover basic response objectives expected of a person certified at the Awareness Level. Course topics include recognizing the presence of a hazardous material, isolating the area to protect the public and responders, and identifying the material using various methods available to a responder. The course will also include elements of terrorism and its potential impact and relationship to hazardous materials incidents. This course meets all the competencies required by OSHA 1910.120 and NFPA 472 1997 edition.

FIP 7126. Sprinkers. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course deals with the value of sprinkler systems, the identification and use of sprinkler systems and fire department support of automatic sprinkler systems. This course will also explain the value and benefits of residential Sprinkler systems.

FIP 7127. Ventilation. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course presents the firefighter candidate with the principles of ventilation, the types of ventilation and tools needed to perform ventilation to various types of roofs.

FIP 7128. Ropes. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will allow firefighter candidates to demonstrate their ability to tie varied knots and hitches, and hoist an array of equipment and identify the proper use of rope for lifelines.

FIP 7129. Vehicle Extrication. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
The firefighter candidate will be presented with design features, stabilization procedures, procedures for gaining access, hazards and disentanglement procedures, access and egress points and other hazards associated with extrication procedures. The student will be exposed to new technologies, construction, design, materials, crumple zones, bumper systems, air bags and side impact protection systems.

FIP 7130. L/P Gas Emergencies. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course deals with the properties of liquified petroleum gasses, leak control procedures, and extinguishment of fires involving LPG. The student will become familiar with flammable ranges, vapor density and toxicity ranges of liquified petroleum gasses. The student will gain a working knowledge of the hazards and corrective procedures for handling incidents related to LPG and natural gas.

FIP 7131. Salvage. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will enable the firefighter candidate to demonstrate various folds, rolls, deployment of salvage covers, and the construction and use of water chutes and catch all. In addition, the course will cover the maintenance of and other uses for salvage covers.

FIP 7132. Overhaul. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
The material presented in this course will deal with the purpose of overhaul, how to recognize the location of hidden fires and how to expose them, and present the duties of the firefighters left at the fire scene for security.

FIP 7133. Personal Protective Equipment. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
The firefighter candidate will be presented the function of each article of protective equipment, the leading causes of death of firefighters, and the hazardous environments requiring use of protective equipment. In addition, there is a great deal of information covering the SCBA and its use.

FIP 7134. Emergency Vehicle Driver Safety. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
The student will be presented minimum standards for persons who drive and operate emergency vehicles. Drivers license requirements for driving emergency vehicles will be covered. The student will be presented with vehicle weights, characteristics and dynamics as they relate to emergency vehicles. This course will involve extensive practical training which will be conducted under non-emergency conditions.

FIP 7135. Portable Fire Extinguishers. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will present the firefighter candidate with the proper use of portable extinguishers and the demonstration of the actual extinguishment of a Class A and B fire.

FIP 7136. Forcible Entry. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will enable firefighter candidates to demonstrate their ability to force entry into a structure using varied tools and the maintenance of this equipment.

FIP 7137. Fire Service Ladders. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course presents the firefighter candidate with the different types of ladders and the use of each of these ladders.

FIP 7138. Fire Hose Practices. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will enable the firefighter candidate to demonstrate the use of hoses and nozzles, adapters and appliances and the information needed to conduct an annual service test of fire hose.

FIP 7139. Water Supplies. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
The firefighter candidate will be presented material during this course that will enable him/her to demonstrate both forward and reverse hose lays from the use of a pressurized hydrant and the use of mobile water supplies.

FIP 7140. Managing the MayDay. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will facilitate interaction between Incident Commanders and Telecommunicators, as well as lecture and discussion on how to successfully maintain command and control of a working incident while at the same time managing a May Day transmission on the fire ground. Course emphasis will be placed on the following: Incident command and control Incident accountability Rapid intervention team deployment Case studies both locally and nationally which address these type incidents.
FIP 7141. Airport Familiarization. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
The firefighter candidate will be presented material during this course that will enable him/her to respond to the mitigate incidents on an airport facility.

FIP 7142. Fire Behavior. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course integrates a discussion of physical science in the context of combustion and fire dynamics. This knowledge will aid in interpreting what is observed on the fire ground and recognize potential hazards, and it provides a basis for understanding fire control and ventilation tactical operations. The student will also be exposed to basic concepts related to combustion and fire development in structures. The same scientific principles and physical laws apply equally to other types of fire situations.

FIP 7143. Fire Prevention Standard Inspection Level I. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to develop knowledge and skills for basic fire prevention code enforcement. This course follows the guidelines set by the North Carolina Code Officials Qualification Board. Lecture, demonstration, and skills evaluation are the principal methods of instruction. Specific training areas include: rules of building code enforcement, fire code as it relates to other building codes, use of the fire prevention code, and technical provisions. Prerequisite: completion of Fire Prevention Level I or job experience approved by the qualification board.

FIP 7144. Fire Prevention Standard Inspection Level II. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to develop knowledge and skills for advanced fire prevention code enforcement. This course follows the guidelines set by the North Carolina Code Officials Qualification Board. Lecture, demonstration, and skills evaluation are the principal methods of instruction. Specific training areas include: rules of building code enforcement, fire code as it relates to other building codes, use of the fire prevention code, and technical provisions. Prerequisite: completion of Fire Prevention Level I or job experience approved by the qualification board.

FIP 7145. Fire Prevention Standard Inspection Level III. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to develop knowledge and skills for advanced fire prevention code enforcement. This course follows the guidelines set by the North Carolina Code Officials Qualification Board. Lecture, demonstration, and skills evaluation are the principal methods of instruction. Specific training areas include: rules of building code enforcement, fire code as it relates to other building codes, use of fire prevention code, and technical provisions. Prerequisites: completion of Fire Prevention Level II or job experience approved by the qualification board.

FIP 7146. Leadership I - Strategies for Company Success. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to meet the needs of the company officer, this course of leadership provides the participant with basic skills and tools needed to perform effectively as a leader in the fire service environment. This course addresses ethics, use and abuse of power at the company officer level, creativity in the fire service environment, and managing the multiple roles of the company officer.

FIP 7147. Leadership II - Strategies for Personal Success. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides the company officer with the basic leadership skills and tools needed to perform effectively in the fire service environment. The course addresses ethics, use of abuse of power at the company officer level, creativity in the fire service environment, and management of the multiple roles of the company officer.

FIP 7148. Leadership III - Strategies for Supervisory Success. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides the Company Officer with the basic leadership skills and tools to perform effectively in the fire service environment. The course covers when and how to delegate to subordinates, assess personal leadership styles through situational leadership, discipline subordinates, and apply coaching/ motivating techniques.

FIP 7149. Swift Water Rescue Technician - Advanced. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course integrates techniques learned in SRT-I, taking the students beyond the emphasis on self-rescue to concentrate on victim rescue. This course includes classroom instruction, followed by extensive hands-on skill development. Topics covered will include: Understanding the role and utilization of various line systems, to search class I to Class III swift water, and in some instances, class IV to VI (hydrails and waterfalls). Managing the raising and lowering of litters with patients, tending a litter, relaying of rescuers, basic rappelling, and high line systems. Managing and conducting a night or low visibility river rescue.

FIP 7150. Leadership & Team Building. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
This course presents the company officer with the basic leadership skills and tools needed to perform effectively in the fire service environment. This course includes techniques and approaches to problem-solving, ways to identify and assess the needs of the company officers subordinates, methods for running meeting effectively in the fire service environment, and decision making skills for the company officer. This course addresses ethics, use and abuse of power at the company officer level, creativity in the fire service environment, and management of the multiple roles of the company officer. The final element of this course covers when and how to delegate to subordinates, assess personal leadership styles through situational leadership, discipline subordinates, and apply coaching/ motivating techniques.

FIP 7151. Fire Management for New Officers. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to acquaint officer candidates with the many interpersonal and administrative duties of a company officer. Interpersonal topics covered include communications, public relations and education, and dealing with public inquiries and concerns. Emphasis is placed on human resources and the performance review and development process. Administrative topics covered include the Charlotte Fire Department Operations Manual, the Charlotte Fire Department Strategic Plan, the Charlotte Fire Department Annual Report, budget management, employee benefits, leave time, payroll, fire department information technology, computer-aided dispatch, and records management. Students will review basic code enforcement information and fire cause determination.

FIP 7152. Firefighting Foam. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to cover the uses of firefighting foam. Firefighting foam can be used to fight multiple types of fires and to prevent the ignition of materials that could be involved in a fire. The student will be exposed to new types of foams and efficient systems for applying foam. Demonstrations will show the use in neutralizing hazardous materials and decontamination.
FIP 7153. Radiation Preparedness and Response. 0.0 Hours.
Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide an overview of Radiological Emergency Preparedness for first responder agencies responding to a nuclear/ radiological incident in Mecklenburg County. It will also cover ways to help manage when dealing with Weapons of Mass Destruction. Students will review various methods on detecting radiation, equipment used, decontamination procedures and overall safety working at radiological incidents. For fire personnel, this program will discuss response, operations and decontamination at radiological incidents. For law enforcement personnel, this program will discuss radiological awareness, traffic control points/security and decontamination procedures.

FIP 7154. Public Safety Diver. 0.0 Hours. Class-60.0. Clinical-0.0. Lab-0.0. Work-0.0
Public Safety Diver (PSD) standardizes non-divers and open-water divers as PSDs. A PSD certification combines the fundamentals taught in an open-water class with an emphasis on the exacting skills required to successfully dive in a rescue/recovery operation. The Public Safety Diver programs meet or exceed all the requirements set forth by the Recreational Scuba Training Council. PSD students are taught basic skills, proper use of Scuba equipment & maintenance, dive related injuries, diving physics, physiology, and dive planning using the US Navy Dive Tables. All these topics are covered with classroom lecture, pool & open-water skill sessions. The student is required to pass a written final exam with a minimum score of 80%, the IADRS swims test - min score of 12, and successful completion of all scuba skills in an open-water environment.

FIP 7155. Dive Rescue 1. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
Learn the fundamentals of dive operations from scene evaluation through incident debriefing. Public safety divers and surface-support personnel are prepared to respond effectively to a water-incident scene. Topics include: overview of public safety drowning accidents; selecting, training, and equipping dive teams; family media and other agencies relations; search pattern fundamentals; victim retrieval tactics; responding to vehicle accidents; accident scene documentation; and an introduction to specialized equipment. Programs are presented in a classroom, a pool, and at an open-water training site.

FIP 7156. Water Rescue Equipment - Dry Suits. 0.0 Hours. Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0
Dry Suit Diving addresses the proper precautions needed when diving in potentially hazardous conditions. Without proper protection from your potentially hazardous diving environment, your rescue/recovery operation may be hindered or halted. One of the first steps to preparing for contaminated water or ice diving is learning how to dive in a dry suit. Dry suit diving topics include: history of the dry suit, suit types, accessories, sizing, custom adjustments, emergency procedures, repairs, and maintenance.

FIP 7157. Chief Officer Development-Leadership. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an educational experience that will help company officers or chief officers to apply techniques learned in Command and Control of Incident Operations, in controlling incidents involving target hazards in an urban Fire Department. The four-day session will utilize simulations exercises.

FIP 7158. Chief Officer Development - Human Resource Development. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to aid company officers or chief officers in developing skills and knowledge to effectively manage and develop the human resources in his or her command. In addition, the candidate will study ways of managing risk reduction responsibilities at the Battalion Chief level and its effect on the overall risk reduction mission of the Charlotte Fire Department. In addition to pre-course assignments, the four-day session consists of lecture, group activities and discussion.

FIP 7159. Chief Officer Development - Command & Control of Incident Operations. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an educational experience that will help company officers or chief officers to perform competently in an emergency situation as the primary decision-maker at emergency incidents of all types. The four-day session consists of lecture, group activities, and incident simulations.

FIP 7160. Chief Officer Development - Fire Department Operations At Target Hazards. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an educational experience that will help company officers or chief officers to apply techniques learned in Command and Control of Incident Operations, in controlling incidents involving target hazards in an urban Fire Department. The four-day session will utilize simulations exercises.

FIP 7161. Personal Protective Equipment/Search. 0.0 Hours. Class-35.0. Clinical-0.0. Lab-0.0. Work-0.0
The firefighter candidate will be presented the function of each article of protective clothing, leading causes if firefighter deaths and the hazardous environments requiring use of personal protective equipment, including training and use of self-contained breathing apparatus.

FIP 7162. Ladders. 0.0 Hours. Class-35.0. Clinical-0.0. Lab-0.0. Work-0.0
This course presents the firefighter candidate with the different types of ladders and the use of each ladder presented, including safety, standards, limitations and maintenance.

FIP 7163. Hazardous Materials Refresher. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover various subjects as needed to provide annual upgrade and refresher training for personnel toward recertification for Hazardous Materials certification in North Carolina.

FIP 7165. Fire Chief 101. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will satisfy the 9s inspection criteria as specified by the North Carolina Administrative Code. The primary objective of the course is to inform current and future chief officers of the various aspects and complexities surrounding the operations and organization of North Carolina fire departments. Upon completion of the course students will be better equipped to meet the challenges of the chief officer position.

FIP 7166. Fire Chief 101 Update. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This is the current Chief 101 update course approved by the NC Fire and Rescue Commission to meet NC Administrative Code requirements for those who have previously taken the Chief 101 course. Course content, which is revised at least every five years, must align with the currently approved update course managed by the NC Department of Insurance Office of State Fire Marshal(OSFM), and instructors must be specifically approved. This is a NC Fire and Rescue Commission certification course; however, this course will not transfer electronically to OSFM. Per Commission rules, instructors will be responsible for submitting student information to OSFM directly.
FIP 7170. Fire Officer I. 0.0 Hours. Class-36.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the knowledge, skills, and requirements referenced in the National Fire Protection Association (NFPA) Standard 1021 for Fire Officer I training. Topics include officer roles and responsibilities, budgets, fire cause determination, inspections, education, leadership, management, public relations, and other requirements included in the NFPA standard. Upon completion, students should be able to demonstrate an understanding of relevant NFPA standards as required for State Fire Officer I-II certification. This is a NC Fire and Rescue Commission certification. Prerequisites: Take FIP 7178 Minimum grade s

FIP 7171. Fire Officer II. 0.0 Hours. Class-28.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the knowledge, skills, and requirements referenced in the National Fire Protection Association (NFPA) Standard 1021 for Fire Officer II training. Topics include officer roles and responsibilities, budgets, fire cause determination, inspections, education, leadership, management, public relations, and other requirements included in the NFPA standard. Upon completion, students should be able to demonstrate an understanding of relevant NFPA standards as required for state Fire Officer I and II certification. This is a NC Fire and Rescue Commission certification course.

FIP 7173. Fire Officer III. 0.0 Hours. Class-96.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will present the Fire Officer candidate with the knowledge, skills, and ability to satisfy the requirements of Chapter 6 of NFPA 1021: Standard for Fire Officer Professional Qualifications. This course is designed to meet the needs of an executive management position. The course involves study in the areas of human resource management, fire department administration, community relations, budget preparation, and records management.

FIP 7174. Apparatus and Hydraulics Refresher. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
The Apparatus and Hydraulics-Driver/Operator Pumps refresher is designed to refresh all candidates who drive and operate fire apparatus during both emergency and non-emergency situations. The course seeks to establish a minimum level of skill and efficiency with apparatus handling and pump operation. Upon completion of the course the successful candidate should be able to demonstrate practical knowledge and application in driving a fire apparatus and establishing and maintaining various pumping operations.

FIP 7175. Technical Rescuer Refresher. 0.0 Hours. Class-21.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will refresh the skills of the Technical Rescuer. The Rescuer will revisit the skills and demonstrate their abilities to perform rescues in various types of environments and implement technical rescue skills to effect a rescue. Topics include rescue situations in structural and wilderness settings. Upon completion of the course, successful students should be proficient in the operations necessary to mitigate various rescue scenarios.

FIP 7176. Emergency Vehicle Operations. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
The student will be presented with minimum standards for persons who drive and operate emergency vehicles. Drivers license requirements for driving emergency vehicles will be covered. The student will be presented with vehicle weights, characteristics and dynamics as they relate to emergency vehicles. This course will involve extensive practical training which will be conducted under non-emergency conditions.

FIP 7177. Nuclear Awareness. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course presents a WMD radiological/nuclear overview for first responders and other personnel who, in the course of their normal duties, are likely to be the first to arrive at the scene of a radiological/nuclear incident. It focuses on the basics of radiation, possible health effects, hazard identification, proper notification procedures and the radiological/nuclear threat.

FIP 7178. Fire Instructor -Level I. 0.0 Hours. Class-26.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the knowledge, skills, and abilities needed to train others in fire service operations. Topics include planning, presenting, and evaluating lesson plans, learning styles, use of media, communications, and other related topics. Upon completion, students should be able to meet the requirements of Fire Instructor Level I objectives from National Fire Protection Association (NFPA) 1041. This is a NC Fire and Rescue Commission certification course.

FIP 7179. Fire Instructor II. 0.0 Hours. Class-38.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the knowledge, skills, and abilities needed to train others in fire service operations. Topics include planning, presenting, and evaluating lesson plans, learning styles, use of media, communication, and other related topics. Upon completion, students should be able to meet the requirements of the Fire Instructor Level II objectives from National Fire Protection Association (NFPA) 1041. This is a NC Fire and Rescue Commission certification course.

FIP 7184. Health & Wellness. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
This certification-related course will present the firefighter candidate with the knowledge, skills, and ability to satisfy the requirements of Chapter 5 & 6 of NFPA 1001; Standard For Firefighter Professional Qualifications. This course is designed to educate first responders on the importance of maintaining high levels of fitness and wellness in order to perform their assigned duties efficiently and safely. This course is a part of the NC Firefighter Certification program approved by the NC Fire / Rescue Commission as of January 1, 2015.

FIP 7185. Safety & Survival. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
This certification related course presents the firefighter candidate with the knowledge, skills, and ability to satisfy the requirements of chapter 5 & 6 of NFPA 1001; Standard for Firefighter Professional Qualifications.

FIP 7186. Mayday. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
This certification related course will present the firefighter candidate with the knowledge, skills, and ability to satisfy the requirements of chapter 5 & 6 of NFPA 1001; Standard for Firefighter Professional Qualifications.

FIP 7190. NC Fire Prevention School - Basic. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will offer general information on the survival of a fire inspector. Course work includes building construction, using the fire codes with other codes, electrical hazards, flammable and combustible liquids and other general precautions. Upon completion the novice inspector or the experienced inspector will have updated their fire prevention information.
FIP 7191. NC Fire Prevention School- Intermediate. 0.0 Hours.
Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will offer the student a mixture of general and technical information. Course work includes information from the code and will address materials used daily by the inspector. Topics include: Fire protection systems, Means of egress, Fire alarm systems, Application of flammable finishes, Emergency planning. Upon completion of the course the student will have updated fire prevention material and information. Prerequisites: Take FIP 7190 Minimum grade S

FIP 7198. Preparation for Initial Company Operations. 0.0 Hours.
Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed for company officers, acting company officers, or senior firefighters responsible for the management of a single fire company on a relief basis. This course will develop better understanding of the roles and responsibilities needed to prepare a fire company incident operations. The course will also expand upon the responsibilities for company readiness, personnel safety, and leadership as it relates to company operation.

FIP 7199. Strategy and Tactics for Initial Company Operations. 0.0 Hours.
Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to develop the management skills needed to define and accomplish tactics at structure fires by company officers, acting company officers, or senior firefighters who command a fire company on a relief basis. Students completing this course will be able to make use of the Communications Model and the Quick Access Pre-fire Plan in tactical incidents. Among the many topics presented during the course, the relationship between incident priorities, strategy, tactics and implementation will be discussed relating to the command sequence. Consideration of risk versus benefit, and the use of the Tactical Action Model based on incident assessment will be accomplished through the use of many table-top presentations.

FIP 7203. Fire Alarms & Communications (Level II). 0.0 Hours.
Class-11.0. Clinical-0.0. Lab-0.0. Work-0.0
Course provides for the defining of the policies and procedures concerning the ordering and transmitting of multiple alarms and the action to be taken upon receipt of these signals.

FIP 7204. Fire Behavior (Level II). 0.0 Hours.
Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
Enable the firefighter candidate to demonstrate his/Her knowledge in the terminology used in the area of fire behavior, the hazards of different fuels and the types of heat sources.

FIP 7205. Ventilation (Level II). 0.0 Hours.
Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
With the use of and need for automatic venting devices, the methods for ventilating basements, the use of forced ventilation and the considerations that must be made when ventilating a structure.

FIP 7207. Fire Hose, Appliances & Streams (level II). 0.0 Hours.
Class-7.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will enable the firefighter candidate to demonstrate the use of hoses and nozzles, adaptors and appliances and the information needed to conduct an annual service test of fire hose.

FIP 7209. Fire Control (Level II). 0.0 Hours.
Class-25.0. Clinical-0.0. Lab-0.0. Work-0.0
Deals with the extinguishment of a multitude of different fires and the use of varied tools and extinguishing agents.

FIP 7210. Overhaul (Level II). 0.0 Hours.
Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover the indicator of structural instability and the firefighters role in the perserving of evidence of fire cause and origin.

FIP 7211. Rescue (Level II). 0.0 Hours.
Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
Will present the firefighter candidate with techniques and safety procedures to be used during a number of rescue activities and the proper use of rescue tools and the extrication of entrapped victims from motor vehicles.

FIP 7212. Rescue. 0.0 Hours.
Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will present the firefighter candidate with techniques and safety procedures to be used during a number of rescue activities and the proper use of rescue tools and the extrication of entrapped victims from motor vehicles.

FIP 7213. Sprinklers (Level II). 0.0 Hours.
Class-11.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the various types of sprinkler systems as well as their components and the reliability of automatic sprinkler systems.

FIP 7225. Hazardous Materials Operations & Terrorism Level II. 0.0 Hours.
Class-32.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to cover responding to hazardous materials incidents in a defensive manner. Course topics include advanced recognition and identification procedures. Various defensive actions to limit the harm of an incident of this type will be demonstrated. The course also includes understanding the elements of terrorism and it’s potential impact and relationship to a hazardous materials incident. This class meets all the competencies required by OSHA 1910.120 and NEPA 472 1997 edition.

FIP 7278. Engine Company Operations. 0.0 Hours.
Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to reinforce and strengthen the existing skills of firefighters. The curriculum consist of three sections which will cover operations carried out by engine companies, hose deployment, and fire attack. This course is designed to challenge members to look “outside the box” and use different methods to improve efficiency and effectiveness.

FIP 7279. Ladder Company Operations. 0.0 Hours.
Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to reinforce and strengthen the existing skills of firefighters. The curriculum consist of five sections which cover operations carried out by ladder companies within the department. The course is also designed to challenge department members to look outside the box and use different methods to improve efficiency and effectiveness.

FIP 7300. Fire Fighter I & II (level I & II). 0.0 Hours.
Class-600.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will enable the student to complete the objectives for Firefighter I & II related to fd organization they will become aware of the mission and purpose of the fire department rules and regulations and the components of an incident command system.

FIP 7303. Fire Alarms & Communications. 0.0 Hours.
Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will allow for the student to complete objectives related to fire alarms and communications for Firefighter Certification.

FIP 7304. Fire Behavior. 0.0 Hours.
Class-11.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will allow the student to complete the objectives related to fire behavior for Firefighter Certification.
FIP 7305. Portable Extinguishers. 0.0 Hours. Class-7.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will allow the student to complete the objectives related to portable fire extinguishers for Firefighter Certification.

FIP 7306. Personal Protective Equipment. 0.0 Hours. Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will allow the student to complete the objectives related to personal protective equipment for Firefighter Certification.

FIP 7307. Forcible Entry. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover all the related objectives to the subject of forcible entry for Firefighter Certification.

FIP 7308. Ventilation I & II (Level I & II). 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will present the firefighter candidate with the principles of ventilation, types of ventilation and tools needed to perform ventilation. Student will be shown automatic ventilation devices, methods for ventilating basements, the use of forced ventilation, and considerations that must be made when ventilating a structure.

FIP 7309. Ropes. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will allow the student to complete all objectives related to ropes for Firefighter Certification.

FIP 7310. Ladders. 0.0 Hours. Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will allow the student to complete the related objectives for ladders for Firefighter Certification.

FIP 7311. Fire Hose, Streams & Appliances. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will train the student in all objectives related to fire hose, appliances, and streams in compliance with Firefighter Certification.

FIP 7312. Foam Fire Streams. 0.0 Hours. Class-10.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will detail all objective related to use of foam as it relates to fire streams for Firefighter Certification.

FIP 7313. Fire Control. 0.0 Hours. Class-43.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover all objectives related to Fire control for Firefighter Certification.

FIP 7314. Loss Control. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover objectives related to Salvage and Overhaul for Firefighter Certification.

FIP 7315. Overhaul (Level I & II). 0.0 Hours. Class-7.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover all objectives related to overhaul for firefighter i & II.

FIP 7316. Emergency Medical Care (Level I & II). 0.0 Hours. Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will train the student in the objectives related to emergency medical care for both firefighter i & II levels.

FIP 7317. Rescue. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover the objectives related to rescue as it pertains to Firefighter Levels Certification.

FIP 7318. Water Supplies (level I & II). 0.0 Hours. Class-22.0. Clinical-0.0. Lab-0.0. Work-0.0
This course meets all the requirements for firefighter level i & II for water supplies objectives.

FIP 7319. Sprinklers. 0.0 Hours. Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will train students in all objectives related to sprinklers for Firefighter Certification.

FIP 7320. Response to Hazardous Materials (Level I & II). 0.0 Hours. Class-36.0. Clinical-0.0. Lab-0.0. Work-0.0
Response to hazardous materials - awareness/Operation this course will cover all objectives related to the aware- ness and operations level for both firefighter i and II levels.

FIP 7321. Fire & Life Safety Preparedness. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover all objectives related to fire prevention/fire hazards/fire inspections and fire prevention education for NC Firefighter Certification.

FIP 7322. Building Construction. 0.0 Hours. Class-19.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover all objectives related to building construction as related to Firefighter Certification.

FIP 7323. Fire Department Orientation II). 0.0 Hours. Class-25.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will enable the firefighter to become aware of the basic and advanced operations of the department and understand their position in the organization from a basic and advanced detailed perspective. Course topics will also include the review of basic and advanced safety regulations and the firefighter responsibility to comply with those regulations, the review of the elements of a basic and advanced departmental safety program and a review of the basic and advanced hazards related to fire protection.

FIP 7325. Hazardous Materials Awareness/ Operations & Terrorism (Level I & II). 0.0 Hours. Class-43.0. Clinical-0.0. Lab-0.0. Work-0.0
This course combines both the Haz Mat Awareness and the Operations into one program. Course topics include recognition, isolation, identification, and various defensive control options available to the Haz Mat Operations level responder. The course also includes elements of terrorism and it's potential impact and relationship to a hazardous materials incident. This class meets all the competencies required by OSHA 1910.120 and NFPA 472 2008 edition.

FIP 7400. Fire Fighter Recertification Training. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide training towards the 30-hour annual standards-based training requirement of the NC Fire Rescue Commission. The content of this course may change based upon local need and must be based upon NFPA Standards.

FIP 7401. Firefighter Recertificaion. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides students with information and training on a variety of basic subjects related to Firefighter I and II. This material will go towards meeting the annual requirement of a minimum of 30 hours of standard based training.

FIP 7402. Firefighter Cadet Training Program. 0.0 Hours. Class-600.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will enable the firefighter to become FFI and FFII certified according to the North Carolina State Fire and Rescue Commission. This course will cover all topics in the certification.
FIP 7500. National Fire Academy Courses. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a series of courses that have been developed by the national fire academy for delivery at the state and local fip 3500 shoul be used only if a nfa cours is not listed as a current course.

FIP 7600. Driver Operator Speciality. 0.0 Hours. Class-19.0. Clinical-0.0. Lab-0.0. Work-0.0
This collection of courses will allow the individual to become certified in driver operator specialty.

FIP 7601. Fire Apparatus: Emergency Vehicle Driver. 0.0 Hours. Class-19.0. Clinical-0.0. Lab-0.0. Work-0.0
This course deals with the safe operation of emergency vehicles, driving skills, legal implications of emergency driving, and departmental standard operating procedures. This course is one of three required for driver operator certification (need fip 3602 & 3603).

FIP 7610. Driver Operator/Introduction To Pumps. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will explain and identify job and individual requirements for pump operators and will detail safe operations of the vehicle. It will also detail the safe operation as well as the basic aspects of positive displacement and centrifugal pumps.

FIP 7611. Driver Operator/Basic Pump Operations. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will review and explain basic elements of pump operations including priming, lift drafting, pumping from a hydrant, setting engine pressure & calculating friction loss.

FIP 7612. Driver Operator/Pump Maintenance. 0.0 Hours. Class-9.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will explain job and individual requirements for pump operators and will detail safe operations of the vehicle. It will also detail the safe operation as well as the basic aspects of positive displacement and centrifugal pumps.

FIP 7613. Driver Operator/Sprinklers & Sandpipes. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will discuss and detail operations regarding set and supply operations for pump operators for sprinkler systems, wet and dry standpipe systems. It will include a review of control valves, pressure setting and operations procedures.

FIP 7614. Driver Operator/Pump Hydraulics. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will explain and demonstrate the methods and procedures to clean and maintain nozzles, appliance, and scuba equipment on a pumper.

FIP 7615. Driver Operator/Pump Service Testing. 0.0 Hours. Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide instruction for personnel who wish to teach fire and EMS subjects. The course material is the IFSTA Fire and Emergency Service Instructor Program. Instructors for this class must be qualified by a committee of three representatives from OSFM, OEMS, and NCCCS. This course meets the objectives of NFPA 1041 and Level II Standard.

FIP 7616. Driver Operator - Pumps Water. 0.0 Hours. Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will review and discuss the methods by which water supply is obtained and maintained during an emergency operation. It will detail water main systems and describe how to identify and determine flow in such systems. It will also detail mobile water supply systems and how they operate. It will describe and explain quick dump mobile water supply operations and method for relaying water to a pumper.

FIP 7617. Driver Operator-Introduction to Fire Department Aerial Apparatus. 0.0 Hours. Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to introduce personnel to various types of aerial fire apparatus and their applications to emergency operations. It will include job and individual performance issues; how to identify various types of aerial apparatus, features of the design and application of aerials and elevating platforms. It will also review unsafe acts as it relates to weather and terrain in placement and use of aerials. It will also review unsafe acts as it relates to driver operator errors.

FIP 7618. Driver Operator-Basic Aerial Apparatus Operations. 0.0 Hours. Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will review the application and use of various types of aerials including articulating booms, telescoping booms, elevated platforms, and aerial ladders. It will also cover proper record keeping procedures and the proper method to clean and maintain equipment on aerial apparatus.

FIP 7620. Driver Operator - Testing Fire Service Aerial Apparatus. 0.0 Hours. Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will detail all portions of preventative maintenance on aerial apparatus. It also covers proper recording and precautions and the proper method to clean and maintain equipment on aerial apparatus.

FIP 7700. Fire Officer Specialty I. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a specialty course for fire officers related to management and supervision.

FIP 7705. Fire Officer Qualification. 0.0 Hours. Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0
This course number may be used to report any occupational extension course that is funded with receipts, and that will not generate budget FTE.

FIP 7802. Instructor (Level II). 0.0 Hours. Class-72.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover all aspects of the NFPA 1041 Level II standard. Upon successful completion, the student will be qualified to be a Level II fire instructor.

FIP 7805. Education Methodology. 0.0 Hours. Class-64.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide instruction for personnel who wish to teach fire and EMS subjects. The course material is the IFSTA Fire and Emergency Service Instructor Program. Instructors for this class must be qualified by a committee of three representatives from OSFM, OEMS, and NCCCS. This course meets the objectives of NFPA 1041 and Level II Standard.

FIP 7902. Hospital Fire Safety Procedures. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will present basic fire safety concepts and procedures to hospital employees.

FIP 7903. Industrial Fire Brigade: OSHA Comp. 0.0 Hours. Class-48.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover methods and procedures related to fire safety industry relative to osha standards.
FIP 7905. Industrial Fire Brigade: Intermediate. 0.0 Hours. Class-29.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide intermediate level training to members of an industrial fire brigade.

FIP 7906. Industrial Fire Brigade: Advanced. 0.0 Hours. Class-29.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will detail advanced level training to members of an industrial fire brigade.

FIP 7907. Industrial Fire Brigade: Management. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover the procedures of the management and supervision of an industrial fire brigade manager.

FIP 7908. Industrial Fire Brigade: Communications. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will detail standard procedures and practices on the use of radio communications during an emergency incident.

FIP 7909. Industrial Emergency Response Training. 0.0 Hours. Class-36.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will detail various osha based training and appropriate response operations for industrial teams.

FIP 7910. Ventilation I&II. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course presents the firefighter candidate with the principles of ventilation, the types of ventilation and tools needed to perform ventilation on various types of roofs.

FIP 7911. Incident Command Systems. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will allow students to be exposed to new and emerging issues in fire and rescue as well as broaden your awareness of the Incident Command System.

FIP 8000. Wildlands Fire Protection Speciality. 0.0 Hours. Class-48.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a series of courses dealing with specialty training in wildland fire protection.

FIP 8001. Wildland Fire Suppression. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
Designed for the rural fire department firefighter as a supplement to their regular training program as outlined in nfpa pamphlet 1001. DESIGNED for both the firefighter with little experience and the firefighter with experience in wildland fires, who are not fulltime wildland firefighters and are limited to small unit initial attack units.

FIP 8002. Wildland Fire Cause and Investigation. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will provide training on the proper methods and procedures to follow during the investigation of a wildland fire. It will detail all aspects of cause, determination and investigation techniques.

FIP 8003. Wildland Incident Command Systems. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
FIP 8004. Wildland/Urban Interface Fire Fighting. 0.0 Hours. Class-19.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover aspects related to the mix of structures and woodland and train rural fire personnel in methods and tactics related to fires in the interface.
This course is designed to teach intermediate and advanced skills in underwater search and recovery. Participants will use SCUBA, SCUBA with surface communication and surface supplied air communication. Participants will work from a surface support boat and will be expected to work at varying water depths. Participants must be certified by a nationally recognized agency to the Advanced Open Water Level or above. The student must also request and complete the medical and liability release forms prior to participation. Required equipment: mask, fins, snorkel, wet suit, BCD, regulator with SBG, depth gauge, alternate air source, weights, dive knife, cylinder, minimum size 72 cu. ft.

The course will train personnel in methods and operations related to trench collapses and rescue operations.

This course will train personnel in methods and operations related to rescue in confined space situations. It will also cover OSHA related standards.

The student will be presented minimum standards for persons who drive and operate emergency vehicles. Drivers license requirements for driving emergency vehicles will be covered. The student will be presented with vehicle weights, characteristics and dynamics as they relate to emergency vehicles. This course will involve extensive practical training which will be conducted under non-emergency conditions.

This course provides the firefighter with a complete understanding of their role and responsibilities related to determining cause and origin of a fire.

This course will train fire personnel in investigation methods and procedures to be used to conduct complete investigations into the cause and determination of a fire.

This course is a specialty course that will train personnel in the unique aspects or vehicle fire investigation.
This course offers firefighters and rescue personnel information necessary in the recognition, impact and response to situations involving clandestine drug labs and detonation of bombs. Class will include procedures for responding to incidents involving both clandestine drug labs and bombs.

FIP 8210. Specialized Topics in Arson. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to provide training in new and advanced techniques and emerging topics related to fire and arson investigation.

FIP 8211. Interview Techniques for Fire Service Personnel. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will train fire service personnel in the information necessary to increase proficiency in interviewing techniques as an activity to properly obtain oral and written statements.

FIP 8212. Taking the Fire to Court. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
The cause and origin of fire and the fire scene examination leading to the identification of the cause and origin is covered. There will be discussions regarding the legal aspects of the fire scene examination and documentation of the fire scene examination.

FIP 8213. Investigation of Fire Fatalities. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a course which provides fire officials with proper training in the investigation of a death from fire. The course will detail forensic techniques and procedures.

FIP 8214. Forcible Entry Tools. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Enable the firefighter candidate to demonstrate their ability to force entry into a structure using varied tools and the maintenance of this equipment.

FIP 8304. Chief Officer Development: Fire Ops Target Hazards. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an educational experience that will help company officers and chief officers to apply techniques learned in Command and Control of Incident Operations, in controlling incidents involving target hazards in an urban Fire Department. The four-day session will utilize simulations exercises.

FIP 8317. Company Officer I - Basic Company Officer. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Basic Company Officer course is designed to lay a foundation of understanding the basic functions and duties of the Company Officer. This session consists of three pre-course assignments which must be completed prior to the students arrival on the first day of class. The four day session consists of lecture and group activities addressing the following topics.

FIP 8318. Company Officer II Advanced Company Officer. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Advanced Company Officer is designed to instruct Officer Candidates in the more challenging areas of company management. This session consists of 4 pre-course assignments which must be completed prior to the student's arrival on the first day of class. The four day session consists of lecture, group activities, and role playing exercises.

FIP 8319. Company Officer III - Company Tng & Preparedness. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Company Training and Preparedness course is designed to instruct Officer candidates on the importance of company readiness and training at the company level. This session consists of 2 pre-course assignments which must be completed prior to the students arrival on the first day of class. This four day session consists of individual presentations, lecture and group activities.

FIP 8320. Company Officer IV Firefighting Strategy & Tactics. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Firefighting Strategy and Tactics is designed to instruct Officer Candidates on sound emergency incident decision making and firefighting strategy and tactics. This session consists of two pre-course assignments.

FIP 8330. Building Construction. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the principles and practices related to various types of building construction, including residential and commercial, as impacted by fire conditions. Topics include types of construction and related elements, fire resistive aspects of construction materials, building codes, collapse and other related topics. Upon completion, students should be able to understand and recognize various types of construction and their positive or negative aspects as related to fire conditions, meeting NFPA 1021.

FIP 8331. Fire Hose, Streams, Appliances and Foam. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course offers firefighters and rescue personnel information which must be completed prior to the students arrival on the first day of class. The four day sessions consist of lecture and group activities.

FIP 8351. Company Officer I - Basic Company Officer. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Basic Company Officer course is designed to lay a foundation of understanding the basic functions and duties of the Company Officer. The sessions consists of three pre-course assignments which must be completed prior to the student's arrival on the first day of class. The four day sessions consist of lecture and group activities. Upon completion of the course the successful student should be able to master basic fire company operations.

FIP 8352. Company Officer II Advanced Company Officer. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Advanced Company Officer course is designed to instruct Officer Candidates in the more challenging areas of company management. The sessions consists of four pre-course assignments which must be completed prior to the student's arrival on the first day of class. The four day class consists of lecture, group activities and role playing. Upon completion of the class the successful student should be able to master the more complex issues facing a Company Officer.
FIP 8353. Company Officer III - Company Training and Readiness. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Company Officer and Preparedness course is designed to instruct Officer Candidates on the importance of company readiness and training at the Company level. The sessions consist of two pre-course assignments which must be completed prior to the student's arrival on the first day of class. The four day session consists of lecture, individual presentations and group activities. Upon completion of the course the student will be able to master company readiness issues.

FIP 8354. Company Officer IV - Firefighting Strategy and Tactics. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Firefighting Strategy and Tactics course is designed to instruct Officer Candidates on sound emergency incident decision-making and firefighting strategy and tactics. This session consists of two pre-course assignments which must be completed prior to the student's arrival on the first day of class. The four day class consists of lecture group activities and emergency incident simulations.

FIP 8361. Chief Officer Development I - Leadership. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an educational experience that helps Company Officers or Chief Officers to recognize what effective leadership is, understand the difference between leadership styles and develop skills required to select the most appropriate leadership style for given situations. In addition to pre-course assignments which must be completed prior to the student's arrival on the first day, the four day session consists of lecture and group activities.

FIP 8362. Chief Officer II - Human Resource Development and Community Risk Reduction. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to aid the Chief Officer Candidate in developing skills and knowledge to effectively manage and develop the human resources in their command. Also, the Candidate will study ways of managing risk reduction responsibilities at the Battalion Chief level and its effect on the overall risk reduction mission of the Charlotte Fire Department. There are required pre-course assignments in addition to the four day classroom sessions, consisting of lecture, group activities and discussion. Upon completion of the course, the successful Chief Officer Candidate should be able to effectively manage both personnel and risks under their command.

FIP 8363. Chief Officer III - Command and Control of Incident Operations. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to prepare the Chief Officer Candidate to perform as the primary decision-maker at all types of emergency incidents. The candidate will focus on the application of the Incident Command System (ICS). The four day session will consist of lecture, group activities and incident simulations. Upon completion of the course, the candidate will be able to demonstrate the ability to successfully handle command and control of complex incidents.

FIP 8364. Chief Officer IV - Fire Department Operations at Target Hazards. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Chief Officer IV course provides an educational experience that will help either Company Officers or Chief Officers to apply techniques learned in Command and Control of Incident Operations, FIP-8363. Objectives include controlling incidents involving target hazards in an urban setting. The four day course utilizes virtual simulations of various urban incidents. Upon completion of the course, the student should be able to master the necessary operations required for a successful outcome of complex incidents in the urban environment.

FIP 8371. Apparatus and Hydraulics - Driver/ Operator Pumps. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Apparatus and Hydraulics-Driver/Operator Pumps course is designed to prepare the candidate to drive and operate fire apparatus during both emergency and non-emergency situations. The course seeks to establish a minimum level of skill and efficiency with apparatus handling and pump operation. Upon completion of the course the successful candidate should be able to demonstrate practical knowledge and application in driving a fire apparatus and establishing and maintaining various pumping operations.

FIP 8372. Apparatus and Hydraulics - Driver/ Operator Aerial. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Apparatus and Hydraulics-Driver/Operator Aerial course is designed to prepare the candidate to drive and operate fire apparatus during both emergency and non-emergency situations. The course seeks to establish a minimum level of skill and efficiency with apparatus handling and aerial operation. Upon completion of the course the successful candidate should be able to demonstrate practical knowledge and application in driving a fire apparatus and effective aerial operation and placement.

FIP 8380. Hazardous Materials Awareness, Operations and Terrorism. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Hazardous Materials (Hazmat) course is designed to give the candidate the knowledge needed to identify an incident involving hazardous materials and the skills required to performed hazardous materials response operations effectively and safely. The course also includes elements of terrorism and its relationship to a hazardous materials incident, including its potential impact to both the community and environment. Upon completion of the course the successful student should be able to identify and respond to a variety of incidents involving hazardous materials.

FIP 8500. Emergency Rescue Technician. 0.0 Hours. Class-240.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover eighteen disciplines of becoming an emergency rescue technician as outlined by the north fire and rescue commission on April 1, 1998.

FIP 8501. Emergency Rescue Technician - General. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
Emergency Rescue Technician - general this course will deal with the structure, operations and rules and regulations related to rescue operations. the course will also enable the student to write a basic rescue report.

FIP 8502. Emergency Rescue Technician - Communications. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
The student will demonstrate the receiving and processing of various types of communication and demonstrate the proper use of communications equipment.

FIP 8503. Emergency Rescue Technician - Incident Command. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will present an overview of the incident command system and demonstrate and define the proper roles during an emergency incident.

FIP 8504. Emergency Rescue Technician - Fire Extinguishers. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover the various types of fire extinguishers, their proper selection and use and allow the student to have actual use of a fire extinguisher on a fire.
FIP 8505. ERT: Lifts, Carries, Drags & Modified Stretchers. 0.0 Hours.
Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will demonstrate the proper use of lifts, carries and drags to remove a victim from danger. Students will review and practice on various types of stretchers and other patient transport devices.

FIP 8506. Emergency Rescue Technician - Maintenance. 0.0 Hours.
Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover review and recommendation for the proper methods and techniques to use and maintain rescue tools and equipment used during a rescue operation.

FIP 8507. ERT- Vehicle Extraction. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will present the student various basic and advanced techniques and procedures used in a wide variety of motor vehicle accident situations.

FIP 8508. ERT - Ropes & Knots. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will train the student in the proper methods and techniques as related to ropes and knots used during rescue operations.

FIP 8509. ERT - Low & High Angle Rescue. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will present to the student the information regarding the proper selection of tools and techniques to be used during below ground and high angle rescue operations.

FIP 8510. ERT - Repelling and Ascending a Fixed Line. 0.0 Hours.
Class-0.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will train the student in the proper techniques and repelling rescue operations. Safety procedures will be paramount during this class. All students will participate in rappelling and ascending operations.

FIP 8511. Emergency Rescue Technician - Ladders. 0.0 Hours.
Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover the various types of ground ladders and their use during rescue operations. Students will be trained in their use, setup, cleaning and other inspection and maintenance of ladders.

FIP 8512. ERT - Rescue Rigging. 0.0 Hours. Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will detail the proper use of ropes and other related rescue riggin equipment used during rescue operations. This course will involve the setup and use of such equipment.

FIP 8513. ERT - Self-Contained Breathing Apparatus. 0.0 Hours.
Class-7.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover all aspects of the proper use and operations of scuba’s. This will include proper donning, cleaning and maintenance as well as the care and use of the scba.

FIP 8514. ERT - Specialized Rescue Operations. 0.0 Hours. Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will deal with specific rescue operations such as high rise rescue, mountain and wilderness rescue as well as other unusual and special rescue situations.

FIP 8515. ERT - Water Rescue. 0.0 Hours. Class-11.0. Clinical-0.0. Lab-0.0. Work-0.0
1. The Water Technical Rescuer candidate, given the appropriate equipment, shall correctly demonstrate basic shore-based rescue techniques to include Talk, Reach, and Throw. 2. The Water Technical Rescuer candidate, given the appropriate PPE and other swimming aids, shall demonstrate the correct donning and use of their PPE, and any other swimming aids necessary to safely enter and swim a designated water course. 3. The Water Technical Rescuer candidate, given the appropriate equipment and PPE, shall correctly explain and demonstrate the posturing techniques for rescuers and victims that help retain body heat and slow down the onset of hypothermia. 4. The Water Technical Rescuer candidate, given the appropriate equipment and PPE, shall correctly explain the purpose of and demonstrate the defensive swimming posture, the offensive swimming posture, and ferry angle-crossing posture.

FIP 8516. ERT - Land Search Rescue. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the techniques and procedures to be used in the operation of land search missions. The course will include information on grid techniques, sectoring, map reading and personnel management.

FIP 8517. ERT - Air Transporation. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course deals with the methods and procedures used for transport and packaging of victims for transport by aircraft to a medical facility.

FIP 8518. ERT - Hazardous Materials Operations. 0.0 Hours.
Class-36.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover the elements of hazardous materials as it relates to awareness and operations level issues.

FIP 8519. Emergency Rescue Technician - Safety. 0.0 Hours.
Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will review and detail the safety procedures and methods to be used during all types of rescue operations.

FIP 8520. ERT - Bridge Course. 0.0 Hours. Class-38.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will serve as the bridge course between the previous BRT level certification and the new ERT certification. This course is required if a person has not completed all aspects of the previous BRT and ART program.

FIP 8521. Vehicle Extraction Power Tools. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will review the use and application of air, electrical and hydraulic power tools for rescue extrication. the course will detail the various tools, explain their uses and application and demonstrate proper and safe techniques.

FIP 8522. Telpher Systems I. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the use and set up of high line rescue ropes. Some applications of a telpher system would include rescue work in a ravine, off a mountain slope or in a high angle rescue situation. the course involves the use of ropes, riggin systems and various safety devices.

FIP 8523. Ladder Rigging. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This course details the use of ladders in rescue operations and specifies safe methods to use various ladders for rescue functions. It includes techniques for securing, raising and lowering of ladders to access victims.
FIP 8553. Nc Emergency Management Incident Command System. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
The Emergency Management Incident Command System course is designed to provide the student with basic information about incident command systems consisting of primary functions, management by objectives, unity and chain of command, transfer of command, organizational flexibility, unified command, span of control, common terminology, personnel accountability, integrated communications, resource management and charting action plans.

FIP 8535. Swift Water Rescue Technician - Unit I. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is an intensive 30-hour course, designed to cover fundamental water rescue information as well as technical rope applications. Certification will be given by Rescue 3 International and meets NFPA 1670. This course will be recognized by the NC Fire/Rescue Commission/Office of State Fire Marshal toward Rescue Technician Certification, water rescue section, provided the test for Rescue Technician Water Rescue is given and passed.

FIP 8550. Urban Search and Rescue. 0.0 Hours. Class-100.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a 100 hr. nationally recognized class for qualification Urban Search and Rescue to include but not limited to: search of live victims from collapsed buildings, trapped in automobiles, buses, high rise structures, and in residences. Participant skills to include the gaining of expertise in extrication, cribbing, stabilization and moving of large concrete debris using hand labor, using of specialized tools. Participants must be capable of using heavy tools and lifting heavy loads. They also must be able to don and wear personal protective clothing during simulated rescue training.

FIP 8551. Urban Search and Rescue. 0.0 Hours. Class-120.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to provide training in the skills and techniques required for Urban Search and Rescue (USAR). Course topics may include but are not limited to: search for live victims trapped in collapsed buildings, high rise structures and residences and in automobiles, buses and other vehicles. Participants will gain expertise in the skills required for use in extrication, cribbing, stabilization, moving of large concrete debris using hand labor, using of specialized tools. Participants must be capable of using heavy tools and lifting heavy loads. They also must be able to don and wear personal protective clothing during simulated rescue training. Note: For this course to meet certification requirements it must be taught by FEMA qualified instructors.

FIP 8552. Fire Department Orientation. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will enable the firefighter to become aware of the basic and advanced operations of the department and understand their position in the organization from a basic and advanced detailed perspective. Course topics will also include the review of basic and advanced safety regulations and the firefighter responsibility to comply with those regulations, the review of the elements of a basic and advanced departmental safety program and a review of the basic and advanced hazards related to fire protection.

FIP 8554. Fire Behavior. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will allow the student to complete the objectives related to fire behavior for Firefighter I and II.

FIP 8555. Portable Fire Extinguishers. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will present the firefighter candidate with the proper use of portable extinguishers and the demonstration of the actual extinguishment of a Class A and B fire.

FIP 8556. Personal Protective Equipment. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The firefighter candidate will be presented the function of each article of protective equipment, the leading causes of death of firefighters, and the hazardous environments requiring use of protective equipment. In addition, there is a great deal of information covering the SCBA and its use.

FIP 8557. Forcible Entry. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will enable firefighter candidates to demonstrate their ability to force entry into a structure using varied tools and the maintenance of this equipment.

FIP 8558. Ventilation. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will allow the student to complete all objectives relative to ventilation for Firefighter Levels I and II.

FIP 8559. Ladders. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will train the student in all objectives related to fire hose, ventilation for Firefighter Levels I and II.

FIP 8560. Overhaul. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover all objectives related to overhaul for Firefighter I and II.

FIP 8561. Fire Hose, Appliances and Streams. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will train the student in all objectives related to fire hose, appliances, and streams in compliance with Firefighter Levels I and II.

FIP 8562. Water Supplies. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course meets all requirements for Firefighter Levels I and II for water supplies objectives.

FIP 8610. Educator I: Basic. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will give a basic overview of the duties and responsibilities of the position of educator level I and describe how the work of the position is completed in a typical fire department. The student shall demonstrate the ability to coordinate and deliver community fire and injury prevention programs.

FIP 8611. Educator I: Education. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
During this course the student will be trained how to select educational materials will present a prepared program and utilize multiple presentation methods given preplanned program for various audiences. They will also demonstrate how to distribute educational information and how to work in co-operation with local media personnel.

FIP 8612. Educator I: Administration. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will review and document various fire and life safety educational programs, describe various formats, prepare reports, and discuss time management or organizing skills. Information will be presented on how to develop and maintain a work schedule and how to arrange meetings present ations and events to reduce conflicts.
FIP 8613. Educator II: Planning and Development. 0.0 Hours.
Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will detail methods and procedures to be used to establish public fire education and life safety prevention programs based upon local loss and injury data. Students will learn how to implement an evaluation program, how to prepare a funding proposal, and how to use human and material resources to deliver programs.

FIP 8614. Educator II: Education. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
The purpose of this course is to train individuals in how to develop educational materials based upon an identified issue or local concern; how to develop a detailed lesson plan; and how to design and present the program to an audience.

FIP 8615. Educator II: Administration. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will train an individual how to prepare a budget request costs. It will train the student in the details of the budget process as it related to fire and injury prevention programs.

FIP 8616. Educator III: Planning and Development. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will train personnel in how to develop a fire and life safety education program using the systematic planning process. They will become familiar with program issues and administration to include political and the use of the cost/Benefit analysis method.

FIP 8617. Educator III: Education. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This students will learn to create fire and life safety education materials that relate to local issues. They will learn to create training and awareness programs to meet local identified fire and life safety needs. They will learn how to create a comprehensive report on programs and how to develop an evaluation instrument to measure outcomes of program.

FIP 8618. Educator III: Administration. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will detail methods and procedures on how to create fire and life safety goals and objectives, mission statements, and review loss statistic so that goals are consistent with the organization's mission.

FIP 8628. Rescue Equipment - Torches. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will allow the student to be exposed to both new and existing torches used in cutting and specialized rescue operations. Emerging new technology and techniques in the field of rescue cutting torch use will be discussed and displayed. Upon completion of the course the student should be able to identify and operate different types of rescue cutting torches to a high degree of proficiency as required in rescue operations.

FIP 8700. Aircraft Fire Protection Speciality. 0.0 Hours. Class-96.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a series of courses allowing a student to complete a specialty in aircraft fire protection.

FIP 8701. Initial Airport Firefighter Training. 0.0 Hours. Class-48.0. Clinical-0.0. Lab-0.0. Work-0.0
This program provides indepth aircraft rescue and firefighting training in preparation for assignment to an airport fire department. Program satisfies needs of far 139. 319.

FIP 8704. Fire Department Accident Investigation. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to prepare chief officers with practical training in proper methods and procedures to follow in investigating and documenting any type of accident or injury that may occur in a fire department operation.

FIP 8705. Area Fire/Rescue School I. 0.0 Hours. Class-14.9. Clinical-0.0. Lab-0.0. Work-0.0
This is a 2-day fire rescue course program for training at the area or regional level. Content varies according to local need and requests.

FIP 8707. Liability in the Fire Service. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will educate the student in various aspects of legal liability of the fire service. It will cover all aspects of related law and review recent cases.

FIP 8708. Home Fire Safety I. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will train fire service personnel in the proper methods and procedures to use in conducting home fire safety training and checks for residential structures.

FIP 8709. Fire Dept Operations in Sprinkled Bldgs. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will review proper methods and procedures to be used by fire department personnel when responding to and containing fires in sprinklered buildings.

FIP 8710. Live Fire Training Specialist Line. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
This is specialized training that qualifies the student to conduct live burn training. This course is operated mainly by the North Carolina Fire & Rescue Division of the NC Department of Insurance Staff.

FIP 8711. Self Contained Breathing Apparatus. 0.0 Hours. Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a specialist class designed to allow the student to be a specialist in the area of SCBA. This is an advanced course.

FIP 8712. Positive Pressure Ventilation. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
The purpose and tactical priorities of positive pressure ventilation are detailed.

FIP 8713. Vehicle Fires I. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a course which trains fire personnel in the proper methods to attack and extinguish various vehicle fires.

FIP 8714. Live Structural Burn Training. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
This class involves the student participating in a live burn of a structure for realistic fire service training. All training should be conducted in accordance with NFPA 1403.

FIP 8715. First Responder (Medical) Certification. 0.0 Hours. Class-65.0. Clinical-0.0. Lab-0.0. Work-0.0
This is an extensive course which allows for the fire department personnel to be qualified as a first responder. This course is approved by NC OEMS and the local county EMS director.

FIP 8716. Telecommunicator Certification Training. 0.0 Hours. Class-48.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a course designed to train emergency dispatch person nel on proper methods and procedures to obtain certification as a telecommunicator.
FIP 8717. Preparing for an ISO Inspection Fire Service. 0.0 Hours.  
Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course will review all the factors in the ISO Public Protection. Rating  
for cities and fire districts. This course will allow you to improve the  
representation of the department for maximum credit, possibly lowering  
insurance premiums for property owners.

FIP 8718. NC Fire Protection Law. 0.0 Hours. Class-14.0. Clinical-0.0.  
Lab-0.0. Work-0.0  
This course reviews all aspects of the NC Fire Protection Law at the  
county and municipal level.

FIP 8719. Private Fire Protection Systems. 0.0 Hours. Class-19.0.  
Clinical-0.0. Lab-0.0. Work-0.0  
This course will cover purpose and function of all alarm-receiving  
instruments and personnel-alerting equipment provided in fire stations,  
identify traffic control devices installed in fire stations to facilitate response  
of apparatus; define all five alarm signals—including multiple alarm and  
special signals.

FIP 8720. Scuba Repair and Maintenance. 0.0 Hours. Class-14.0.  
Clinical-0.0. Lab-0.0. Work-0.0  
This course will train personnel into the proper methods and procedures to  
be used to repair various scuba equipment.

FIP 8721. Pre-Fire Planning I. 0.0 Hours. Class-29.0. Clinical-0.0.  
Lab-0.0. Work-0.0  
This course is designed to prepare the firefighter for developing pre-fire  
surveys and a workable plan.

FIP 8723. Railroad Emergencies I. 0.0 Hours. Class-14.0. Clinical-0.0.  
Lab-0.0. Work-0.0  
This class covers the aspects of rail incidents for emergency responders.  
The variety of containers on railroad cars are examined and includes the  
placard system used in product identification.

FIP 8724. Large Diameter Hose Applications. 0.0 Hours. Class-14.0.  
Clinical-0.0. Lab-0.0. Work-0.0  
This course is designed for persons using, planning to use, or specifying  
Large Diameter Hose. Urban, suburban and rural hands-on formats will be  
used. NFPA standards and LDH safety will be covered.

FIP 8725. Mobile Water Supply I. 0.0 Hours. Class-14.0. Clinical-0.0.  
Lab-0.0. Work-0.0  
This course will detail all aspects of the provision of mobile water supply to  
rural fire departments.

FIP 8726. Terrorism: Problems and Responsibilities. 0.0 Hours.  
Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course details the various issues and problems that are encountered.  
From a fire department and rescue perspective, during a terrorist attack.

FIP 8727. Fire Operations and High Rise Buildings. 0.0 Hours.  
Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course will review special problems and challenges encountered during  
high rise fire operations.

FIP 8728. Special Topics: Fire and Rescue. 0.0 Hours. Class-40.0.  
Clinical-0.0. Lab-0.0. Work-0.0  
This course will allow students to be exposed to new and emerging issues in  
fire and rescue.

FIP 8729. General Practices: Fire and Rescue. 0.0 Hours. Class-14.0.  
Clinical-0.0. Lab-0.0. Work-0.0  
This training will consist of general fire and rescue training dealing with  
basic fire and rescue principles of operations. This course would serve as  
introductory and/or refresher training. This course would not lead to any  
fire or rescue certification.

FIP 8731. Technical Rescuer Victim Management Rescue. 0.0 Hours.  
Class-60.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course will present the Technical Rescuer with the knowledge, skills,  
and ability to satisfy the requirements of Chapter Ten (VMR) of NFPA  
1006: Standard for Technical Rescue Professional Qualifications. Classes  
included in this course are: Rescue Operations for VMR, Vehicle Anatomy  
and New technologies, Stabilization and Extrication techniques, Bus and  
Machinery, and Victim Management.

FIP 8815. Technical Rescuer - General. 0.0 Hours. Class-440.0.  
Clinical-0.0. Lab-0.0. Work-0.0  
This course will present the Technical Rescuer with knowledge, skills and  
ability to perform rescues in various types of environments and implement  
technical rescue skills to effect a rescue. Topics include rescue situations  
in structural and wilderness settings. Upon completion of the course,  
successful students should be proficient in the operations necessary to  
mitigate various rescue scenarios.

FIP 8816. Technical Rescuer - Vehicle and Machiniry Rescue. 0.0  
Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course will present the Technical Rescuer with the knowledge, skills  
and ability to perform rescues in various types of environments and implement  
technical procedures to effect a rescue. Topics include types of  
entrapments, mechanisms of injury, potential hazards, successful  
strategies and firefighter safety. Upon completion of the course, successful  
students should be proficient in the operations necessary to mitigate  
various rescue scenarios.

FIP 8817. Technical Rescuer-Ropes. 0.0 Hours. Class-75.0. Clinical-0.0.  
Lab-0.0. Work-0.0  
This course will present the Technical Rescuer with the knowledge, skills,  
and ability to satisfy the requirements of Chapter Six (Ropes) of NFPA  
1006: Standard for Technical Rescue Professional Qualifications. Classes  
included in this course are: Rescue Operations for Rope, Anchors,  
Mechanical Advantage Systems, Fixed Rope Systems, Lower and Raises,  
High Lines, and Victim Management.

FIP 8819. Technical Rescuer - Ropes. 0.0 Hours. Class-440.0.  
Clinical-0.0. Lab-0.0. Work-0.0  
This course will present the Technical Rescuer with knowledge, skills and  
ability to perform rescues in various types of environments and implement  
technical rescue procedures to effect a rescue. Topics include rescue  
operations, ropes, knots, anchors, raises and lowers, victim management  
and scene safety. Upon completion of the course, successful students  
should be proficient in the operations necessary to mitigate various rescue  
scenarios.

FIP 8820. Surface Water Rescue Technician. 0.0 Hours. Class-40.0.  
Clinical-0.0. Lab-0.0. Work-0.0  
This course is designed to fulfill the elements of the NFPA 1006 (Rescue  
The course will cover the five aquatic environments that are most  
commonly faced in the state of North Carolina including Surf and Tidal  
waters, Flood waters, Swift waters, Still or Standing waters and Ice.  
The course will consist of both classroom and hands-on practical skills  
applications. This class will be restricted to personnel with the following  
types of certified training: ERT, Firefighter I or II and completion of a  
recognized High-Angle School, and other recognized water training  
courses.

FIP 8828. Flammable Liquid Fire Fighting. 0.0 Hours. Class-14.0.  
Clinical-0.0. Lab-0.0. Work-0.0  
This course deals with preparing the firefighter to respond and contain  
flammable liquid fires such as hydrocarbons.
FIP 8831. Helicopter Landing Operations. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will train fire and rescue personnel in the pro- per methods and procedures to be used to properly support and conduct safe landings of helicopters for casualty evacuations, disaster flyovers, and emergency situations.

FIP 8832. Survival: Field Maintenance AI-30. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
During this class the overall procedures in the maintenance and overhaul of the survivair xl-30 unit. Inspecting all equipment at yearly intervals for substandard performance and maintaining maintenance records.

FIP 8839. Fire Brigade Training I. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides training to industries, correctional institutions and others agencies on the use of in-house fire protection equipment.

FIP 8847. Emergency Response: Industry. 0.0 Hours. Class-29.0. Clinical-0.0. Lab-0.0. Work-0.0
During the course of instruction, the response team will be introduced to fire behavior concepts, portable fire extinguisher, and their use and proper evacuation procedures. Also included in this course will be cpr, first aid, lifting pro- cedures and osha regulations concerning haz mat and infection control.

FIP 8848. Industrial Emergency Response Team Training. 0.0 Hours. Class-84.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a combination of the first responding train- ing course, hazardous materials awareness level, and intro- duction to fire suppression. It provides members of emergency response teams in industrial setting with the information needed to respond to common in-Plant emergency situations.

FIP 8850. Pesticide Spill and Control. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
During this class the students are given information on the very increasing problem of pesticide spill and fire control. This course was developed by the national fire academy to address the pesticide problem. Students are given material on how to recognize hazardous pesticides, how to utilize pesticides, resources and what pesticides have on pollution.

FIP 8853. Fire Management for the New Officer. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to assist candidates with their management responsibilities for future promotion to Fire Captain. It consists of City of Charlotte guidelines and Charlotte Fire Department General Orders.

FIP 8859. Mantracking Practices I. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a specialty search and rescue class that teaches procedures to be used in a search for a lost person. It teaches tracking procedures.

FIP 8860. Wilderness Rescue. 0.0 Hours. Class-13.0. Clinical-0.0. Lab-0.0. Work-0.0
This class trains personnel on methods and procedures to be used in a remote wilderness rescue operation.

FIP 8861. Chlorine Safety. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
Covers the basic of an accidental leak of chlorine. How to detect and plug a leak are discussed. Different size chlorine containers are reviewed.

FIP 8863. Wildland/Urban Interface Fire Protection. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
This course expose students to urban interface fire protection, fire organization and behavior, suppression methods, strategies and tactics, and safety concepts in forest fire suppression situations encountered by initial attack units.

FIP 8872. Helicopter Landing Operations. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
A helicopter landing briefing. Students, learn the requirements of landing a helicopter at an unplanned site.

FIP 8874. Building Collapse I. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
Covers the causes of building collapse, how fire affects the structural integrity of a building, and the sign of a poten- tial failure.

FIP 8875. Railway Emergencies for Emergency Personnel. 0.0 Hours. Class-19.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will cover information on hazardous material com- mon in rail transportation: detecting the presence of a haz- mat, placarding, shipping papers, hazard classes, identif- ication numbers, train consist, key trains and key routes, incident reporting and notification.

FIP 8880. Fire Cause & Investigation (Fire College). 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers legal aspects of fire and arson investi- gation, determining fire causes and origin, care managements collection and preservation of physical evidence.

FIP 8881. Technical Rescuer-General-Rescue Operations. 0.0 Hours. Class-9.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will present the Technical Rescuer with the requirements for proper site operations, victim management, and maintenance for all of the rescue disciplines which include rope rescue, confined space rescue, trench rescue, structural collapse, vehicle and machinery rescue, surface water, swift water rescue, and wilderness rescue.

FIP 8882. Technical Rescuer-General-Personal Protective Equipment. 0.0 Hours. Class-9.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will introduce to the Technical Rescuer the need for and use of personal protective equipment to enable the rescuer to perform his/her duties in a safe and responsible manner. Physical characteristics of rescuers, stress, endurance, and the limitations of equipment will be discussed.

FIP 8883. Technical Rescuer-General-Rescue Equipment. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will introduce the Technical Rescuer to the operation and function of various tools and equipment commonly used in rescue operations. This course will also present procedures for care, inspection, and maintenance of personal protective equipment, tactical equipment, and apparatus. The value of periodic inspection and maintenance to reduce the chances of unexpected equipment failure, performance failure, disabling injuries, and fatalities will be discussed.

FIP 8884. Technical Rescuer- General Helicopter Transport. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will present to the Technical Rescuer general operating and safety guidelines when working with helicopters at emergency scenes for the protection of on scene emergency providers, flight crews, and the civilian population.
This course will present the Technical Rescuer the proper use of ropes and other related rescue rigging equipment used during rescue operations. This course will involve the setup of various ladder and timber configuration for technical rescues.

FIP 8886. Technical Rescuer-General-Ropes. 0.0 Hours. Class-21.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will present to the Technical Rescuer safe and effective methods of rescue in elevated and below grade environments using ropes, knots, and rope related equipment. Mechanical advantage, anchors, anchoring techniques, and stress loads will be covered.

FIP 8887. Technical Rescuer-General-Victim Management. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will present the Technical Rescuer vehicle anatomy and introduce new technologies in vehicle devices which present hazards for rescue personnel. Topics included in this class are: vehicle construction, crumple zones, bumper systems, air bags, side impact protection systems, new vehicle innovations, propulsion systems, passive safety systems and active safety systems. Suggestions on how to cope with innovative vehicles to safely mitigate a modern vehicle rescue will also be discussed.

FIP 8888. Vehicle & Machinry Rescue - Rescue Operations. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will present the Technical Rescuer the consistency of hazards of vehicle rescue operations, ICS, access, disentanglement, extrication, and the post rescue phases of vehicle rescue.

FIP 8889. Vehicle & Machinry Rescue - Vehicle Anatomy. 0.0 Hours. Class-9.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will present the Technical Rescuer the steps to stabilize a vehicle on four wheels, a side-resting vehicle and a roof-resting vehicle. The Technical Rescuer will also be introduced to procedures for the following: opening a jammed door using a hinge attack and a latch attack, how to create a third door, total door removal, sidewall removal, working with a collapsed roof, creating the roof flap, C-B-A roof pillar cut, procedures for total roof removal, trunk tunneling, through the floor access, how to displace a steering column, dash roll, removal and/or relocation of pedals, and how to remove and/or relocate seats.

FIP 8890. Vehicle & Machinry Rescue - Stabilization Extricate. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will present the Technical Rescuer construction style and use of school, mass transit, and tour buses. The class will offer additional information on how to organize size-up, gaining access, vehicle stabilization, enlarging openings, disentanglement of victims, extrication techniques, and post rescue operations. The Technical Rescuer will be introduced to methods to control electrical, fuel, fire, traffic, A/C, and engine hazards.

This class will present the Technical Rescuer the hazards of vehicle rescue operations, ICS, access, disentanglement, extrication, and the post rescue phases of vehicle rescue.

FIP 8892. Vehicle & Machinry Rescue - Victim Management. 0.0 Hours. Class-15.0. Clinical-0.0. Lab-0.0. Work-0.0
This class will present the Technical Rescuer with proper methods for the movement of patients from a hazardous situation while focusing on the safety and well being of the patients and rescuers. Stabilizing the situation, gaining access, packaging, and removal patients from vehicle and machinery rescue incidents will be emphasized in this course.

FIP 8901. Hazardous Materials: Technician. 0.0 Hours. Class-95.0. Clinical-0.0. Lab-0.0. Work-0.0
This is an advanced course that requires the student to be at operations level certification. the course will train the individuals to the technician level in compliance with nfpa 472 standards and the nc fire rescue commission.

FIP 8902. Hazardous Materials: Specialist. 0.0 Hours. Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a comprehensive course dealing with one or more specialty areas such as tank cars. Flammable liquids, and etc each area is a different specialty.

FIP 8903. Hazardous Materials: Recertification. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is an awareness course designed to cover basic response objectives expected of a person certified at the Awareness Level. Course topics include recognizing the presence of a hazardous material, isolating the area to protect the public and responders, and identifying the material using various methods available to a responder. This course will cover the MX6 air monitors as well as the MPX 6000 radios. The course will increase the awareness with detection and identification of equipment currently used by responders and go over correct procedures for atmospheric monitoring. This course meets all the competencies required by OSHA 1910.120 and NFPA 472 1997 edition.

FIP 8904. Hazardous Materials: Lp & Comp Gases. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course deals with methods and procedures to be used to handle and management & other compressed gas emergencies. This will provide students with hands-on experience and training in valves tanks, and other items. This course is not part of a certification program.

FIP 8905. Hazardous Materials: Chemistry. 0.0 Hours. Class-96.0. Clinical-0.0. Lab-0.0. Work-0.0
This is the national fire academy chemistry of hazardous materials course. It details various chemical uses and provides the student with a in depth understanding of the chemical process and formulas.

FIP 8906. Hazardous Materials: Transportation Accident. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course deals with the handling of the hazardous materials during rail, highway, water, and airway accidents. This course provides procedures and policies that should be used in the event of a transportation accident involving hazardous materials.

FIP 8907. Hazardous Material: Flammable Liquids. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course deals with methods and procedures to be used to handle and contain flammable liquid spills and other accidents.

FIP 8908. Special Topics. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will allow students to be exposed to new and emerging issues in fire and rescue as well as broaden your awareness of the Incident Command System.
FIP 8909. Incident Command System 300. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides training for personnel who require advanced application of the Incident Command System (ICS). The course expands upon information covered in the ICS -100, ICS -200 courses.

FIP 8910. Incident Command 400. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides training for personnel who require advanced application of the Incident Command System (ICS). The course expands upon information covered in the ICS -100-300 courses.

FIP 8911. Personal Protective Equipment. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The firefighter candidate will be presented the function of each article of protective equipment, the leading causes of death of firefighters, and the hazardous environments requiring use of protective equipment. In addition, there is a great deal of information covering the SCBA and its use.

GIS 7011. Introducing ArcGIS. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
ArcGIS is a GIS developed and sold by Environmental Systems Research Institute, Inc. (ESRI). It has a long history and has been through many versions and changes. Originally developed for large mainframe computers, in the last 10 years it has metamorphosed from a system based on typed commands to a full-featured graphical user interface (GUI), which makes it easier to use. Because of the size and complexity of the suite of programs, and because users have come to depend on certain aspects of the software, much of the code is carried forward and included in new versions. Knowing this background helps a student of ArcGIS understand the nature of the ArcGIS system, and helps explain some of its odd features and characteristics.

GIS 7012. Working with ArcMap. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
ArcMap works with map documents; a map document is a collection of different spatial data layers and tables, along with instructions for how the layers will be displayed. Map features have properties that control the symbol, color, and style with which they are drawn. Tables have properties that specify which fields are shown, how many decimal places are included, and so on. The map document keeps track of all of these layers and their properties, so that when it is opened again, the map appears exactly as it was when it was last saved. Even the size of the windows and the location of the toolbars are stored when saving the document.

GIS 7013. Coordinate Systems and Map Projections. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
A successful GIS system depends in large part on using projections correctly, and a person's skill in managing and converting projections can dictate the value of a database. Unfortunately, projections can be somewhat daunting to those encountering them for the first time, so review is often necessary to become comfortable. One learns best about projections by working with them.

GIS 7014. Drawing & Symbolizing Features. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
ArcMap provides many ways to present and analyze map data, and one of the most powerful techniques is assigning symbols based on one or more attributes. Readers can quickly see spatial patterns not readily apparent from looking at the data. This section presents many ways to display features, and it also shows how to edit symbols and save them in groups, as styles.

GIS 7015. Working with Tables. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
A table is a data structure for storing multiple attributes about a location or object. ArcGIS manages these data tables in an object it refers to as a Table, which is a window that displays information from the tabular data structure and allows the user to work with the information in the file. The data may come from several types of data files, but the Table itself always looks the same and has the same functions, so that users don't need to learn different commands for working with different file types.

GIS 7016. Queries. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
A query extracts features or records from a data table and isolates them for further use, such as printing them, calculating statistics, editing them, creating new files from them, or doing more queries. In the simplest kind of query, the selected features are highlighted on the screen, and the corresponding records in the table are highlighted as well. This course provides examples of that selection and highlighting.

GIS 7017. Spatial Joins. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
A spatial join is similar to an attribute join except that instead of using a common field to decide which rows in the table match up, the location of the spatial feature is used. For example, a point layer containing locations of wells and a polygon layer of geology could be joined to determine the geologic unit the well lies within. Each well gets the attribute information from the polygon it lines inside. An alternate criterion is distance - joining records that lie closest to each other, such as tagging each hotel with its closest restaurant.

GIS 7018. Map Overlay. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Spatial joins, although powerful, are limited when spatial features do not overlap exactly. When this limitation occurs, the ability to split features and assign use to each section is required. This ability to split features that partially overlap is the most important feature of a map overlay and explains how it differs from a join.

GIS 7019. Presenting Data. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
GIS analysis often results in information to be shared with others in the form of maps or reports. Whether you're creating a large poster-style map, a page-sized map, or a report, a few guidelines help in devising a map design which expresses the essence of the data and gets its message across. This section introduces some basic ways to communicate ideas to others.

GIS 7110. Geocoding. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
A street address contains a type of spatial information; however, additional knowledge on the part of the post office is required in order to deliver mail, e.g. the location of the street and the sequence of house numbers. Geocoding combines map information with street addresses in order to locate a point uniquely; it enables someone to convert a list of addresses into points on a map.
GIS 7111. Basic Editing in ArcMap. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Editing in ArcMap provides the ability to modify and update existing layers of data, or to create new ones. For example, if a housing subdivision is added to a city, the new roads must be added to the city’s roads layer. Likewise, new parcels, sewer lines, and other infrastructure need to be added to the city database to ensure it is up to date. A new layer may be created to reflect a city council’s decision to create garbage collection zones where none existed before. This section provides insight into these processes.

GIS 7112. More Editing Techniques. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Examining additional ways to form and modify features. First, examining the functions of the different types of sketch tools, look at ways to modify and reshape features, combine features together, and create new features by buffering old ones. Finally, discovering how to easily edit features which share a common boundary.

GIS 7113. Working with Geodatabases. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
In ArcGIS software, coverages were the first data model used. Later in ArcView, shapefiles were developed; in ArcGIS 8 the geodatabase model arrived. The new model offers advantages over coverages and shapefiles but is simpler in construction and more robust in general usage. This module provides insight into those advantages.

GIS 7114. Analyzing Networks. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Networks consist of a system of paths traveled by a variety of things, e.g. traffic, water, sewage or electricity; they generally also have a modeling capability to be able to better answer common problems that may arise. Geodatabases contain a special data model developed to answer those same kinds of questions by creating a network of feature classes or layers. This module explores that technique.

GIS 7115. Raster Analysis. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The availability of two different data models, raster and vector, provides added flexibility to options for data storage and analysis. Neither model is intrinsically superior; both have areas in which they excel and areas in which they are at a disadvantage. Having a grasp of both tools holds the key to developing the most efficient and accurate analysis.

GIS 7116. Introduction to ArcGIS 9.3. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
ArcGIS 9.3 is a software package developed and sold by Environmental Systems Research Institute, Inc. (ESRI). It has a long history and has been through many versions and changes. Originally developed for large mainframe computers, in the last 10 years it has metamorphosed from a system based on typed commands to a full-featured graphical user interface (GUI), which makes it easier to use. Because of the size and complexity of the suite of programs, and because users have come to depend on certain aspects of the software, much of the code is carried forward and included in new versions. Knowing this background helps a student of ArcGIS understand the nature of the ArcGIS system, and helps explain some of its odd features and characteristics.

GIS 7117. Introduction to ArcPad and GPS Analyst. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
A comprehensive suite of theory, techniques, and hands-on practice to learn to use GPS equipment/software for data collection, with the final product being a geospatial data layer. Course emphasis is on how to complete a GIS project from start to finish. The student will learn how to plan a field collection, create a data dictionary, download and correct GPS data, and then export to a GIS data format. Equipment and software used during the course for project planning and field exercises include Trimble Mapping GPS receivers, Pathfinder Office and GPS Analyst software, and ESRI ArcGIS and ArcPad software.

GIS 7200. HAZUS-Multi-Hazard Training - Hurricanes. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is designed specifically to provide training in: An introduction and overview of HAZUS; The particular nuances using ArcGIS software for map creation and basic editing; And the use of models for various hurricane scenarios.

GIS 7320. Integrating Cultural Resources with GIS GPS. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
A comprehensive suite of theory, techniques, and hands-on practice to learn to use GPS equipment/software for data collection, with the final product being a geospatial data layer inside. Course emphasis is on how to complete a cultural resources GPS project from start to finish. The student will learn how to plan a field collection, create an SDH compliant data dictionary, download and correct GPS data, and then export to a GIS data format. Equipment and software used during the course for project planning and field exercises includes Trimble Mapping GPS receivers, TerraSync Field Software, Pathfinder Office software, and ESRI ArcGIS.

GIS 7500. GIS in Economic Development. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Having the right tool for the right job is an accurate way of describing the requirement for the use of GIS technology in the role of economic development. Without the tool and data, performing adequate analysis to be able to determine suitable (or best) site selections are extremely difficult and sometimes impossible. Without that analysis, marketing or other forms of communications of strengths is a formidable task. This course describes those tools, data and communications techniques.

GIS 7600. Geographic Information Systems in Law Enforcement. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
GIS makes critical information from local, state, and federal government agencies readily available. Law enforcement officials can benefit from this availability by planning and reacting more effectively. This ability is provided through the integration of information such as property ownership, accessible streets and highways, hazardous material locations, fire preplans and zoning information. This course provides the basics for this integration through planning, map creation, data acquisition & preparation, mitigation analyses and the presentation of that analyses.

GIS 7700. GPS in GIS. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
A comprehensive suite of theory, techniques, and hands-on practice to learn to use GPS equipment/software for data collection, with the final product being a geospatial data layer inside. Course emphasis is on how to complete a cultural resources GPS project from start to finish. The student will learn how to plan a field collection, create a data dictionary, download and correct GPS data, and then export to a GIS data format. Equipment and software used during the course for project planning and field exercises includes Trimble Mapping GPS receivers, TerraSync Field Software, Pathfinder Office software, and ESRI ArcGIS.
GIS 8101. Working with ArcPad 7. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
ArcPad is ESRI's mobile GIS software that is used to capture, display, analyze, and edit geographic information in the field. This focused course provides an overview of ArcPad 7 and demonstrates some of its powerful capabilities. Students learn about the wide range of tools, symbols, and style sheets that come with ArcPad and how ArcPad is used to gather and edit data. The course emphasizes best practice principles and considerations for common field tasks.

GIS 8111. Learning ArcGIS9. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
ArcGIS Desktop software is an integrated system that includes all the tools needed to get the most out of a GIS. This course introduces fundamental concepts of GIS and the major functionality contained within ArcGIS Desktop software. In course exercises, participants follow the GIS analytical process and work with a variety of tools to solve realistic problems. This course emphasizes practical GIS skills.

GIS 8112. Creating and Intergrating Data for Natural Resource Applications. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Frequently, the natural resource data needed for a project (such as vegetation, species locations, or watersheds) does not exist. Or, the data may exist but significant manipulation is required before it can be displayed and used for analysis in a GIS. This four-module course teaches methods for acquiring, evaluation, creating, manipulating, and intergrating data in preparation for analysis and map creation. Participants will learn tips for assembling a high-quality database, as well as best practice approaches to data problems commonly encountered by those in the natural resource and conversation fields. In a course project, participants apply the skills they've learned throughout the course.

GIS 8115. Creating, Editing, and Managing Geodatabases for ArcGIS 9. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The geodatabase is the ESRI data model that allows features to be modeled more realistically then ever before. This course covers all the basics and introduces the more advanced functionality that makes the geodatabase such a powerful data model. Participants will be able to get started working with geodatabases right away and understand the range of functionality that the geodatabase offers.

GIS 8120. Understanding Map Projections and Coordinate Systems. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Map projections and coordinate systems enable us to map the three-dimensional earth on a two-dimensional surface such as paper or a computer screen. This course introduces the fundamental concepts behind map projections, datums, and coordinate systems. Participants learn how the earth's shape is defined and how geographic features are positioned using spherical coordinate systems. Essential characteristics of all map projections-aspect, perspective, and distortion-are discussed. Participants work with several popular projections and learn in which circumstances to use them. The emphasis is on theory, but participants gain practical experience working with ArcGIS software to apply map projections, modify their properties, and manipulate data sets stored in different coordinate systems. This course does not teach the mathematics behind individual map projections.

GIS 8121. Cartographic Design Using ArcGIS 9. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
As more people begin making maps using GIS software, they need to understand cartographic design principles that will help them create maps that are clear and convincing to those who will read them. This course discusses key design issues and teaches practical guidelines for creating maps that are well suited to their display medium and that speak effectively to their audience. Participants learn fundamental design principles and practice with the ArcGIS Desktop tools for creating high-quality maps.

GIS 8122. Working with Map Topology in ArcGIS. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This workshop provides an overview of map topology and gives ArcView users a foundation for working with map topology tools.

GIS 8125. Learning ArcGIS9 3D Analyst. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
ArcGIS 3D Analyst software provides advanced tools for three-dimensional modeling and analysis. This course teaches what a surface model is and shows how to create both raster and vector surfaces. Working mostly with models of terrain, participants display surfaces in three-dimensional perspective, symbolize them, and set three-dimensional properties. Participants also create realistic models by draping aerial photographs over surfaces and displaying two-dimensional features in three dimensions.

GIS 8130. Creating and Maintaining Using ArcGIS Desktop. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Metadata, the key information that documents a dataset, has emerged as a powerful tool for safeguarding an organization's investment in spatial data. Documenting datasets allows people to efficiently find them, evaluate their usefulness for a particular project, and share them with others. This course shows how metadata supports efficient management and use of spatial data and teaches practical strategies for creating and maintaining metadata using ArcGIS Desktop software. Participants learn how to write proper metadata using tools in ArcCatalog and how to automate metadata workflows using templates.

GIS 8131. Creating and Editing Geodatabase Topology with ArcGIS 9. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
ArcGIS software provides full support for geodatabase topology, including an advanced editing environment for maintaining topological relationships among features. This course explains how topology is implemented in the geodatabase and teaches how to use geodatabase topology to more accurately model the real world.

GIS 8132. Understanding Branching & Looping in VBA. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Branching allows programs to execute different code based on user input or the result of a process. With looping, programs can repeat processes until specific conditions are met. This workshop introduces the two branching methods (the If Then Else statement and the Select Case statement) and the two looping structures (the For Next loop and the Do loop) that are available in the VBA environment, and teaches how to implement them. The workshop also teaches how branching and looping can be used in conjunction with ArcObjects.
GIS 8135. Learning ArcGIS 9 Spatial Analyst. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
ArcGIS Spatial Analyst software supports a broad range of sophisticated spatial modeling and analysis applications. This course teaches how to use ArcGIS Spatial Analyst to produce and control raster data. Participants create a variety of raster surfaces including hillshade relief maps, slope and aspect surfaces, and density and distance surfaces. In course exercises, participants work within the new ArcGIS geoprocessing environment to create, execute, and automate spatial analysis workflows.

GIS 8161. Customizing ArcGIS 9. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Designed for nonprogrammers, this course reveals how to customize ArcMap and ArcCatalog. By rearranging interface controls and taking advantage of available code samples, participants learn how to tailor ArcGIS to match individual preferences and workflows. The course covers how to rearrange basic elements of the interface, customize toolbars and menus, and create custom tools and buttons. Additionally, participants learn how to locate and implement existing VBA code samples to add custom functionality.

GIS 8162. Customizing ArcMap: Easy Ways to Extend the Interface. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This workshop introduces easy ways to add custom functionality to the ArcMap interface. Using sample Visual Basic and VBA code, participants learn how to add, remove, and rearrange toolbars and menus; create new buttons, tools, command, and shortcut keys; and access commands that are not on the ArcMap interface.

GIS 8211. Spatial Analysis of Geohazards Using ArcGIS 9. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Geologic hazards loom all around. As population growth forces more communities to expand into areas at risk, concern increases about the danger that geohazards pose to people, property, and the environment. This course shows how GIS can be used to determine where geohazards are likely to occur and assess their potential impact on the human community. Participants work with ArcGIS Desktop software to analyze and map a variety of geohazards. A better understanding of these events is the first step toward effective disaster planning.

GIS 8215. Creating and Editing Geodatabase Features with ArcGIS 9. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
ArcGIS 9 software introduces new and improved sketch and edit tools for the geodatabase. This course teaches how to use those tools to build a geodatabase from the ground up. Participants learn how to utilize ArcMap’s standard and advanced tools to create and edit simple and complex features as well as feature-linked and dimension annotation. Additionally, participants learn how to work with features using coordinate geometry (COGO) descriptions and survey measurements.

GIS 8220. Introduction to ArcGIS I. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
ArcGIS Desktop software is an integrated system that includes all the tools needed to get the most out of a GIS. This course introduces fundamental concepts of GIS and the major functionality contained within ArcGIS Desktop software. In course exercises, participants follow the GIS analytical process and work with a variety of tools to solve realistic problems. This course emphasizes practical GIS skills.

GIS 8221. Introduction to Urban and Regional Planning Using ArcGIS 9. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
For decades, urban and regional planners have used GIS technology to help find solutions to the challenges posed by increasing population growth and urban development. This course covers basic urban and regional planning concepts and tasks and teaches how those tasks can be managed using GIS techniques and ArcGIS Desktop software. Participants learn how to use ArcGIS tools to address real-world social, economic, and environmental planning problems. The skills and techniques presented in the course provide an effective and efficient means of carrying out urban and regional planning tasks.

GIS 8225. Geoprocessing with ArcGIS Desktop. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Geoprocessing is a primary function of a GIS. ArcGIS Desktop software provides hundreds of tools for processing geographic data as well as ModelBuilder, a graphical environment for visualizing and executing workflows. This five-module course teaches practical strategies for using the ArcGIS geoprocessing framework to accomplish GIS work flows. Participants work with geoprocessing tools to create and organize workspaces, prepare data for analysis, and perform GIS analysis tasks, then learn how to streamline processes using models and scripts. Participants also learn how to create custom geoprocessing tools and the importance of documenting custom tools, scripts, and models. This course provides a solid foundation in the ArcGIS Desktop geoprocessing framework and emphasizes hands-on practice through software exercises.

GIS 8230. Turning Data into Information Using ArcGIS 9. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course examines the scientific methods used to derive useful information from spatial data. Participants will explore GIS theory related to the visualization, measurement, transformation, and optimization of spatial data. An underlying theme that uncertainty is an inherent characteristic of spatial data is thoroughly examined and students learn how to identify it, measure it, and live with it.

GIS 8232. Protecting Your Investment in Data with Metadata. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to make GIS professionals take a critical look at their data documentation needs. Further, this course is designed to teach GIS professionals how to use ArcCatalog to document their data according to the Federal Geographic Data Committee’s (FGDC) Content Standard for Digital Geospatial Metadata.

GIS 8235. Working with Rasters in ArcGIS 9. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Many geographic phenomena are best represented as rasters, but GIS users tend to be less familiar with this data model than with the vector data model. This course unlocks the mysteries of the raster. Participants learn which types of geographic phenomena are appropriately represented as rasters and how the type of data affects raster analysis. In course exercises, participants explore and work with a variety of raster datasets using core ArcGIS tools. Participants gain experience displaying rasters and modifying their properties to aid visual interpretation.

GIS 8240. Solving Disaster Management Problems Using ArcGIS 9. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Participants will learn to apply GIS to protect life, property, and critical infrastructure from natural disasters such as earthquakes, hurricanes, volcanoes, floods, and wildfires, as well as human-caused disasters, including technological hazards or acts of terrorism. Key GIS applications include natural hazard identification and mapping, multi-hazard analysis, shelter planning, mitigation, damage assessment, and recovery monitoring. Additionally, participants will learn how to present GIS data in ways that support emergency management analyses.
GIS 8300. Google Sketchup for GIS modeling. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will introduce and explore the tools and techniques needed to build three dimensional (3D) models using Google Sketchup and ArcGIS. Students will learn the basic techniques of creating 3D models by using basic shapefiles and TIN's in ArcGIS and extruding their elevations with Google Sketchup. Advanced techniques such as "painting" and "landscape visualization" will be introduced to create more realistic scenes.

GIS 8400. Creating GIS Web-Mapping Applications. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will focus on some of the different methods for creating and deploying useful Internet Web-Mapping applications. Students will focus on using ArcGIS Server to build and deploy applications including ArcGIS Server web mapping, Google Earth and Google Maps KML and KMZ files, and using the ArcGIS Server platform to manage web mapping applications. Students will also learn techniques in ArcMap to build maps that will function properly in ArcGIS Server and basic server maintenance for web mapping applications.

GIS 8510. Introduction to Geospatial Technology For K-12 Teachers. 0.0 Hours. Class-200.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will introduce K-12 Teachers to Geospatial Technology for use throughout the K-12 curriculum. This course will introduce the foundations of becoming literate in geospatial software and how to integrate geospatial technology into the classroom for a variety of disciplines. Upon completion of this course the student will understand the core foundations in geospatial technology and will be able to apply it within the K-12 curriculum.

GIS 8520. Advanced Geospatial Technology for K-12 Teachers. 0.0 Hours. Class-200.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will focus on advanced techniques in geospatial technology such as data management and advanced data processing. Students will learn how to manage and manipulate data to be used in a variety of applications and will understand processes essential to maintaining spatial data integrity. Upon completion of this course the student will understand how to manage spatial data and critical data maintenance for proper data functionality.

GIS 8530. Introduction to Geospatial Technology for College/University Faculty. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will introduce College/University Faculty to Geospatial Technology for use throughout higher education curriculum. This course will introduce the foundations of becoming literate in geospatial software and how to integrate geospatial technology into the classroom for a variety of disciplines. Upon completion of this course, the student will understand the core foundations in geospatial technology and will be able to apply it within a higher education curriculum.

GIS 8540. Advanced Geospatial Technology for College/University Faculty. 0.0 Hours. Class-200.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will focus on advanced techniques in geospatial technology such as data management and advanced data processing. Students will learn how to manage and manipulate data to be used in a variety of applications and will understand processes essential to maintaining spatial data integrity. Upon completion of this course the student will understand how to manage spatial data and critical data maintenance for proper data functionality.

GIS 8600. Building and Managing a Geodatabase in ArcGIS. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is designed to introduce basic concepts in building and managing a geodatabase and to explore advanced options for geodatabase use. The course will guide the student through the design process and illustrate multiple methods in customizing a geodatabase. Special emphasis will be placed on topology, annotation, and coordinate systems.

GIS 8800. GIS/GPS for NC Water Technicians. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is designed specifically for the NC Rural Water Association for technicians in NC water & stormwater utilities. It is designed to provide training in: GIS concepts, the particular nuances using ArcGIS software for map creation and basic editing, and the use of GPS devices and procedures to integrate position data into GIS systems.

GIS 8801. GIS/GPS for NC Water Technicians II. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is designed specifically for the NC Rural Water Association for technicians in NC water & stormwater utilities. It is designed to provide training in: GIS concepts, the particular nuances using ArcGIS software for map creation and basic editing, and the use of GPS devices and procedures to integrate position data into GIS systems.

GIS 8802. Water Association-Introduction to GIS. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is designed specifically for the NC Rural Water Association for technicians in NC water & stormwater utilities. It is designed to provide training in: GIS concepts, The particular nuances using ArcGIS software for map creation and basic editing.

GIS 8803. Water Association-Introduction to GPS. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is designed specifically for the NC Rural Water Association for technicians in NC water & stormwater utilities. It is designed to provide training in: The use of GPS devices and procedures to integrate position data into GIS systems.

GIS 8804. Water Association-Introduction to Cartography. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is designed specifically for the NC Rural Water Association for technicians in NC water & stormwater utilities. It is designed to provide training in: Map Creation; Basic Editing & Features of maps.

GIS 8805. Water Association-Advanced GIS. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is designed specifically for the NC Rural Water Association for technicians in NC water & stormwater utilities. It is designed to provide training in: Geoprocessing (Spatial Analysis); More Editing Techniques; Analyzing Networks.

GIS 8808. Introduction to Mobile GIS Training. 0.0 Hours. Class-200.0. Clinical-0.0. Lab-0.0. Work-0.0
ArcPad is ESRI's mobile GIS software that is used to capture, display, analyze, and edit geographic information in the field. This focused course provides an overview of ArcPad 7 and demonstrates some of its powerful capabilities. You will learn about the wide range of tools, symbols, and style sheets that come with ArcPad and how ArcPad is used to gather and edit data. The course emphasizes best practice principles and considerations for common field task.
**GIS 8901. GIS/GPS Primer for Environmental Use. 0.0 Hours.**
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will include content from 4 established courses: GIS8101 includes "A focused course provides an overview of ArcPad 7 and demonstrates some of its powerful capabilities". GIS8111 "introduces fundamental concepts of GIS and the major functionality contained within ArcGIS Desktop software". GIS8112 "Teaches methods for acquiring, evaluating, creating, manipulating, and integrating data in preparation for analysis and map creation". GIS8120 includes "Map projections and coordinate systems to enable students to map the three-dimensional earth on a two-dimensional surface such as paper or a computer screen".

**GIS 8902. GIS/GPS for Emergency Operations. 0.0 Hours.**
Class-200.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will include content from 4 established courses: GIS 8101 includes "A focused course provides an overview of ArcPad 7 and demonstrates some of its powerful capabilities." GIS 8111 "introduces fundamental concepts of GIS and the major functionality contained within ArcGIS Desktop software." GIS 8112 "Teaches methods for acquiring, evaluating, creating, manipulating, and integrating data in preparation for analysis and map creation." GIS 8120 includes "Map projections and coordinate systems to enable students to map the three-dimensional earth on a two-dimensional surface such as paper or a computer screen.

**GIS 8911. GIS for CSM - Data Management. 0.0 Hours.**
Class-200.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of ArcCatalog's tools and advanced operations, and introduces improved methods for managing and searching both spatial and nonspatial data. Students learn how to customize the interface by adding new tools and functionality. Raster data files, such as satellite images and aerial photographs, are more useful when registered to the same projection used by other GIS data in an organization's data holdings. ArcGIS software provides all the tools needed to georeference, transform, and project raster data. In this focused course, students learn how to transform a raster to fit a known projection, as well as how to scale, shift, rotate, and project raster data.

**GIS 8912. GIS for CSM - Cartography. 0.0 Hours.**
Class-200.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a foundation for understanding what a geographic information system is and the possibilities it offers for discovering patterns, relationships, and trends. You will learn how GIS maps are different from other types of paper and digital maps, what makes the data used in a GIS unique, and how to use GIS software to obtain information and create meaningful maps. In interactive exercises and activities throughout the course, you will work with ArcGIS software and see how a GIS supports problem solving in many different contexts.

**German (GER)**

**GER 7000. Technical German. 0.0 Hours.**
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The course will offer lectures and practice of German language concept with an emphasis on technical vocabulary building and on the development of conversational and understanding skills required at the workplace.

**Graphic Arts (GRA)**

**GRA 7100. Image Manipulation I. 0.0 Hours.**
Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
This course includes mouth-To-Mouth breathing one rescuer cpr; two rescuer cpr; one and/or two rescuer cpr for infant; clearing obstructed airway and study risk factors of heart attack and stroke.

**Health (HEA)**

**HEA 7000. Cpr Recertification- Course a. 0.0 Hours.**
Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
Review and update on cpr material and manikin practice. Includes written test and satisfactory preformance of one rescuer cpr.

**HEA 7002. Adult,Infant Child Cpr and First Aid. 0.0 Hours.**
Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course teaches the standard first aid skills the student needs in order to act as the first link in the ems system. Subjects such as bleeding, burns, fractures, and strokes, one-Person cpr for adult/Infant/Child, procedure for an obstructed airway and a discussion of risk factors leading to cardiac arrest and symptoms of heart attack.

**HEA 7003. First Aid 1. 0.0 Hours.**
Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course teaches the standard first aid skills the student needs in order to act as the first link in the ems system. Subjects such as bleeding, burns, fractures, and strokes are included.

**HEA 7005. Course B Cpr - Adult, Child, Infant. 0.0 Hours.**
Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will include one person (heartsaver) adult and pediatric obstructed airway, and pediatric (infant cpr).

**HEA 7007. CPR - Basic Rescuer-Course C. 0.0 Hours.**
Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will review and update cpr material and a written test will be given. Maniken practice and performance of a satisfactory one-Rescuer cpr will be done.

**HEA 7099. First Aid and Adult Cpr. 0.0 Hours.**
Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to teach basic first Aid principles, procedures for minor to major injuries and adult cpr. Comon emergencies, such as respiratory, bleeding, fracture, poisonings, burns and the proper methods of treatment are covered.

**HEA 7131. Tanning Booth Certification. 0.0 Hours.**
Class-10.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a review of optics i, optics ii, optics iii, optics iv, optics v, and optics vi.

**HEA 7226. Osha Bloodborne Pathogens Standards. 0.0 Hours.**
Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to provide mandated training on the osha bloodborne pathogens standard as specified in the standard.

**HEA 7235. Neonatal Resuscitation Program. 0.0 Hours.**
Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to equip the health care provider with the necessary skills to manage emergency situations in the newborn.
HEA 7236. Pediatric Advanced Life Support. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
The PALS course is designed to certify EMS and Critical Care Personnel in Pediatric Advanced Life Support through the American Heart Association. This course teaches the proper evaluation and treatment of a pediatric patient in cardiopulmonary arrest. Upon successful completion, the student will be awarded PALS certification from the American Heart Association. Pre-requisite: Initial PALS course, BLS certification. It is desirable but not required that and ALS certification be held.

HEA 7244. Advanced Cardiac Life Support (ACLS). 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
This course follows the standard American Heart Association guidelines. It provides physicians, nurses, paramedics and other health care providers with information concerning advanced management of the adult cardiac patient. Upon successful completion, the student will be awarded ACLS certification from the American Heart Association. Pre-requisite: Previous ACLS course and current AHA Basic Life Support (CPR) certification.

HEA 7245. Venipuncture Techniques for Lab Draws And IV Therapy. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to provide health care professionals with the necessary skills for obtaining laboratory samples and providing IV therapy.

HEA 7246. Pre-Hospital Trauma Life Support. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
Understanding the need of the trauma patient. Teaches that critically injured patient must be transported as quickly as possible, without detailed examination and treatment of non-Critical conditions. Accomplished through lecture and skills assessment. Studies kinematics of trauma, patient assessment & mgt, airway mgt, ventilation, thoracic trauma.

HEA 7247. Pediatric Advanced Life Support Recertification. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
Recertification course needed to maintain certification in advanced pediatric life support.

HEA 7248. Pediatric Advanced Life Support Instructor Trainer Course. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
Designed instructors to teach pediatric advanced life suppor after successful completion of the course, participants will be certified as pals instructors through the american heart association.

HEA 7249. Advanced Cardiac Life Support- Recertification. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
Required yearly recertification to remain certified as a provider of acs.

HEA 7250. Exploring Medical Language. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
Basic medical terminology course for health care personnel medical terms will be introduced using word roots, suffixes and prefixes as the student explores the various body structures and systems.

HEA 7252. Pre-Hospital Trauma Life Support Renewal. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to review the key content of the initial phtls course and expand the participant's knowledge and understanding of the special considerations in assessment and management of the pediatric and the elderly trauma victim. Current changes and controversies are identified and each participant should receive the knowledge and develop the ability to perform the skills identified as recommended by prehospital trauma care standards.

HEA 7253. Prehospital Trauma Life Support Instructor. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
The purpose of this course is to provide the pre-Hospital trauma life support instructor coordinator candidates with the knowledge, skills, and support materials necessary to conduct and/or participate as a faculty member in an approved phtls course.

HEA 7254. Exploring Medical Language. 0.0 Hours. Class-90.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a medical terminology course that includes the basics of anatomy and physiology, disease process and pharmacology.

HEA 7255. Cpt Medical Coding. 0.0 Hours. Class-32.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to train medical record personnel in medical coding using the cpt procedural codes.

HEA 7256. Basic Coding Principles of ICD-9-CM. 0.0 Hours. Class-32.0. Clinical-0.0. Lab-0.0. Work-0.0
A course designed to introduce icd-9-cm coding to individuals who have not had formal training in format and coding guidelines and also to be a refresher course for individuals who have not used coding for a period of time.

HEA 7260. Basic ICD-9-CM and CPT Medical Coding. 0.0 Hours. Class-58.0. Clinical-0.0. Lab-0.0. Work-0.0
Students will learn basic procedure codes for use in physician offices. Must have some medical terminology background.

HEA 7265. Anatomy & Physiology for CCE Students. 0.0 Hours. Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0
Basic anatomy and physiology course designed for students entering medical transcription and medical coding classes.

HEA 7270. Medical Reimbursement Specialist. 0.0 Hours. Class-90.0. Clinical-0.0. Lab-0.0. Work-0.0
Students will learn basic ICD-10-CM and CPT coding skills coding skills. Students will gain knowledge of Medicare, Medicaid, Managed Care, insurance terminology, billing and reimbursement skills.

HEA 7271. Medical Reimbursement Specialist- Icd-9. 0.0 Hours. Class-150.0. Clinical-0.0. Lab-0.0. Work-0.0
Students will learn basic coding skills, Medicare, Medicaid, insurance terminology and billing and reimbursement skills.

HEA 7272. Advanced Cardiac Life Support Instructor Course. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to prepare the individual to set up, teach and evaluate advanced cardiac life support courses.

HEA 7275. Medical Billing and Reimbursement. 0.0 Hours. Class-36.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to teach students the fundamental skills necessary to perform medical billing in today's managed care environment.

HEA 7280. Hospital Coding. 0.0 Hours. Class-58.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will give students instruction in ICD-9-CM diagnosis and CPT code assignments for hospital records. Students should be acquainted with basic coding before entering this course.

HEA 7300. Skills for Success. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
Provides students with study skills necessary for school and dietary management program success.
HEA 7301. Basic Coding Principles of ICD-9-CM. 0.0 Hours.  
Class-36.0. Clinical-0.0. Lab-0.0. Work-0.0  
A course designed to introduce ICD-9-CM Coding to individuals who have not had formal training in format and coding guidelines and also to be a refresher course for individuals who have not used coding for a period of time.

HEA 7302. CPT Medical Coding. 0.0 Hours. Class-42.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course is designed to train medical record personnel in cpt medical coding.

Clinical-0.0. Lab-0.0. Work-0.0  
Covers nutrition from infancy to old age. Course includes basic food groups, vitamins, minerals, energy nutrients and metabolism.

HEA 7304. Therapeutic Nutrition. 0.0 Hours. Class-54.0. Clinical-0.0. Lab-0.0. Work-0.0  
Course includes diet modifications as a response to illness, disease, growth and development, and old age.

HEA 7305. Food Systems Management. 0.0 Hours. Class-50.0.  
Clinical-0.0. Lab-0.0. Work-0.0  
Prepares students in the areas of safety, sanitation, accident prevention, menu planning and food preparation.

HEA 7306. Personnel and Administration. 0.0 Hours. Class-42.0.  
Clinical-0.0. Lab-0.0. Work-0.0  
Covers professional roles, responsibilities, personnel management, and problem solving.

HEA 7307. Neonatal Resuscitation - Instructor Trainer Course. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0  

HEA 7311. Optometric Technician Course. 0.0 Hours. Class-20.0.  
Clinical-0.0. Lab-0.0. Work-0.0  
This course is designed to provide participants with the skills necessary to function in the capacity of technician with an ophthalmic or optometric medical practice.

HEA 7312. Intermediate Icd-9-Cm Coding. 0.0 Hours. Class-24.0.  
Clinical-0.0. Lab-0.0. Work-0.0  
Follow up course to basic icd-9-Cm coding, this course will provide participants with additional coding guidelines and te ach the student how to apply the basic guidelines to specific body systems. This course will provide more hands-on coding.

HEA 7313. Advanced Coding. 0.0 Hours. Class-72.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course is a continuation of basic and intermediate coding. It will provide in-depth coverage of ICD-10-CM and CPT coding.

HEA 7315. EKG Technician. 0.0 Hours. Class-112.0. Clinical-0.0. Lab-0.0. Work-0.0  
Students will gain knowledge of cardiac terminology, understand the structure and function of the heart, and understand the anatomy and physiology of the heart. Students will gain basic understanding of the electrical conduction system and how it affects heart function. Students will identify why the EKG is done. Students will identify common arrhythmias, and demonstrate patient prep as well as proper placement of EKG leads. Students will be able to properly and safely operate the equipment, run a 12 lead EKG accurately and prepare it for reading.

HEA 7316. Dietary Managers Assoc. Exam Review. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0  
This review course covers the materials taught in each of the four dietary managers training course program--Nutrition through the life cycle, therapeutic nutrition, food systems management, and personnel and administration.

HEA 7317. Food Systems Management. 0.0 Hours. Class-85.0. Clinical-0.0. Lab-0.0. Work-0.0  
This comprehensive course addresses food service delivery systems and detailed management information from menus through recipes, forecasting, purchasing, inventory management, budgets, cost control, quality management, employee safety and more. As a certified dietary manager an essential role is human resources, which includes staffing, scheduling, motivation, performance review, training, goals and objectives and communication. This course has been approved by the Association of Nutrition and Foodservice Professionals. 70 hours classroom/50-hour preceptorship.

HEA 7318. Therapeutic Nutrition. 0.0 Hours. Class-85.0. Clinical-0.0. Lab-0.0. Work-0.0  
Content includes the basics of nutrition: food preferences and customs, dietary guidelines, digestion, nutrient needs throughout the life cycle, medical nutrition therapy; nutrition assessment/screening, implementing diet orders and care plans. 85 hours classroom, 50 hours (clinical) preceptor. Preceptor hours must be completed by the last day of class. They are scheduled individually by the preceptor and each student. Criminal background check and health screening is required by preceptor facilities and must be completed prior to starting preceptorship. Textbook required and is purchased through the Association of Nutrition and Foodservice Professionals.

HEA 7319. Sanitation: Servsafe Certification. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0  
ServSafe is the National Restaurant Association Educational Foundation's food safety program. Its focus is upon the food service leader's role in measuring risks, setting policies, and training and supervising employees.

HEA 7320. Hospital Nursing Unit Secretary. 0.0 Hours. Class-192.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course is designed to prepare individuals to perform competently as a secretary on a nursing unit. Students will learn and perform various clerical procedures such as telephone techniques, physician order interpretation, maintenance of the patient's chart, scheduling appointments and requesting supplies and/or equipment.

HEA 7326. Hospital Nursing Unit Secretary Part 2. 0.0 Hours. Class-96.0. Clinical-0.0. Lab-0.0. Work-0.0  
Course is designed to teach hospital nursing unit secretary skills such as physician order interpretation, medical chart management, and orientation to a nursing unit. Prerequisite or corequisite HEA 7254 and keyboarding at 35 wpm.

HEA 7330. Spanish for Healthcare Workers. 0.0 Hours. Class-48.0. Clinical-0.0. Lab-0.0. Work-0.0  
Designed as a basic Spanish class for healthcare workers. This course will cover basic vocabulary of greetings, daily living activities and anatomical features.

HEA 7344. Advanced Medical Life Support. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0  
AMLS is a two-day (16-hour) in-depth study of medical emergencies. This course emphasizes a pragmatic approach and format, based on teaching providers what they need to know.
HEA 7345. AMLS Instructor Course. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
This mandated class covers the material needed to prepare an individual to instruct in an AMLS class. This class meets the NAEMT requirements.

HEA 7400. Advanced Transcription. 0.0 Hours. Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0
Uses advanced transcription tapes to fully prepare students for entry into the job market as a medical transcriptionist.

HEA 7401. Medical Transcriptionist. 0.0 Hours. Class-144.0. Clinical-0.0. Lab-0.0. Work-0.0
Students learn basic medical transcription skills using a Dictaphone and computer keyboarding.

HEA 7405. Medical Transcription Formatting/Editing. 0.0 Hours. Class-176.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will prepare students with research skills, proofreading and editing ability, and also formatting of material to be transcribed. Provides students with more specialized terms related to the medical field as well as commonly confused terms, misspelled words, punctuation, grammar, and style guidelines of transcription. Familiarizes students with Microsoft Word as used by transcriptionists, including shortcuts and formatting.

HEA 7500. Medical Reimbursement Specialist Part I. 0.0 Hours. Class-72.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to prepare individuals to work in the healthcare field as a billing specialist. Part I includes medical terminology, disease process, basics of medical insurance, insurance terminology, legalities, ethics and parts of a medical record.

HEA 7600. Medical Keyboarding. 0.0 Hours. Class-40.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed as a basic keyboarding program intended for persons entering a health care field. The keyboarding practice utilizes some medical terms.

HEA 7625. Medical Keyboarding. 0.0 Hours. Class-72.0. Clinical-0.0. Lab-0.0. Work-0.0
Provides a basic keyboarding course designed for persons entering a healthcare field.

HEA 7630. Medical Receptionist. 0.0 Hours. Class-45.0. Clinical-0.0. Lab-0.0. Work-0.0
Designed for students who want to work in a physician’s office performing front-desk receptionist skills such as appointment scheduling and medical records management.

HEA 7631. Diseases and Pharmacology. 0.0 Hours. Class-27.0. Clinical-0.0. Lab-0.0. Work-0.0
Provides basic information about common diseases and their treatment as well as commonly prescribed drugs. Course is designed as a follow-up for medical terminology for students preparing for courses in medical information training.

HEA 7700. Sleep Technologist. 0.0 Hours. Class-104.0. Clinical-0.0. Lab-0.0. Work-0.0
Prerequisite: Must take test 452, be a HS graduate and have departmental permission. This program will train students to become a sleep technologist in a hospital and/or sleep center.

HEA 7701. Introduction to Health Occupations for ESL Students. 0.0 Hours. Class-54.0. Clinical-0.0. Lab-0.0. Work-0.0
Students will improve their communication in the workplace and literacy skills needed for workplace training through an overview of health care with a focus on the nursing assistant profession. Students will demonstrate the ability to use efficient learning techniques as well as acquire, evaluate, analyze and communicate information.

HEA 7800. Computer Software for the Medical Office. 0.0 Hours. Class-176.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to introduce students to software applications in the medical office. Students will learn valuable skills including medical billing, scheduling, report generation, patient data input, computer utilities and software vocabulary.

HEA 7936. Pediatric Advanced Life Support. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
The Pediatric Advanced Life Support [PALS] Course is designed to certify physicians, registered nurses or EMT- Paramedics in Pediatric Advanced Life Support through the American Heart Association. This course teaches the proper evaluation and treatment of a pediatric patient in cardiopulmonary arrest. Upon successful completion, the student will be awarded PALS certification from the American Heart Association. Prerequisite: Current AHA BLS and ACLS. * It is desirable but not required that an ACLS certification be held.

HEA 7944. Advanced Cardiac Life Support. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
The Advanced Cardiac Life Support [ACLS] Course is designed to certify physicians, registered nurses or EMT- Paramedics in Advanced Cardiac Life Support through the American Heart Association. This course teaches the proper evaluation and treatment of an Adult patient in cardiopulmonary arrest. Upon successful completion, the student will be awarded ACLS certification from the American Heart Association. Prerequisite: Current AHA BLS Certification as a Healthcare Provider.

HEA 7956. CPR Adult, Infant, Child. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
Adult, infant child CPR based on American Heart =Association standards.

HEA 7981. American Heart Association Cardiopulmonary Resuscitation Techniques -Initial. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to provide a wide variety of professionals with the ability to recognize several life-threatening emergencies, provide Cardio Pulmonary Resuscitation (CPR), use an Automated External Defibrillator (AED), and relieve choking in an adult, child or infant victim; in safe, timely and effective manner.

HEA 7982. American Heart Association Cardiopulmonary Resuscitation- Techniques - Renewal. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to provide a wide variety of professionals with the ability to recognize several life-threatening emergencies and provide Cardio Pulmonary Resuscitation (CPR), use an Automated External Defibrillator (AED), or relieve choking in an adult, child or infant victim; in safe, timely and effective manner.

HEA 7983. CPR Adult/Infant/Child Heartsaver. 0.0 Hours. Class-7.0. Clinical-0.0. Lab-0.0. Work-0.0
The Heartsaver CPR course is designed to teach CPR and relief of foreign-body airway obstruction to lay rescuers including security guards, firefighters, and police. Course teaches adult, child and infant CPR and foreign body airway management, mouth-to-mouth ventilation and rescue breathing using barrier devices that are typically used for CPR in the workplace.

HEA 7984. Cardiopulmonary Resuscitation Recertification. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is to recertify students who currently hold an American Heart Association basic CPR certification. The method of instruction will be lecture, demonstration and skill application upon training mannekins.
HEA 8020. Medical Keyboarding. 0.0 Hours. Class-48.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed as a basic keyboarding program intended for persons entering a healthcare field. The keyboarding practice utilizes some medical terms.

HEA 8025. Medical Office Terminology / Admin. Pro. Administrative Procedures. 0.0 Hours. Class-96.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed for students who want to work in a physician's office doing front desk receptionist work, appointment scheduling and medical records management. Medical terminology of all body systems is included.

HEA 8030. Medical Keyboarding and Receptionist Skills. 0.0 Hours. Class-110.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed for students who need basic keyboarding skills and front office medical reception skills.

HEA 8040. Sleep Technologist. 0.0 Hours. Class-90.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to train individuals to become a sleep technologist in a hospital and/or sleep center. Students will learn appropriate sleep terminology with anatomy and physiology, introduction to PC, CPR, and clinical aspects of sleep.

HEA 8045. Hospital Coding. 0.0 Hours. Class-45.5. Clinical-0.0. Lab-0.0. Work-0.0
This course will give students instruction in ICD-9-CM Diagnosis code assignments for hospital (in-patient) records. Students should have basic coding skills before entering this course.

HEA 8046. Medical Billing and Reimbursement. 0.0 Hours. Class-36.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to teach students the fundamental skills necessary to perform medical billing in today's managed care environment.

HEA 8047. Medical Reimbursement Specialist. 0.0 Hours. Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to prepare participants in the basics of ICD-9-CM and CPT-4 Coding, HCFA 1500 Forms, insurance basics and collections.

HEA 8051. Cancer Prevention and Early Detection. 0.0 Hours. Class-1.5. Clinical-0.0. Lab-0.0. Work-0.0
HEA 8052. Dietary Manager Distance Learning Course. 0.0 Hours. Class-290.0. Clinical-0.0. Lab-0.0. Work-0.0
The dietary manager distance learning course is designed to allow participants to learn through self study and guided discussion at home. Requirements include 140 hours of study and 150 hours of clinical preceptorship. All work is supervised by a registered dietitian. Upon completion of the course, participants are eligible for nat. Exam cert. Diet. Mgr.

HEA 8056. Medical Transcription I. 0.0 Hours. Class-192.0. Clinical-0.0. Lab-0.0. Work-0.0
This course consists of extensive medical terminology and anatomy that is needed to prepare the student to transcribe medical reports. It also includes keyboarding. Students must be able to type 45 wpm at the end of the course.

HEA 8057. Medical Transcription II. 0.0 Hours. Class-128.0. Clinical-0.0. Lab-0.0. Work-0.0
Medical transcription II is a continuation of medical transcription I with the emphasis being on increased keyboarding speed and transcribing speed.

HEA 8058. Medical Insurance Billing. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to teach individuals the fundamental skills necessary to perform medical billing in today's managed care environment.

HEA 8059. Understanding Medical Insurance. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
Students taking this course will learn a basic knowledge of medical insurance, including medical insurance, medicare/Medical info, and understanding of claim forms.

HEA 8060. Basic Icd-9-Cm Coding. 0.0 Hours. Class-32.0. Clinical-0.0. Lab-0.0. Work-0.0
A course designed to introduce icd-9-cm coding to individuals who have not had formal training in format and coding guidelines, and also to be a refresher course for individuals who have not used coding for a period of time.

HEA 8061. Basic Spanish for Health Care. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a 14 hour introductory spanish course for health care providers.

HEA 8062. Medical Reimbursement Specialist Part 1. 0.0 Hours. Class-60.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to prepare individuals to work in the healthcare field as billing specialist. Part I includes medical terminology, disease process, basics of medical insurance, insurance terminology, legalities, and the parts of a medical record.

HEA 8063. Medical Reimbursement Specialist- II. 0.0 Hours. Class-75.0. Clinical-0.0. Lab-0.0. Work-0.0
Course covers all aspects of coding and insurance billing procedures.

HEA 8065. Certified Precedural Coder (CPC) Exam Review. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
A review of ICD-9-CM and CPT medical codes for students wanting to take the CPC Exam.

HEA 8235. Neonatal Resuscitation Course. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This class is for healthcare providers. Textbook Required.

HEA 8236. Neonatal Resuscitation Instructor. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
Prerequisite: Must have current NRP provider certification. Textbook required.

HEA 8237. Pediatric Advanced Life Support. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This is a 14 hour introductory spanish course for health care providers.

HEA 8242. Bls Instructor Update Course. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a mandatory update from American Heart Association for approved basic life support instructors to address new standards for basic life support instruction.

HEA 8243. CPR Instructor. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
Textbook Required. Must have current AHA Healthcare CPR card.

HEA 8244. Advanced Cardiac Life Support. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
Textbook Required. Prerequisite: knowledge of cardiac rhythms and medications.

HEA 8247. Pediatric Advanced Life Support Renewal. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
Textbook required. Must have current NRP certifications.
HEA 8248. Pediatric Advanced Life Support Instructor Course. 0.0 Hours. Textbook required. Must have current PALS provider card.

HEA 8249. Advanced Cardiac Life Support - Renewal. 0.0 Hours. Textbook Required.

HEA 8272. Advanced Cardiac Life Support Instructor Course. 0.0 Hours. Textbook Required. Must have current ACLS provider card.

HEA 8273. Physical Therapy Workshop. 0.0 Hours. Workshop designed to meet continuing education needs of physical therapists, physical therapists assistants, and occupational therapist. Topics vary and relate to the practice of the specialties. Examples of topics include: Proprioceptive Neuromuscular facilitation I, Neuro-clinical applications of PNF, Functional Gait: Component Assessment and Treatment, and Back Education and Training.

HEA 8301. Common Sense About Feeling Tense. 0.0 Hours. This health promotion program focuses on educating participants on the effects of stress and provides suggestions for stress management and behavioral modification.

HEA 8302. Cardiovascular Risk Factor Education Program. 0.0 Hours. This course is an interdisciplinary program targeted to healthcare professionals. It is designed to identify, counsel, and treat patients who have risk factors for heart disease and stroke. The primary focus is high cholesterol and hypertension.

HEA 8303. Stroke: What Every Person Needs to Know. 0.0 Hours. This program helps educate patients and other community members on the causes and effects of stroke. The focus of the course is on facts. Supportive care for the stroke patient outlines the caregiver’s and patient’s needs.

HEA 8304. Dietary Manager Certification Exam Review. 0.0 Hours. This course serves as a review for current and past dietary manager students to help prepare them to sit for the dietary manager national certification exam.

HEA 8306. Servsafe Re-Certification. 0.0 Hours. Servsafe is the National Restaurant Association Education Foundation’s food safety program. The course is accepted in most jurisdictions that require training for food safety. This re-certification course involves a short review and the SERVSAFE exam.

HEA 8311. Optometric Technician. 0.0 Hours. This course is designed to provide participants with the skills necessary to function in the capacity of technician within an optometric or ophthalmic practice.

HEA 8316. Dietary Manager Certification Exam Review. 0.0 Hours. The Dietary Manager Certification exam review covers the material taught in each of the three training program courses - Therapeutic Nutrition, Food Systems Management and ServSafe Essentials. Eligibility to take the exam requires successful completion of the three programs. The exam is offered through the Association of Nutrition and Foodservice Professionals each October and March at designated locations. Upon passing the exam, the student will have earned the title of Certified Dietary Manager, Certified Food Protection Professional (CDM?, CFPP?).

HEA 8340. Holistic Health - Feel Better, Look Better!. 0.0 Hours. Unhappy? Overweight? Stressed? Sleep Deprived? Would you like more energy, less weight and fewer aches and pains? You know you should live more healthfully, but where do you begin? Diet, exercise, sleep, environmental toxins - all the headlines, conflicting studies, and trendy diets can be overwhelming. The premise of a holistic approach is to give the body what it needs and it will keep itself disease and symptom-free. Come learn simple, practical tools to help you quickly and easily adopt healthier habits in your day-to-day life. This 12-week interactive course provides sensible strategies to get your life "on track." It will include healthy cooking demos and taste testing. It will help you create a personalized path to greater wellbeing.

HEA 8401. Medical Transcription Internship. 0.0 Hours. This course provides internship training at local facility medical records department. Students will gain additional expertise in medical transcription using actual hospital records under the guidance of instructors.

HEA 8902. Asperger's Syndrome & Psychiatric Disabilities in Higher Ed.. 0.0 Hours. This course number may be used to report any occupational extension course that is funded with receipts, and that will not generate budget FTE.

HEA 8926. Primary Aerobic Instructor Certification. 0.0 Hours. This course is designed to certify aerobic instructors in primary aerobics through the American Aerobics Association. Class includes: aerobic structure and design, anatomy and physiology, injury prevention, workout, muscle physiology, emergency procedures, cardiovascular physiology, and certification exam.

HEA 8927. Step Aerobic Instructor Certification. 0.0 Hours. This course is designed to certify aerobic instructors in step aerobics through the American Aerobics Association. The course includes: step safety guidelines, injury prevention, drill stop, upper body anatomy, propulsion and plyometrics, certification exams.

HEA 8928. Sports Nutrition Consultant Certification. 0.0 Hours. This course is designed to certify individual as a sports nutrition consultant through the American Aerobics Association. Course includes: setting goals, energetics, designing your diet, carb loading, sports specific nutrition and certification exam.
HEA 8929. Personal Fitness Trainer Certification. 0.0 Hours.
Class-7.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to certify individuals as personal fitness trainers through the American Association of Health, Exercise Science and Allied Health Professions. The course covers topics such as fitness assessment, exercise prescription, personal training ethics, and business management.

HEA 8930. Exploring Medical Language. 0.0 Hours. Class-40.0.
Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to introduce students to the medical language and terminology used in the healthcare field. The course focuses on word parts and medical terms.

HEA 8932. Exploring Medical Language Part II. 0.0 Hours. Class-20.0.
Clinical-0.0. Lab-0.0. Work-0.0
This course continues the exploration of medical language and terminology, focusing on specific body systems and medical conditions.

HEA 8956. CPR-Adult/Infant/Child/American Heart Association. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to teach the standard first aid skills the student needs in order to act as the first link in the EMS system. Includes such subjects as bleeding, burns, fractures and strokes.

HEA 8960. 1st Aid/Infant/Child/American Heart Association. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is intended for licensed and certified healthcare professionals.

HEA 8968. CPR/Adult- Renewal. 0.0 Hours. Class-4.0. Clinical-0.0.
Lab-0.0. Work-0.0
This course is designed to teach first aid skills and knowledge. The focus is on methodology and learning styles.

HEA 8969. First Aid/Adult. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course teaches the standard first aid skills the student needs in order to act as the first link in the EMS system. Includes such subjects as bleeding, burns, fractures and strokes.

HEA 8971. First Aid/Infant/Child. 0.0 Hours. Class-4.0. Clinical-0.0.
Lab-0.0. Work-0.0
This course is designed to teach basic first aid skills needed to care for an injured child.

HEA 8982. CPR-Adult/Inf/Child-AHA-Renewal. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to teach the skills necessary to instruct others to teach first aid skills and knowledge. The focus is on methodology and learning styles.

HEA 8995. Chiropractic Assistant's 50 Hr. Basic X-ray. 0.0 Hours. Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides the chiropractic assistant with knowledge and understanding of the radiologic procedures relative to the practice of chiropractic. The student will be able to assist the doctor of chiropractic in taking and processing x-rays of the appendicular and arial skeleton.

HEA 8996. Physical Assessment for Health Care Professionals. 0.0 Hours. Class-32.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to introduce history taking and physical exam. Course is taught as an overview of history and physical for health care professionals.

HEA 8997. Public Access Defibrillation. 0.0 Hours. Class-5.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to prepare the student to apply an automatic/Semi-automatic defibrillator to a pulseless and breathless patient. The student may be trained in healthcare or be a layperson. At the completion of this class, the student will be able to: explain defibrillation and the role of CPR and correctly operate an automatic/Semi-Automatic defibrillator. (pre-Requisite: adult cpr or healthcare provider cpr.).

HEA 8998. CPR Adult/Infant/Child Heartsaver. 0.0 Hours. Class-7.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is for the general public and daycare workers.
HEA 8999. HeartSaver CPR Adult, Infant, Child Renewal. 0.0 Hours.
Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
Two-year credential (card). The HeartSaver CPR Adult, Infant, Child Renewal course is designed to review CPR and relief of foreign body airway obstruction to lay rescuers that are expected to respond to emergencies in the workplace. It is specifically designed for lay rescuers who are required to obtain a course completion card. Current textbook and pocket mask required.

Health Information Technology (HIT)

HIT 7000. ICD-10 Medical Coding. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
ICD-10 is an upgraded diagnostic and procedural medical coding system that, by law, must be implemented throughout the healthcare industry by October 1, 2014. Because this new system is radically different, it's important to prepare now. This online program offers you comprehensive, robust training in diagnostic and procedural coding, using the ICD-10-CM (diagnostic) and ICD-10-PCS (procedural) coding manuals. You will get detailed instructions for using the coding manuals, understanding the coding guidelines, and accurately applying the ICD-10 coding steps. There are more than 40 quizzes and exams for diagnoses and procedures by body system to test your knowledge and understanding. This program is for anyone in the healthcare industry who wants to master ICD-10 medical coding. Offered in partnership with ed2go. Textbooks included. Some knowledge of medical terminology is required. Education in anatomy and physiology is strongly recommended, but not required.

Heavy Equipment Maintenance (HET)

HET 7115. Electronic Engines. 0.0 Hours. Class-330.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the principles of electronically controlled diesel engines. Emphasis is placed on testing and adjusting diesel engines in accordance with manufacturer’s specifications. Upon completion, students should be able to diagnose, test, and calibrate electronically controlled diesel engines.

HET 7128. Medium/Heavy Duty Tuneup. 0.0 Hours. Class-330.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces tune-up and troubleshooting according to manufacturer’s specifications. Topics include troubleshooting engine systems, tune-up procedures, and use and care of special test tools and equipment. Upon completion, students should be able to troubleshoot, diagnose, and repair engines and components using appropriate diagnostic equipment.

Horticulture (HOR)

HOR 7011. ISA Certified Arborist Exam Review Course. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This 2 day course will better prepare students to sit for the ISA Certified Arborist Examination. All sixteen (16) domains of the exam will be reviewed: Safety, Biology, Soils, Water, Fertilization, Working in Trees, Pruning, Tree Support Systems, Tree ID, Tree Selection, Installation, Assessment, Diagnosis, Plant Health Care, Trees & Construction and Urban Forestry. Students should have read and studied Arborist' Certification Study Guide - Sharon Lilly (ISBN 978-1-881956-69-3) prior to attending this class. Please note: This is an Exam Prep course only. Students must register separately for the ISA Certified Arborist Examination.

HOR 7012. North Carolina Landscape Contractors’ Exam Review Class. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This 15-hour class, held over three evenings, will better prepare students to sit for the North Carolina Landscape Contractors’ Exam. The material included in the general landscaping multiple choice exam and the Landscape Design exam will be covered; the plant ID portion is not included. Students should have read and studied the North Carolina Landscape Contractors Registration Board Study Manual which is available through NCLCRB at nclcrb@nclcrb.org. Please note: This is an exam prep course only. Students must contact the NCLCRB for the exam registration.

HOR 7013. North Carolina Department of Agriculture Pesticide Applicators’ Exam Review Class. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This eight-hour class will better prepare students to sit for the North Carolina Department of Agriculture Pesticide Applicators’ Examination. The material included on the CORE and Ornamentals & Turfgrass Pest Control exams will be covered. Students should have read and studied the three manuals: Applying Pesticides Correctly, N.C. Pesticide Laws & Regulations, and Ornamentals & Turfgrass Pest Control (available from http://www.agr.state.nc.us/SPCAP/pesticides/CATEGE XP.HTM). Please note: This is an exam prep course only. Students must contact the North Carolina Dept. of Agriculture for the exam registration (919.733.3556).

HOR 7014. Greenhouse & Landscape Skills. 0.0 Hours. Class-330.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the basic fundamentals of applied botany, plant identification, propagation, greenhouse operation, landscape installation and maintenance. Students will master many of the skills necessary to qualify for entry level positions in the horticulture field.

Hydraulics (HYD)

HYD 7001. Hydraulics & Pneumatics. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
An introductory course in industrial fluid power systems emphasizing fluid power applications, properties, air & hydraulic cylinders, and pressure & flow control circuits.

HYD 7112. Hydraulics-Medium/Heavy Duty. 0.0 Hours. Class-80.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces hydraulic theory and applications as applied to mobile equipment. Topics include component studies such as pumps, motors, valves, cylinders, filters, reservoirs, lines, and fittings. Upon completion, students should be able to indentify, diagnose, test, and repair hydraulic systems using schematics and technical manuals.
Information Systems Security (SEC)

SEC 7000. Series 7 Exam Prep. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Pass the Series 7 licensing exam, with our intensive 5-day review course. Our live course is designed to make your prep-time more productive and help you to understand difficult material. Securities experts deliver material in a concise and easy-to-understand manner, while providing important topical insight and valuable exam tips and strategies. A Series 7 license qualifies a candidate for the solicitation, purchase, and/or sale of all securities products, including corporate securities, municipal securities, municipal fund securities, options, direct participation programs, investment company products, and variable contracts. To take the Series 7 examination, you must be sponsored by a member firm of FINRA or a self-regulatory organization such as an exchange or state regulator.

International Business (INT)

INT 7210. Certified Global Business Professional. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Start out strong or demonstrate your knowledge in international business by preparing for the credential by exam designation of Certified Global Business Professional (CGBP). Offered by the North American Small Business International Trade Educators Association (NASBITE), this credential provides a benchmark for competency in global commerce. It can give you the recognition you deserve and demonstrate your commitment to professional development. The prep and exam cover four areas: global management, global marketing, supply chain management, and trade finance. This program is for you if you're a NASBITE member, work in a large or small company with global interests, or a practitioner, an educator or a student engaged in international trade and global commerce. The credential is also suitable if you work in trade-association organizations, trade-promotion agencies and related educational institutions. Offered in partnership with ed2go.

INT 8003. Certified Export Specialist (CES) Certification Program. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The National Customs Brokers & Forwarders Association of America (NCBFAA)’s Certified Export Specialist (CES) Certification Program is built upon a set of key export regulatory requirements and legislation. It provides the technical competency necessary to deliver services and exporting solutions in the freight forwarding industry. Equipped with this certification, professionals will become experts in the current export regulations and render trade services that benefit both their company and/or clients.

INT 8004. Certified Customs Specialist (CCS) Certification Program. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The National Customs Brokers and Forwarders Association of America (NCBFAA)’s Certified Customs Specialist (CCS) Certification Program is designed to assist trade professionals involved in the import industry to become experts in the current import regulations. Whether you have a broker’s license or you have just a year or two of related experience, this course will provide you with a solid foundation for you to increase your industry knowledge. The CCS course will review fundamental points relevant to the importation process while delving into practical, relevant subject matter not generally tested on the formal Customs licensing exam. Each topic will help you grow and develop as an import professional. You will find that participating in the CCS program will provide you numerous venues for honing your professional skills while continuing to stay up with the rapidly changing marketplace within import industry.

Journalism (JOU)

JOU 7001. Introduction to Internet Writing Markets. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Discover the thousands of lucrative publishing opportunities that await you on the Internet if you understand Internet marketing. Whether you're just taking your first steps toward that dream of getting published, or you have a dozen books to your credit, this course will show you how you can start earning income on the Web right away. You'll learn how to make the Internet work for you from a writer who has spent years exploring its potential.

JOU 7005. Beginner’s Guide to Getting Published. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
If your goal is to become a published freelance writer of fiction or nonfiction for books or magazines, this comprehensive course will help you guide your work directly into the hands of an editor and onto the shelves of your favorite stores. Taught by a successful journalist and author, this course will walk you through every step of the publishing process. What's more, she'll be standing by to answer your every question about important legal issues, including copyright, agents, and the use of pseudonyms.

JOU 7006. Publish and Sell Your E-Books. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
It's no secret that e-books now regularly outsell traditionally published books in online bookstores around the world. Learn step by step how to use free tools to turn your manuscript into a professionally published e-book ready for distribution. Or, if you don't consider yourself a “techie,” this course will give you the information you need to select the right publishing services to help you as you convert your manuscript so you're ready to sell it as an e-book. Whether you're a first-timer or have already put out an e-book or two, this course puts you inside the publishing industry, sharing the tricks of the trade used by traditional publishers to make sure their books are in the best position to be found by readers.

JOU 7007. Writing for Children. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Join author and writing mentor Steve Alcorn and discover what you need to know to write for children. If you're a beginning writer, this course will help you transform your book idea into a finished product that could potentially land in the hands of an editor or agent. And if you're already a successful writer, this course will help you explore new opportunities and markets for your work.
JOU 7010. Research Methods for Writers. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0

Attention all writers! Learn how to efficiently and effectively conduct research for any writing project: fiction, nonfiction, business . . . even term papers and dissertations. Modern research techniques are boundless. The trick is to know where to look and what to look for. This six-week online course teaches the best methods for mounting a search on any subject.

JOU 7110. Introduction to Journaling. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
If you've ever wanted to try journaling, this course will provide answers to your every question. You'll discover the different types of journaling (including dream journaling), and sample a buffet of journaling techniques, exercises, tools, and resources. We'll cover everything you need to know about journaling, including a seven-step process that will ease you into writing a journal, even if you've never journaled before. You'll get detailed instructions on developing, decorating, and customizing your journal, and you'll learn exciting new ways to express yourself and develop your creativity. You'll find out how you can use your journal to explore your thoughts, feelings, and values, and you'll learn how to use your journal to support you as you develop true emotional well-being. You'll also understand how journaling can ease the stress of unwanted change throughout the course of your life. You'll even discover how journaling can help you choose the best career for you or advance in your current career. Offered in partnership with ed2go.

JOU 8000. Science Fiction and Fantasy Writing. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Enter the world of speculative fiction and learn to structure, polish and prepare your science fiction and fantasy (SF & F) ideas and writings for publication. This course is designed for writers at all stages of development, who have a keen interest in writing science fiction or fantasy stories, under the guidance of a seasoned SF & F author. In class, you will learn how critiques (both giving and taking) are an essential part of any successful writing process. Students will first work on structuring their stories, learning and using the building blocks of all fiction writing, and then submit finished stories to the class and instructor for constructive criticism, feedback and refinement during the latter sessions of the class.

JOU 8100. Food Writing for Newspapers, Magazines, And Cookbook Authoring. 0.0 Hours. Class-18.0. Clinical-0.0. Lab-0.0. Work-0.0
Food writing offers a "buffet" of opportunities. Learn the nuances of writing for magazines or newspapers and gain insight into how to publish a cookbook. This six-week course details the riting process and offers tips on how to pitch a story for publication. Topics covered include: different types of food journalism, the writing process, writing a restaurant review, pitching a story idea, compiling a cookbook and writing receipes. Students must activate their SNAP account prior to the start of class.

JOU 8101. News Writing for Print, Online and Broadcast Journalism. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Learn the ins-and-outs of news writing from a "pro" and gain valuable insight into the world of journalistic news. This six-week course details the writing and reporting processes in journalistic news and offers tips on how to accurately report your story. Topics covered will include: different types of news stories (features, hard news, first-person and columns), the writing and editing process and how to pitch a story idea.

JOU 8102. Follow Your Tale. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Alice was curious so she followed the white rabbit. You are curious about writing, but you feel stuck. Have you been following your rabbit's tale? In this course you will have the opportunity to follow your own rabbit tale. We will read, write, and discuss the work of published authors as well as fellow classmates in each class period as we take the fuzzy (tale) of an idea and follow it down its rabbit hole. Maybe you have an image that wants to be a poem. Perhaps you have a character that needs to find its story, etc. All genres are welcome. See you in Wonderland!!

JOU 8103. Writing Across Genres. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
So you want to write, but you can't seem to get started on that novel. Have you ever considered starting a shorter piece first? In this course writers will have the opportunity to learn about and try their hand at writing in short forms (flash fiction, micro essays, prose-poetry, dramatic monologues) from across the genres. Pieces produced in this course may even be the buds for longer works. Strategies for expanding these shorter pieces (or publishing/enjoying them as is) will also be addressed.

JOU 8109. The Art of Short-Shorts-Capturing Your Important Moments on Paper. 0.0 Hours. Class-528.0. Clinical-0.0. Lab-0.0. Work-0.0
Everyone has stories to tell, so here's a class to help you get your most memorable moments on the page - in creative ways! "Short-shorts" writing focuses on capturing miniature word-snapshots of the important moments of your life. In-class writing and homework assignments will yield 12 short-shorts. So bring your memories to class and let's get started!

JOU 8111. The Healing Power of Words. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
What benefits can writing provide - physically, mentally, spiritually? Are some ways of writing more healing than others? Can we create quality literary work as we heal? In this workshop that incorporates Dr. James Pennebaker's groundbreaking ideas, we'll discuss and implement ways to use writing as a transformational tool. And, if you're looking, you'll find the genesis of new poetry, creative non-fiction, and/or fiction. WARNING: Laughter likely. Inspiration guaranteed!

JOU 8113. Advanced Creative Writing: Creativity Taken to the Next Level. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
Do you have a fiction or nonfiction story in the making? Are you feeling a bit uncertain about how to pull it together? Then this course is for you! You will examine the details of your creation and get tips on every facet of crafting a story, including structure, theme, motif, opening and more. With careful attention to detail your story will come alive. Learn how to create a page-turner that touches your reader's heart. Class time will include lecture, discussion and writing exercises.

JOU 8114. Creative Writing. 0.0 Hours. Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0
Are you ready to test the waters of creative writing but not sure where to start or how? Maybe you've written before, but long ago. Or, maybe you never had an opportunity to learn. This course will guide you as you let your creative thoughts roam. You will get tips on craft and practice as you use various imagination-stretching exercises, then write through in-class readings, discussions and assignments, to build upon those ideas. This course will focus on fiction, creative nonfiction and depending on interest, poetry as a means to enhancing and structuring your writings. Best of all: no exams or grades to worry about!!
JOU 8115. Telling Your Story - The Personal Essay and the Essence of Memories. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
Have you ever looked at your life and wondered how to make sense of it? We all have. Writing forces us to think through our life experiences, one sentence at a time. In the process, memories become coherent and we find a sense of purpose. This class will show you how to write about something that matters to you, whether a favorite relative, or a lesson learned through personal hardship or happier times. You'll learn how to turn an idea into a essay or story and at the end of six weeks, you'll have a written work to share.

JOU 8117. Write Yourself: a Journey of Self-Discovery and Self-Expression. 0.0 Hours. Class-10.0. Clinical-0.0. Lab-0.0. Work-0.0
Take a trip through the writing process with Charlotte's award-winning author Maureen Ryan Griffin. Capture truth, imagination and passion as you learn to "Write From The Heart" by using your writing as an on-going means of self-discovery and self-expression. Come explore the techniques and processes that will enhance your journey!

JOU 8118. Delicious Words: Food For The Soul Stories. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
Food not only nurtures us, it is also a rich source of metaphor and memory. Come nibble on cookies from well-known author Maureen Ryan Griffin's own mother's recipes as you write your own delicious memories. Learn how to begin your own food memoir or family/community cookbook, write a food-related essay, and/or leave a legacy to share with loved ones. Class is taught by Barbara Lawing, well-known local writer.

JOU 8119. Write Yourself!. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
Writers write. So says Anne Larnott, author of Bird By Bird. It's that easy! This course is for practicing writers, closet writers and as-yet-to-pick-up-the-pen writers who are interested in personal discovery and growth. Bring pen and notebook and reap writing's benefits - physical, mental, emotional and spiritual. We'll play with techniques and prompts to spur your imagination and look at how to turn your drafts into poems, stories, articles and/or essays. Class will be taught by Maureen Ryan Griffin, local award winning author.

JOU 8120. I Want to be a Writer You Go From Here?. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
Now what? Identify your writing interests and skills and build upon them to fit into today's market. Learn to prepare pieces for submission and make use of local resources and support networks for writers.

JOU 8121. A Writers Guide to Successful Publication. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
A concentrated workshop designed for the writer whose goal is publication. Receive instructions for producing a professional manuscript, examine publishing industry structure, and learn strategies for finding an appropriate publisher. Resources for locating a literary agent are revealed.

JOU 8122. Creating a Sense of Place. 0.0 Hours. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
What is a "sense of place" and how can writers capture the essence of a setting? Class will include readings and creative exercises that will promote open discussion. Students are encouraged to bring passages from the works of their favorite authors and examples of their own work.

JOU 8123. Write Away and Home Again. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
Capture the spirit and specific details of your upcoming or past trips in this class that focuses on keeping a travel journal. Learn brainstorming and writing techniques that will have your trip come alive on the page!

JOU 8124. Introduction to Contemporary Poetry. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
Interested in reading, sharing, discussing, or understanding contemporary poetry? Then this course is for you! An eight-week "gathering" for the exploration and appreciation of contemporary poetry in an intimate workshop setting. Both writers and readers welcome. Students will be asked to purchase a book of contemporary poetry by the second class meeting for the purpose of sharing/study. A list will be provided by the instructor at the first class meeting.

JOU 8125. The Artist's Way: Feeding Your Creative Self. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
Whether you dream of being a writer, an artist or actor, a singer or dancer, or just want to experience more joy in your life, this class will point the way. Learn to tap into your creative energies through in-class and out-of-class writing exercises and reading from, Julia Cameron's, "The Artist's Way."

JOU 8126. Creativity in the Work Place: the Artist's Way At Work. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
I am not a businessman, I am an artist, says Warren Buffet. No one can dispute the success of this man in the business world, but what about the idea of business as art? If this concept is intriguing to you, join this class in exploration and problem solving.

JOU 8127. Crafting Characters That Connect. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will focus on the basic principles involved in writing compelling, three-dimensional characters for short and long narratives. Aspiring novelists and short story writers will benefit as they analyze elements that make up a successful character. Students will examine character depth and growth, write dialogue, learn to identify a character's wants and needs and complete a character's autobiography. "Bring a composition book, pen, jump drive and favorite novel or short story to the first class. Upon enrollment in the class, you will receive an invitation for the class wiki site: http://createacharactercpcc.pbworks.com. This is an online, editable website for class assignments, postings and student work and critiques. Go to the front page of the wiki and follow the instructions several days before class begins. Suggested supplemental texts include "Characters & Viewpoint" by Orson Scott Card and "Teaching the Story: Fiction Writing in Grades 4-8" by Carol Baldwin. Recommended reading: "Bronx Masquerade" by Nikki Grimes.

JOU 8128. Novel Writing - Laying a Foundation. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
Laying a foundation is a must for every person who shares the dream of writing The Great American Novel. This course is an in-depth study of the building blocks of fiction writing and is designed for all serious writers.

JOU 8130. The Editing & Revision Process. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
Learn to submit well-edited manuscripts. This class zeroes in on how to structure and focus your writing, plus a review of the grammatical details necessary for successful submissions. Students are encouraged to bring in papers for editing and review. Class is taught by a well-known local writer and editor.

JOU 8132. Magazine Masterpieces. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
Want to write for magazines, but have no idea how to write that first piece or get it published? Magazine Masterpieces will get you started on your first article armed with a wealth of potential target markets. Learn how to select a topic, target an audience, self-edit, and more! In-class writing assignments and a completed outside article will be required.
JOU 8133. Writing for Children. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
What do Madonna, Sandra Day O'Connor and Judy Blume all have in common? They are all authors of books for children. While there is no easy, sure-fire way to get published, there are tricks of the trade that will help. In this hands-on workshop, Carol Baldwin, author of "Teaching the Story: Fiction Writing in Grades 4-8," will use her 15 years of experience leading the Society of Children's Book Writers and Illustrators local critique group to talk about writing picture, chapter and young adult books as well as non-fiction and magazine articles. Upon enrollment in the class, you will receive an invitation for the class wiki (http://writing4children.pbworks.com), an online, editable website for class assignments, postings, student work and critiques. Go to the front page of the wiki, click on the link to request access. The instructor will respond via email. Then follow the instructions on the front page several days before the class begins. Suggested supplemental text: "Teaching the Story: Fiction Writing in Grades 4-8.? Bring to class: Composition book, pen, red pen or pencil.

JOU 8137. Short Story Marathon. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
Writing is often a solo exercise, but some writers need a supportive network and a deadline to get the writing done. This class will give you a little bit of both. At the end of the course, you will have completed three short stories and have a clear plan on how to structure your short stories going forward.

JOU 8143. Just Write! a Weekend Writing Workshop For Writers. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Write and write and write some more. The goal of this intensive, boot camp-style writing workshop is to help you find your words naturally and easily by writing quickly to prompts. Such prompts and working until the timer stops are proven to stimulate your creativity and remove your creative blocks. Whether fiction, short story, poetry or just capturing memorable experiences, this workshop will ensure writing success in a productive session. Write on your laptop or the page in this interactive session with other writers. New writers welcome, too.

JOU 8148. Novel Writer's Marketing Toolkit. 0.0 Hours. Class-16.0. Clinical-0.0. Lab-0.0. Work-0.0
Designed to prepare and equip writers with everything from drafting a synopsis of your novel to marketing to publisher queries, the aim of this course is to help fiction writers in all genres learn how to polish, prepare and market their work.

JOU 8149. Marketing for Writers - How to Sell Everything You Write. 0.0 Hours. Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
Discover how to find publishers for your articles, evaluate the market, deal and market your work.

JOU 8150. Freelance Journalism: Writing to Sell. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
Freelance feature writing is a staple of magazines, alternative weeklies and daily newspapers. Whether you're interested in entertainment, sports, travel, business or profiles, this course offers a primer in the fundamental skills of interviewing, reporting, writing and editing - all of which go into creating the thoughtful, vibrant and well-constructed feature stories editors want.

JOU 8151. Freelance Journalism: The Next Step - Ideas to Income. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Designed for students who have taken a freelance journalism class or have some experience writing for publications but need support and structure to turn ideas into income. We'll work on polishing ideas, writing (and critiquing) queries, improving research and interview techniques, learning how to develop relationships with editors and understanding the basics of setting up a freelance business. This is an interactive class for writers who know the basics and are ready to launch their writing careers.

JOU 8154. Entertainment Writing for Fun and Profit. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Get an insider's view on how to write successful entertainment stories for print and media, plus get useful tips on publishing and the Charlotte market. No longer relegated to feature sections entertainment writing is an integral and popular piece of news coverage in local communities and publications. This can become a lucrative career and fun way to express your opinion of bands, authors, plays and more. You will learn to write for front pages and for the growing entertainment community. Master the five keys of a successful entertainment article: the Q and A, profile, advance article, performance review and product review.

JOU 8155. Screenwriting Workshop. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Do you have a keen interest in writing feature-length scripts or developing a script idea? Whether you are a fledgling screenwriter or have a work-in-progress, this workshop is for you. Class time will focus on generating a story idea, creating an outline, script organization and structure, pitching your idea and writing the scene. Students will learn to analyze narrative structure, openings and the all important elements of scenes. Classroom instruction will include lectures, discussions, writing exercises, reading of scenes from produced scripts and possible film viewings. Suggested supplemental text: "Screenplay" by Syd Field (Dell new edition).

JOU 8156. Screenwriting For The Director. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Screenwriting for the Director will focus on the basic principles involved in writing for film and television, with emphasis on the issues and logistics involved in transitioning from script to screen. This course is beneficial for those aspiring to be writer-directors and/or creative producers. Students will analyze narrative structure, character and theme as it relates to production techniques and budget constraints. Instruction will include lectures, discussions, writing exercises, workshops, script readings, film viewings and possible in-class speakers. Suggested supplemental texts: screenplay by Syd Field, story by Robert McKee, The Art of Dramatic Writing: Its Basis in the Creative Interpretation of Human Motives by Lajos Egri and screenwriter's problem solver by Syd Field.

JOU 8157. Screenwriting Workshop: The Spec Script, A Work-In-Progress. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Every aspiring screenwriter has a work-in-progress which could benefit from the input of a seasoned screenwriter and the fellowship and feedback of other writers Bring your script to this weekend workshop to hone your premise and a structure to take your storyline and characters to their conclusions. Short lectures, generated by participant demands, will address refining the premise, scene, character and emotional content. The exchange of constructive peer feedback will help students develop their projects in a supportive environment. Suggested Supplemental Text: "Screenplay" by Syd Field, Dell (new edition). Also helpful: Final Draft 7 Professional Scriptwriting software.
JOU 8158. Introduction to Screenwriting. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
Whether you want to write micro-budget indie films or Hollywood blockbusters, this course will teach you everything you need to know to create a script that can sell. You'll start with the fundamentals and how to develop that tiny spark into a story, and finally how to structure it into a screenplay. You'll also get an inside look into the business of selling your script and building your career as a writer. Offered in partnership with ed2go.

JOU 8160. How to Sell a Book in Today's Publishing Marketplace. 0.0 Hours.
Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0
Students will learn about the nature of the publishing marketplace, how to find and evaluate ideas for books, find publishers, find an agent, research, and write a book proposal, and understand the publishing contract.

Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
Off your desk and onto the shelves. Take a look at the exciting world of small press publications. Learn about available resources for small press publications and focus on marketing and submitting your poems, essays, or short fiction to a particular audience. Class is taught by Barbara Lawing, well-known local writer.

JOU 8171. The Pros & Cons of Self-Publishing. 0.0 Hours.
Class-528.0. Clinical-0.0. Lab-0.0. Work-0.0
Many writers today choose to self-publish using a Print on Demand (POD) publisher. Gain an overview of the POD publishing model, what a POD publisher can and cannot do for an aspiring author, plus the advantages, disadvantages, requirements and cautions as you decide if this is the best route for you and your book. Instructor is a local, published author, experienced in the POD process.

JOU 8180. Publishing Your Book. 0.0 Hours. Class-16.0. Clinical-0.0.
Lab-0.0. Work-0.0
Everyone has a book idea, but few people see it through to the shelves. A major reason? They don't understand the publishing process. Learn how to publish your fiction and nonfiction writing through the traditional publishing model and the rapidly growing self-publishing industry. This course presents strategies for refining your idea, presenting it to publishers and agents, and publishing it yourself. A book idea or completed manuscript is suggested, but not required, for in-class critiques.

JOU 8181. A Character Dialogue Workshop - Who Says Dialogue Doesn't Matter?. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Few components of fiction and non-fiction can make or break your writing like dialogue. Not only does it have to be believable, it also affects pacing and plot. Do you know how to avoid "wooden" dialogue? What about the nine ways to alter and punctuate, to show off your character's words to their best, most polished effect? If you want to learn this, and more, come join local author Maureen Ryan Griffin to study examples by accomplished writers and craft your own work.

JOU 8184. Fiction Writing Workshop. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
Are you an intermediate fictional writer interested in taking your project to the next level? Then this class is for you! In the first hour your instructor will discuss a variety of topics related to creating fiction structured to engage and captivate your reader. The remaining class hour will be devoted to working on individual projects with advice and guidance from your instructor. Learn about effective beginnings, structuring your plot, creating rich characters and settings, world-building, dialogue, revising, and querying and publishing. Note: A story or work-in-progress is strongly recommended for this class. Suggested supplemental texts: Teaching the Story: Fiction Writing in Grades 4-8 by Carol Baldwin; Plot & Structure, Conflict & Suspense, and Revision and Self-Editing for Publication by James Scott Bell; Writing the Breakout Novel Workbook by Donald Maass; or Planning Your Novel: Ideas and Structure (Foundations of Fiction) Volume 1, by Janice Hardy. Other suggested readings will be found on the wiki site. Bring a composition book, pen, jump drive and a favorite novel or short story to the first class. Upon enrollment in the class, you will receive an invitation for the class wiki: http://writingworkshopccpc.pbworks.com. This is a private, editable website for class assignments, online resources, student work and critiques. Go to the Front Page of the wiki and follow the instructions several days before class begins.

JOU 8185. Writing, Structuring and Publishing a Romance Novel. 0.0 Hours.
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Harlequin romance author AlTonya Washington brings her experiences from the writing industry to this class geared towards aspiring romance novelists. As an award-winning author, AlTonya will share insights, resources and advice on several aspects including hero-heroine character development, creation of dramatic scenes as well as her experiences writing for traditional publishing houses such as BET, Dafina Books and Harlequin romances.

JOU 8200. Writing for Women. 0.0 Hours.
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Love, parenting, health; these are some of the things women want to read about. Writing for women's magazines can be high-profile and lucrative and there are lots of opportunities for writers. Learn how to come up with great ideas, how to target your ideas and write stories that are filled with information and emotion. In-class writing assignments and an article written outside of class will be required.

JOU 8201. Travel Writing. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Travel writing is a job most people just dream about. It is possible to sell articles based on your travels. Learn how to think like a travel writer, where to find magazines interested in travel articles, how to pitch ideas and the ethics of travel writing. Get in class assignments and finsh an outside article during the course.

JOU 8202. Crafting a Great Query Letter. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
The best way to capture an editor's attention - and land a lucrative writing assignment - is with a great query letter. This class will provide you with the essential tools for writing a great query letter. This hands-on workshop covers the basics like selecting a topic and researching publications as well as focusing on the specific details a query letter should contain and how to promote your expertise as a writer. In-class writing exercises will be required.
JOU 8203. Marketing Your Writing - an Editor's Perspective on Successful Freelancing. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Are you looking to supplement your income? Maybe start a second career? Join us and work with an experienced editor who will give advice and tips on how and where to market your freelance work. Topics include creating ideas that will sell, pitching your piece, the submission process, including revisions and rewrites, understanding a basic publishing contract, payments, budgeting and time management; the important key to a freelance writer's success.

JOU 8204. Crafting the Personal Essay - The Essence of Memoirs. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The art of condensing your thoughts into essay format can be intimidating, but not if you have the right tools. Learn how to use a personal essay to capture your reader's interest, inform and share, and tie it all together with a satisfying conclusion. The personal essay can bring the reader into your world to share your experience and values; this class will help you learn how to do this. Three outside-of-class assignments will be required as part of the class.

JOU 8205. Crafting the Personal Essay Part II - The Essence of Memories. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
You've learned the basics of how to write a short essay about your life. Your story may have focused on a place you lived, a person, an experience, or even an object that was important to you. This is called the nonfiction essay. Now you want to write more. This class is writing intensive and is a continuation of the foundations learned in JOU 8204 or JOU 8115. You'll complete two essays, one short and one long, as well as study published essays to understand what works and what doesn't. You'll receive feedback on your writing and provide feedback to others during class. Also included will be an advanced grammar and punctuation component, making sure your story doesn't get tossed off an editor's desk because of careless errors. You don't have to be a published author to take this class, but you have to be committed to writing! All classes except the first have homework assignments.

JOU 8803. Letter Writing - Reviving a Lost Art in Today's Fast Paced World. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
NPR describes letter writing as the, "lost art." When was the last time you wrote a letter, or received one - yet how excited were you to open a personal, handwritten letter or card? People say, "Getting a letter in the mail beats an impersonal text or email, any day." A personal letter lets the recipient know you care about them - and took the time to truly show it. But how do you get started, let alone sustain letter writing? This class will refresh your dormant writing skills (taught by an Associated Press journalist and weekly letter writer of 15 years). You'll hone your writing techniques; grammar and structure, as you reach out to people you care about. Also discussed, personal ways to stay in touch, including a personal blog aimed at a specific audience. And who knows, along the way you may rekindle a new (old) way to communicate!.

JOU 8805. Narrative Nonfiction Writing:Technique and Style 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
Are you looking to supplement your income? Maybe start a second career? Join us and work with an experienced editor who will give advice and tips on how and where to market your freelance work. Topics include creating ideas that will sell, pitching your piece, the submission process, including revisions and rewrites, understanding a basic publishing contract, payments, budgeting and time management; the important key to a freelance writer's success.

MAC 7000. Introduction to Metrology. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the care and use of precision instruments. Emphasis is placed on the inspection of machine parts and use of a wide variety of measuring instruments. Upon completion, students should be able to demonstrate the correct use of measuring instruments.

MAC 7001. Overview of Metrology. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the care and use of precision instruments. Emphasis is placed on the inspection of machine parts and use of a wide variety of measuring instruments. Upon completion, students should be able to demonstrate the correct use of measuring instruments.

MAC 7114. Metrology Reading. 0.0 Hours. Class-12.0. Clinical-0.0. Lab-0.0. Work-0.0
8-hour introduction to concepts of metrology with instructor demonstration, and hands-on use of common precision measuring instruments.

MAC 7130. Basic Blueprint Reading/Machining. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers basic principles of blueprint reading. Topics include multi-view drawings; interpretation of conventional lines; and dimensions, notes, and thread notation. Upon completion students should be able to interpret basic drawings, visualize parts, and make pictorial sketches.

MAC 7131. Basic Blue Print Reading Machining Reading. 0.0 Hours. Class-32.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the basic principles of blueprint reading. Topics include multi-view drawings; interpretation of conventional lines; and dimensions, notes, and thread notation. Upon completion, students should be able to interpret basic drawings, visualize parts, and make pictorial sketches.

MAC 7132. Blueprint Reading/Machining Part II. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course includes more complex blueprints. Topics include auxiliary views; sections views; violations of true project and applications of GD&T.
MAC 7133. Basic Blueprint Reading/Machining. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0 
This course covers basic principles of blueprint reading. Topics include multi-view drawings; interpretation of conventional lines; and dimensions, notes, and thread notation. Upon completion students should be able to interpret basic drawings, visualize parts, and make pictorial sketches.

MAC 7134. Advanced Blueprint Reading. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0 
Upon completion, students should be able to read and interpret complex industrial blueprints.

MAC 7135. Geometric Dimensioning and Tolerancing. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0 
This course will cover the basics of GD&T including symbology, datums, material modifiers, limits of size, and position tolerancing.

MAC 7136. Geometric Dimensioning and Tolerancing. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0 
This course covers advanced elements of GD&T including form, orientation, profile, position, coaxial controls, screw thread formulas, and tolerance stackups.

MAC 7137. Overview of Geometric Dimensioning and Tolerancing. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0 
This course provides an overview of the GD&T system, including symbology, material condition, feature control frames, concept of size, effect of modifiers, position tolerancing calculations, datum reference frames; and dimensioning a drawing using GD&T principles.

MAC 7138. Basic Blueprint Reading. 0.0 Hours. 
Class-440.0. Lab-0.0. Work-0.0 
This course covers basic principle of blueprint reading. Topics include multi-view drawings; interpretation of conventional lines, and dimensions, notes and thread notation. Upon completion, students should be able to interpret basic drawings, visualize parts, and make pictorial sketches.

MAC 7140. Computer Numerical Control Graphics Programming/ 
Turning. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0 
This course introduces Computer Numerical Control Graphics Programming and concepts for turning center applications. Emphasis is placed on the interaction of menus to develop a shape file in a graphics CAM system.

MAC 7141. Computer Numerical Control Graphics Programming/ 
Milling. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0 
This course introduces Computer Numerical Control Graphics Programming and concepts for machining center applications. Emphasis is placed on developing a shape file in a graphics CAM system and transferring coded information to the CNC milling center.

MAC 7151. Basic Shop Math. 0.0 Hours. 
Class-33.0. Clinical-0.0. Lab-0.0. Work-0.0 
This course introduces basic calculations as they relate to machining operations. Emphasis is placed on basic calculations and their applications in the machine shop. Upon completion, students should be able to perform basic shop calculations.

MAC 7152. Manual Lathe Operations. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0 
This course introduces students to manual lathe operations as it relates to the metalworking industry.

MAC 7153. Manual Mill Operations. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0 
This course introduces students to manual mill operations as it relates to the metalworking industry.

MAC 7161. Applied Technology Review. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0 
This course is designed as a review of technology terms and principles for industrial applications.

MAC 8111. Machining Technology 1. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0 
This course introduces machining operations as they relate to the metal working industry. Topics include machine shop safety, measuring tools, lathes, drilling machines, saws, bench grinders and layout instruments. Upon completion, students should be able to safely perform the basic operations of measuring, layout, drilling, sawing and turning.

MAC 8121. Introduction to Computer Numerical Control. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0 
This course introduces the concepts and capabilities of computer numerical control machine tools. Topics include setup, operation, and basic applications. Upon completion, students should be able to explain operator safety, machine protection, data input, program preparation, and program storage.

Mathematics (MAT)

MAT 7010. Review of Data Analysis Tools. 0.0 Hours. 
Class-6.0. Clinical-0.0. Lab-0.0. Work-0.0 
This training is designed to give participants a review of basics such as simple calculations and rounding in preparation for specific instruction in percentages to allow them to calculate percent discounts, increases, decreases and sales margins.

MAT 7060. Intensive Review of Arithmetic and Pre-Algebra. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0 
Fast Track 7060 is a fast-paced, intensive review course that covers arithmetic and pre-algebra in a standard instructor/student format. There are no pre-requisites for this course; however, students should have a history of being successful in equivalent levels of math, although they may not recall enough information to do well on the placement test. After successful completion of the class, which includes a graded test, the student will be given pre-requisite permission for MAT 060 or MAT 070 unless granted permission in advance, students are required to take a curriculum math course in the semester immediately following the fast-track class.

MAT 7070. Intensive Review of Introductory Algebra. 0.0 Hours. 
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0 
Fast Track 7070 is a fast-paced, intensive review course that covers introductory algebra in a standard instructor/student format. To be eligible for the course, a CPT arithmetic score of 55 or completion of MAT 060 with a “C” or better is required. Students should have a history of being successful in equivalent levels of math, although they may not recall enough information to do well on the placement test. After successful completion of the class, which includes a graded test, the student will be given pre-requisite permission for MAT 080 or MAT 140 or MAT 115 unless granted permission in advance, students are required to take a curriculum math course in the semester immediately following the fast-track class.

Prerequisites: Take MAT 060
MAT 7080. Intensive Review of Intermediate Algebra. 0.0 Hours.
Class-44.0. Clinical-0.0. Lab-0.0. Work-0.0
Fast Track 7080 is a fast-paced, intensive review course that covers intermediate algebra in a standard instructor/student format. To be eligible for the course, a CPT arithmetic score of 55 and elementary algebra score of 55 or completion of MAT 070 with a "C" or better is required. Students should have a history of being successful in equivalent levels of math, although they may not recall enough information to do well on the placement test. After successful completion of the class, which includes a graded test, the student will be given prerequisite permission for MAT 161 or MAT 171 or MAT 155. Unless granted permission in advance, students are required to take a curriculum math course in the semester immediately following the fast-track class.
Prerequisites: Take MAT 060 MAT 070

Mechanical (MEC)

MEC 7003. CNC Operator Training I. 0.0 Hours. Class-28.0. Clinical-0.0. Lab-0.0. Work-0.0

MEC 7111. Machine Shop Practices. 0.0 Hours. Class-35.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will include the following: introduction to machine tools (drill press, lathe, milling machine, shaper, grinders, etc.), care and use of basic hand tool and measuring instruments, elementary layout and processes on lathe, drill press, and off-hand grinding of tools. Safety glasses are required.

MEC 7200. CNC Programming in the Workplace. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
APICS-The Educational Society for Resource Management is a not-for-profit international educational organization known for its education and professional certification programs. Though Corporate and Continuing Education, CPCC offers CPIM preparation courses to prepare individuals for certification and to help organizations improve workplace performance.

MEC 7210. Introduction to CNC Control. 0.0 Hours. Class-48.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a basic introduction to the operation of specific CNC equipment within the workplace. Included is an introduction to writing and loading computer code into a particular piece of equipment to produce the machining results desired.

Plumbing (PLU)

PLU 7000. Commercial/Residential Plumbing Level I, Part I. 0.0 Hours. Class-48.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to provide training in the Plumbing Level 1 competencies including the Math for Plumbers: Introduction to Plumbing Blueprint Reading; Reading Residential Plumbing Drawings; Copper and Plastic Piping Practices; Soldering and Brazing; Cutting and Threading Carbon Steel Pipe; Joining Cast-Iron Pipe and Fittings; Making Flared and Compression Joints with Copper Tube; Installing Traps and Interceptors; Fitting and Cleanout Requirement for DWV Piping; Installing Natural Gas Piping Systems; Installing Fuel Oil Piping Systems.

PLU 7001. Commercial/Residential Plumbing Level I, Part II. 0.0 Hours. Class-48.0. Clinical-0.0. Lab-0.0. Work-0.0
PLU 7006. Plumbing 1-2-3. 0.0 Hours. Class-44.0. Clinical-0.0. Lab-0.0. Work-0.0
Put the yellow pages away; let us teach you how to tackle your own plumbing projects. This class will lead you through the basic plumbing methods, including the tools and materials used to install plumbing pipe work and plumbing fixtures. Primary emphasis will be placed on plumbing systems for residential homes.

PLU 7010. Residential/Commercial Plumbing Core. 0.0 Hours. Class-784.0. Clinical-0.0. Lab-0.0. Work-0.0
This preparatory apprenticeship training is designed to provide Plumbing Level I - Level IV training required for journeymen plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year. Prerequisite: Courses must be taken in sequence. This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with the NC Department of Labor.

PLU 7013. Plumbing Codes and Law. 0.0 Hours. Class-48.0. Clinical-0.0. Lab-0.0. Work-0.0
A review of current plumbing codes, laws and regulations useful in preparing for journeyman or contractor license exam.

PLU 7015. Backflow Assembly Tester Certification. 0.0 Hours. Class-50.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will develop entry level skills and working knowledge of the causes and principles of backflow and backflow prevention will be demonstrated. Recognizing proper backflow prevention assembly application, installation and operation is stressed. Record keeping and backflow program responsibilities are also covered. Student should have knowledge of hydraulic principles and laws, along with plumbing code requirements. Reading, math and mechanical skills are also needed.

PLU 7016. Backflow Prevention Assembly and Tester Recertification. 0.0 Hours. Class-14.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will focus on reviewing the basic skills and knowledge for a backflow assembly field tester. The student must have completed a CMUD (Charlotte Mecklenburg Utility Department) approved course in cross connection control and require recertification of original certificate.

PLU 7017. Residential/Commercial Plumbing Level I, Part I. 0.0 Hours. Class-784.0. Clinical-0.0. Lab-0.0. Work-0.0
This preparatory apprenticeship training is designed to provide Plumbing Level 1 - Level 4 training required for journeymen plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year.
Prerequisites: Take PLU 7010 with a minimum grade of S

PLU 7018. Residential/Commercial Plumbing Level I, Part II. 0.0 Hours. Class-653.0. Clinical-0.0. Lab-0.0. Work-0.0
This preparatory apprenticeship training is designed to provide Plumbing Level 1 - Level 4 training required for journeymen plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year. Prerequisite: Courses must be taken in sequence. This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with The NC Department of Labor.
Prerequisites: Take PLU 7010 PLU 7017 with a minimum grade of S
PLU 7020. Residential/Commercial Plumbing Level II, Part I. 0.0
**Hours.** Class-784.0. Clinical-0.0. Lab-0.0. Work-0.0
This preparatory apprenticeship training is designed to provide Plumbing Level II required for journeymen plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year. 
Prerequisite: Students must complete the plumbing apprentice core skills course and courses must be taken in sequence. This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with the NC Department of Labor.
Prerequisites: Take PLU 7010 PLU 7017 PLU 7018 PLU 7020 with a minimum grade of S

PLU 7021. Residential/Commercial Plumbing Level II, Part II. 0.0
**Hours.** Class-784.0. Clinical-0.0. Lab-0.0. Work-0.0
This preparatory apprenticeship training is designed to provide Plumbing Level II required for journeymen plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year. 
Prerequisite: Students must complete the plumbing apprentice core skills course and courses must be taken in sequence. This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with the NC Department of Labor.
Prerequisites: Take PLU 7010 PLU 7017 PLU 7018 PLU 7020 with a minimum grade of S

PLU 7030. Residential/Commercial Plumbing Level III, Part I. 0.0
**Hours.** Class-784.0. Clinical-0.0. Lab-0.0. Work-0.0
This preparatory apprenticeship training is designed to provide Plumbing Level III required for journeymen plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year. 
Pre-requisite: Students must complete the plumbing apprentice core skills course and courses must be taken in sequence. This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with the NC Department of Labor.
Prerequisites: Take PLU 7010 PLU 7017 PLU 7018 PLU 7020 PLU 7021 with a minimum grade of S

PLU 7031. Commercial/Residential Plumbing Level III, Part II. 0.0
**Hours.** Class-210.0. Clinical-0.0. Lab-0.0. Work-0.0
This preparatory apprenticeship training is designed to provide Plumbing Level III required for journeymen plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year. 
Prerequisite: PLU 7010 Core; PLU 7017 Residential/Commercial Plumbing Level I, Pt 1; PLU 7018 Residential/Commercial Plumbing Level II, Pt 2; PLU 7020 Residential/Commercial Plumbing Level I, Pt 1; PLU 7021 Residential/Commercial Plumbing, Level II, Pt 2; PLU 7030 Residential/Commercial Plumbing, Level III, Pt 1; PLU 7031 Residential/Commercial Plumbing, Level III, Pt 2. This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with the NC Department of Labor.
Prerequisites: Take PLU 7010 PLU 7017 PLU 7018 PLU 7020 PLU 7021 PLU 7030 PLU 7031 with a minimum grade of S

PLU 7040. Commercial/Residential Plumbing Level IV, Part I. 0.0
**Hours.** Class-210.0. Clinical-0.0. Lab-0.0. Work-0.0
This preparatory apprenticeship training is designed to provide Plumbing Level IV required for journeymen plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year. 
Prerequisite: PLU 7010 Residential/Commercial Plumbing Level I, Pt 1; PLU 7017, Residential/Commercial Plumbing Level I, Pt 2; PLU7020 Residential/Commercial Plumbing Level II, Pt 1; PLU 7021 Residential/ Commercial Plumbing, Level II, Pt 2; PLU 7030 Residential/Commercial Plumbing, Level III, Pt 1; PLU 7031 Residential/Commercial Plumbing, Level III, Pt 2. This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with the NC Department of Labor.
Prerequisites: Take PLU 7010 PLU 7017 PLU 7018 PLU 7020 PLU 7021 PLU 7030 PLU 7031 with a minimum grade of S

PLU 7041. Commercial/Residential Plumbing Level IV, Part II. 0.0
**Hours.** Class-210.0. Clinical-0.0. Lab-0.0. Work-0.0
This preparatory apprenticeship training is designed to provide Plumbing Level IV required for journeymen plumbers. The program consists of four years of training with a minimum of 144 hours of instruction per year. 
Prerequisite: PLU 7010 Residential/Commercial Plumbing Level I, Pt 1; PLU 7017 Residential/Commercial Plumbing Level I, Pt 2; PLU7020 Residential/Commercial Plumbing Level II, Pt 1; PLU 7021 Residential/Commercial Plumbing, Level II, Pt 2; PLU 7030 Residential/Commercial Plumbing, Level III, Pt 1; PLU 7031 Residential/Commercial Plumbing, Level III, Pt 2; PLU 7040, Residential/Commercial Plumbing, Level IV, Pt 1. This course was developed by contractors and the NC Department of Labor. Students in this program are intended to be indentured apprentices with the NC Department of Labor.
Prerequisites: Take PLU 7010 PLU 7017 PLU 7018 PLU 7020 PLU 7021 PLU 7030 PLU 7031 PLU 7040 with a minimum grade of S

PLU 7101. Introduction to Plumbing. 0.0 Hours. Class-96.0. Clinical-0.0. Lab-0.0. Work-0.0
This is an introduction course to the plumbing trade with an emphasis on residential plumbing materials and installation methods.

PLU 7200. Blueprint Reading for Plumbing. 0.0 Hours. Class-72.0. Clinical-0.0. Lab-0.0. Work-0.0
Introduces the types of plumbing drawings on the job. Discusses how to interpret & apply them when laying out & installing plumbing systems. Discusses symbols used in plumbing & mechanical drawings & reviews isometric, oblique, orthographic and schematic drawings. Trainees render plumbing drawings and recognize how code requirements apply to plumbing drawings. Teaches trainees to interpret and use civil, architectural, structural, mechanical, plumbing and electrical drawings when installing plumbing systems, and create and use isometric drawings, material takeoffs and approved submittable data.

PLU 7500. Basic Plumbing I. 0.0 Hours. Class-54.0. Clinical-0.0. Lab-0.0. Work-0.0
Put the yellow pages away; let us teach you how to tackle your own plumbing projects. This class will lead you through the basic plumbing methods, including the tools and materials used to install plumbing pipe work and plumbing fixtures. Primary emphasis will be placed on plumbing systems for residential homes.
PLU 8000. Residential/Commercial Plumbing Level I. 0.0 Hours.
Class-653.0. Clinical-0.0. Lab-0.0. Work-0.0
This class provides plumbing apprentices and those entering the trade with a certificate of completion in basic plumbing. The topics covered include safety, construction math, hand and power tool use and blueprint reading with emphasis in each of these areas on plumbing. Competency testing is required and will be both in written and practical form. This class is the pre-requisite for the plumbing series of classes.

PLU 8001. Residential/Commercial Plumbing Level II. 0.0 Hours.
Class-784.0. Clinical-0.0. Lab-0.0. Work-0.0
This class provides plumbing apprentices and current craft workers with a certificate of completion in basic plumbing. The topics covered include plumbing safety, introduction to plumbing math, plumbing tools, introduction to plumbing drawings, plastic, copper, and cast iron pipe and fittings. Competency testing is required and will be both written and practical form.

Printing (PRN)
PRN 7000. Flexography I. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0
PRN 7100. Seminar in Flexography Applications I. 0.0 Hours.
Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0
PRN 7300. Screen Printing. 0.0 Hours. Class-8.0. Clinical-0.0. Lab-0.0. Work-0.0

Process Control Instrumentation (PCI)
PCI 7170. LabView Fundamentals I. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
This course is a survey of data acquisition and control applications in an industrial setting. Topics include remote I/O systems, PC-based data acquisition, real-time monitoring and other related topics. Upon completion, students should be able to demonstrate an understanding of data acquisition circuits. This course is a certified National Instruments Academy course and will cover the material to help prepare for the National Instruments Certified LabView Associate Developer certification.

PCI 7173. Basic Programmable Systems. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
The course is a focuses on programmable systems used in industry. Topics include PLC systems, and PAC systems used in control systems implementation. Upon completion, students should be able to demonstrate an understanding of the programming, troubleshooting, configuration, maintenance and planning involved in control systems. To introduce students to the similarities and differences of PLCs and PACs; and to the design of basic PLC and PAC programs using discrete and analog I/O, timers, counters, math functions, and operator interfaces; and to the sharing of data between PLC and PAC systems using appropriate industrial networks and human machine interface (HMI) software.

Reading (RED)
RED 7090. Improved College Reading - Abridged. 0.0 Hours.
Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Fast Track RED 7090 is a fast-paced, intensive abridgement of Improved College Reading in a standard instructor-student format. The prerequisite for the course is successful completion of RED 080 or the appropriate placement-test score. After successful completion of the course, which includes a retaking of the Reading-Comprehension placement test, a student may advance to ENG 111, provided that the additional prerequisite of ENG 090 with a grade of "C" or higher or the appropriate Sentence-Skills placement-test score has been met.
Prerequisites: Complete one of the following options:
- Take RED 080
- Take ENG 085 ENG 085A

Simulation & Game Development (SGD)
SGD 7111. Introduction to Simulation & Game Development. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an introductory overview of the simulation & game development process. Topics include historical context, content creation strategies and future trends in the industry. Additionally, the course explores how simulations and games are produced, tested and released.

SGD 7113. SGD Programming. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the fundamentals of programming languages and tools employed in simulation and game development. Emphasis is placed on programming concepts used to create simulations and games. Upon completion, students should be able to program simple games and/or simulations.

SGD 7171. Flash SG Programming. 0.0 Hours. Class-440.0.
Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the Flash programming environment for use in simulation and game development. Topics include timeline effects, extensibility layers, alias text, globalization tools, ActionScript and lingo programming. Upon completion, students should be able to create a simple simulation or game using Flash.

Spanish (SPA)
SPA 8000. Spanish for Social Services. 0.0 Hours. Class-30.0.
Clinical-0.0. Lab-0.0. Work-0.0
SPA 8001. Spanish for School Administrators, Teachers and Support Staff. 0.0 Hours. Class-10.0. Clinical-0.0. Lab-0.0. Work-0.0
SPA 8002. Command Spanish for Health Care Professionals I. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will prepare non-Spanish speaking health care professionals to provide medical care and attention to Spanish-speaking patients in medical offices and hospitals. This course will also provide transcultural training. Emphasis will be placed on enhancing quality of patient care. No prior knowledge of Spanish is necessary. Materials not included. Students must purchase a Command Spanish manual. This course is offered in partnership with Carolinas HealthCare System. For information, call Edith Valladares at 704.330.6064.
SPA 8003. Workplace Pathways Spanish. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course offers applied Spanish for the workplace to facilitate basic communication with people whose native language is Spanish. Emphasis is placed on oral communication and career specific vocabulary. Upon completion, participants should be able to communicate at a functional level with native speakers and demonstrate cultural sensitivity.

SPA 8070. Acting and Theater in Spanish. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will prepare students to explore, learn, and improve the main areas of the actor's repertoire: Posture movement, voice, performing text, character, improvisations and concentration.

SPA 7000. Spanish for Law Enforcement. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
In this course, you will focus specifically on Spanish for law enforcement personnel, skipping the "touristy" phrases you don't need to know. Whether you're new to the Spanish language or just want a refresher, this course will teach you the basic Spanish phrases you need for everything from making casual conversation to handling life-or-death situations. You'll start with simple vocabulary for everyday topics including colors, numbers, conversational phrases, family names and words for asking questions. Next, you'll learn Spanish terminology you can use during arrests, traffic stops, medical emergencies and many other common law enforcement situations.

SPA 7001. Spanish for Medical Professionals. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Are you struggling to communicate with your Spanish-speaking patients? If so, here's the perfect solution. Whether you're new to the Spanish language or just want a refresher, this fun and simple course will give you the basic tools you need to bridge the communication gap.

SPA 7002. Spanish for Medical Professionals II. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Do you feel like you have a pretty good sense of intro Spanish, but are ready to take it to the next level? This course picks up where the first course, Spanish for Medical Professionals, left off. And if you didn't take the first course, no problem! This course is also for healthcare providers who already have a pretty good sense of Spanish, but just need more medical vocabulary to sharpen their skills.

SPA 8000. Spanish for Social Services. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
SPA 8001. Spanish for School Administrators, Teachers and Support Staff. 0.0 Hours. Class-10.0. Clinical-0.0. Lab-0.0. Work-0.0
SPA 8002. Command Spanish for Health Care Professionals I. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will prepare non-Spanish speaking health care professionals to provide medical care and attention to Spanish-speaking patients in medical offices and hospitals. This course will also provide transcultural training. Emphasis will be placed on enhancing quality of patient care. No prior knowledge of Spanish is necessary. Materials not included. Students must purchase a Command Spanish manual. This course is offered in partnership with Carolinas HealthCare System. For information, call Edith Valladares at 704/330-6064.

SPA 8003. Workplace Pathways Spanish. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course offers applied Spanish for the workplace to facilitate basic communication with people whose native language is Spanish. Emphasis is placed on oral communication and career specific vocabulary. Upon completion, participants should be able to communicate at a functional level with native speakers and demonstrate cultural sensitivity.

SPA 8070. Acting and Theater in Spanish. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will prepare students to explore, learn, and improve the main areas of the actor's repertoire: Posture movement, voice, performing text, character, improvisations and concentration.

Turfgrass Management (TRF)

TRF 7000. Turf Maintenance Practices. 0.0 Hours. Class-20.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the following turfgrass information and practices: 1. Turfgrass species and culture, 2. Turf pests and their control, 3. Pesticide.

Web Technologies (WEB)

WEB 7200. Web Technology Series: Principles of Web Design. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will guide you through the entire Web site creation process, while developing and enhancing your HTML, CSS, and visual design skills along the way. You will plan site layout and navigation; progress to Web typography, colors, and images. This is course 1/6 of our Web Technology Certificate.

WEB 7201. Web Technology Series: Principles of Html and Cascading Style Sheets. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
You will learn the basics of building structured Web pages with HTML and XHTML, how to add text and images to Web pages, how to create frames, tables, and forms, and how to format and design Web pages using Cascading Style Sheets (or CSS). This is course 2/6 of our Web Technology Certificate.

WEB 7202. Web Technology Series: Javascript. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
One of the world's most used programming language is Javascript. It's prevalence among programmers is just one of the reasons why you should learn this language and begin authoring webpages that perform efficiently. This is course 3 of the six part Web Technology Certificate Program.

WEB 7203. Principles of Internet Marketing: Web Technology Series. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
In today's marketplace a digital presence is key. Companies aren't just looking for a functioning website they are looking for a website that generates revenue! Take your programming skills into the business arena by learning about: site traffic, e-commerce, digital branding and measuring ROI. This is class 4/6 of our Web Technology Certificate.

WEB 7211. Design and Build Websites with HTML & CSS. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Learn the skills to become a Front-End Developer - not just code skills! You will have the experience of working with industry experts while designing and building your own website using HTML and CSS, with the elements that customers see and interact with directly. In this course, you will learn the right combination of programming and aesthetics.
WEB 7212. Front End Development With Javascript & Jquery. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Advance your Front-End development skills with JavaScript. Learn how to add animation, tabbed panels, content sliders, form validation, interactive galleries, and sort data. In this class you will experience how to create a user interface that is more interactive, intuitive and attractive.

WEB 7215. Programming in HTML5 with JavaScript & CSS3. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This class helps you prepare for the Official Microsoft Certification, it is an entry point into both the Web application and Windows Store apps training paths. The class focuses on using HTML5/CSS3/JavaScript to implement programming logic, define and use variables, perform looping and branching, develop user interfaces, capture and validate user input, store data, and create well-structured application.

WEB 7216. Beginning ASP.NET 4.5. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This is an introductory class that provides a firm foundation for developers who are new to ASP.NET and delivers key insights for those not yet familiar with new updates. This class is a guide to create a fully functional, database-driven website, from creation of the most basic site structure all the way down to the successful deployment of the website to a production environment.

WEB 7249. Website Designer Certificate. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Learn to design and maintain a website, whether for your company or your own. The certificate covers the basics of visual communication, branding, instruction on how to register your domain name, security issues, Adobe Creative Suite, HTML5, CSS, and Fireworks. Instructors will guide you in web building, step-by-step, while you practice the skills you learn both inside and outside of the classroom.

WEB 7252. Front End Jr Developer Certification. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
The Front End Web Developer is responsible for creating and implementing Web based user interfaces. It works closely with Web designers, Back End Developers and database administrators. It is the bridge between design and development and contributes to planning and defining the web application. Some of the key subjects in this certificates are: HTML, CSS, JavaScript and jQuery.

WEB 7254. Microsoft Basic Web App Developer Certification. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
This certification serves as preparation for the Microsoft Technology Associate Certification. It includes 3 fundamental classes that together lay the foundations to understand how the architecture works, and to get started developing Web Applications in Microsoft technologies.

WEB 7256. Programming in HTML5/CSS3/JS Certificate. 0.0 Hours. Class-440.0. Clinical-0.0. Lab-0.0. Work-0.0
Whether you are leveraging your existing web programming skills in JavaScript or starting from scratch on a new website, the Programming HTML5/CSS3/JS Certificate track is for you. This certificate helps prepare the for the Microsoft Certified Professional, by completing training in the core solutions developer course #70-480.

Welding (WLD)

WLD 7100. Blueprint Reading for Welders. 0.0 Hours. Class-30.0. Clinical-0.0. Lab-0.0. Work-0.0
WLD 7200. Basic Welders II. 0.0 Hours. Class-24.0. Clinical-0.0. Lab-0.0. Work-0.0

Course Registration

Registration
Course registration services are offered at all six campuses: Cato, Central, Harper, Harris, Levine, and Merancas. Students are encouraged to register as early as possible to secure a schedule of classes that meets their needs. The College year consists of three terms. Fall and spring semesters are 16 weeks each. The summer term is eight weeks. Calendars (http://www.cpcc.edu/calendar) are continually updated on the College’s website along with registration dates and information for online registration. Although the summer session is shorter, summer classes carry the same course credit as those in other terms.

Students entering degree, diploma, or certificate programs must complete the admissions process prior to registration.

Returning CPCC students or new students who have completed the admissions process may register online using their student User ID and password at https://mycollege2.cpcc.edu.

Counseling and Advisement Services
Counselors and Academic Advisors provide numerous services for students, including:

- Academic advising for new and returning students without an assigned faculty advisor for their program of study
- Advising for students in pre-nursing/pre-health careers programs
- Academic counseling for students in meeting their academic goals
- Personal counseling and referrals

Counseling and Advisement on Central Campus can be reached at 704.330.6433 or at Student Success Services in Room 365 of the Central High Building. The website: www.cpcc.edu/ican/contact-us gives locations for Counseling and Advisement services on each CPCC campus.

Student Success Information Center
The Student Success Center helps connect students with resources throughout the College. It is located on the second floor (ground floor) of the Central High Building on Central Campus for face-to-face information or assistance. For information by phone, call the Information Call Center at: 704.330.2722.
College Life

Student Success at CPCC
College Life

CPCC is committed to fostering student success. It accomplishes this through an assortment of services and resources that help individuals reach their full potential as a student or working professional. CPCC staff members are committed to responding to each person’s needs to help them succeed both academically and professionally, while maintaining a learning environment that is engaging, challenging and secure.

CPCC Student Handbook

The online student handbook is a comprehensive site including important CPCC policies that govern academic and campus life, as well as other valuable student information.

Click here to access the Student Handbook (http://www.cpcc.edu/firstyear/success-documents) or use this web address: http://www.cpcc.edu/firstyear/success-documents.

Student Life

The Office of Student Life places priority on activities which support and enhance learning in the classroom, provide opportunities for student leadership development and honor the rich diversity at CPCC and in the surrounding community. Student Life staff are present on each CPCC campus.

The Office of Student Life serves as a center for campus programs and activities, a resource for student organizations and a focal point for leadership development opportunities. Student Life provides direction, guidance and resources for numerous CPCC student organizations, including the Student Government Association, Phi Theta Kappa International Honor Society and the Student Leadership Academy.

Activities sponsored or supported by Student Life include festivals, lectures, workshops, conferences, field trips, service projects, educational exhibits, live music and other co-curricular experiences. A full online calendar of Student Life events and activities can be found on the Student Life website at www.cpcc.edu/student_life.

For further information, visit the Student Life office on any campus, online at www.cpcc.edu/student_life, or call 704.330.6584.

Student Government Association

The Student Government Association (SGA) is the student organization at CPCC. It serves as a resource for student clubs and organizations, and is present at each CPCC campus. Membership is open to all currently-enrolled curriculum students. The Executive Committee is elected through the process outlined in the SGA Constitution each spring. SGA’s policies are in keeping with those of the CPCC Board of Trustees, the administration and the laws of the State of North Carolina.

The SGA serves as a

• student liaison with College administration,
• resource for student clubs and organizations,
• sponsor of annual festivals and service activities, and
• recommending committee for the expenditure of student activities fees.

The SGA president serves as a non-voting member of the College Board of Trustees and SGA members frequently serve as student representatives on various College committees.

The Executive Committee of the SGA includes the president, vice-president, secretary, treasurer and public information officer. Applications for senator positions are accepted during spring and fall semesters and appointments are made by vote of the Executive Committee. Applications for senator positions and the SGA Constitution are available in the Student Life office on any campus or online at www.cpcc.edu/student_life/sga. For more information about SGA, call 704.330.6584.

Student Clubs and Organizations

Student Life and the Student Government Association offer support, guidance and resources to numerous student clubs and organizations on all CPCC campuses. Some of these organizations focus on special interests and others are directly related to curriculum programs offered at CPCC. Although some clubs have membership requirements, no student organization at CPCC is allowed to discriminate on any grounds. A complete list of student clubs and organizations is available online at www.cpcc.edu/student_life.

Student Information

CPCC Today is the weekly student e-newsletter filled with useful information including important deadlines, policy changes, events at the College and student discounts. Find out about parking information, new scholarships and the array of CPCC resources available. Visit http://www.cpcc.edu/cpcc-today for this week’s issue or add the CPCC Today gadget to a CPCC student portal for easy access. For additional information, call 704.330.6231.

Family Resource Center at CPCC

The Family Resource Center, located in Room 245 of the Overcash Academic and Performing Arts Center on Central Campus, serves CPCC students, staff and faculty on all six campuses. The Center’s mission is to enhance student success through healthy lifestyle programming and to support the CPCC community by identifying resources and services to assist with life challenges.

The Family Resource Center offers:

• A warm, welcoming environment with access to a variety of educational materials
• Educational workshops and drop-in programs focusing on topics such as healthy eating, tobacco cessation, financial management, handling stress and domestic violence awareness
• Support and encouragement to individuals dealing with major life events and assistance in identifying helpful resources both on and off campus.
• Referrals to agencies and programs that may be of further assistance

The Family Resource Center also administers the state Childcare Assistance Grant to assist students with the costs of childcare.

For more information, please visit the Family Resource Center online at www.cpcc.edu/student_life/frc or call 704.330.6246.
Learning Resources

As a Learning College, CPCC creates environments that generate positive, nurturing and learning-focused experiences for students in the classroom. To assist students on their academic journey, the college has developed a host of resources, such as Library Services, Academic Learning Centers, and others, for students to utilize on their lifelong learning journey.

Academic Learning Center (ALC)

The Ruth G. Shaw Academic Learning Center (ALC) is a comprehensive tutorial center that provides assistance to CPCC students enrolled in curriculum courses. The Center is located on Central Campus in Room 103 of the Central High Building. Assistance is available to students in the following key areas: math, science, writing and study skills. The ALC promotes independent learning and the development of skills necessary to support academic and life-long learning success. Group instruction sessions are offered, along with one-to-one tutoring sessions arranged by appointment. The ALC also houses a computer lab for student use with limited assistance.

Services also are available on:

- Cato Campus at Harris Boulevard and Grier Road,
- Harper Campus off Arrowood Road,
- Harris Campus in the airport area,
- Levine Campus in Matthews, and
- Merancas Campus in Huntersville.

Schedules vary by location. For further information, contact the ALC at 704.330.6474 or visit the website at: www.cpcc.edu/academic_learning.

Bookstores

The Right Book, from the Right Place

CPCC campus bookstores ensure students get exactly what they need to be prepared for class when purchasing books and supplies. Campus bookstores’ staff work closely with faculty members to ensure the correct books are in stock. Visit one of the CPCC bookstores listed below.

Barnes & Noble - R. Powell Majors Bookstore (Central Campus)

1112 Charlottetowne Avenue
Charlotte, N.C.
704.330.6649

Academic year operating hours:
Monday–Thursday, 7:30 a.m.–6:30 p.m.*
Friday, 7:30 a.m.–4:30 p.m.*
Saturday and Sunday - closed*

* Hours subject to change without notice.

Extended hours:
To see extended operating hours, visit the Barnes & Noble college website at http://cpcc.bncollege.com or call the Central Campus bookstore at 704.330.6649.

Barnes & Noble Bookstore at Levine Campus

2800 Campus Ridge Road
Matthews, N.C.
704.330.4233

Academic year operating hours:
Monday–Thursday, 7:30 a.m.–6:30 p.m.*
Friday, 7:30 a.m.–2 p.m.*
Saturday and Sunday - closed*

* Hours subject to change without notice.

Extended hours:
To see extended operating hours, visit the Barnes & Noble college website at http://cpcc.bncollege.com or call the Levine Campus bookstore at 704.330.4233.

Barnes & Noble Bookstore at Cato Campus

8120 Grier Road,
Charlotte N.C.
704.330.4832

Academic year operating hours:
Monday–Thursday, 8:00 a.m.–6:00 p.m.*
Friday, 8:00 a.m.–2:00 p.m.*
Saturday and Sunday - closed*

* Hours subject to change without notice.

Extended hours:
To see extended operating hours, visit the Barnes & Noble college website at http://cpcc.bncollege.com or call the Cato Campus bookstore at 704.330.4832.

Barnes & Noble Bookstores at Area Campuses: Merancas, Harris, Harper

Academic year operating hours:
Area campus bookstores open 30 minutes prior to the start of any new or continuing education class for a period of one hour.

Extended hours:
Area campus bookstores are open one week prior to the start of each term through two weeks after the start of the term. Extended hours are posted at each campus and online at http://cpcc.bncollege.com. They also can be obtained by calling the Central Campus Bookstore at 704.330.6649.

Only credit card and Barnes & Noble Gift card orders can be placed online at http://cpcc.bncollege.com. Purchased books can be requested for ready pick up at any campus or shipped directly to a student address.

eLearning

Online (eLearning) represents an innovative means of addressing the complex range of personal, professional and lifelong learning challenges and goals of today’s learners. The College offers a variety of programs that can be completed fully online, as well as some programs that can be completed primarily online. In addition the College offers some traditional
face-to-face components, as well as a wide array of fully online individual courses.

Online and digital learning models include:

- **Traditional instructor-led classroom courses** that include virtual learning spaces where course content and opportunities for interacting with the instructor and other class members enhance the classroom experience.
- **Blended or hybrid courses** where some portion of the class or its activities are divided between synchronous (real time) and asynchronous (any time) elements.
- **Solely online courses** where all elements of the course experience and content are administered virtually or fully online.

Students who take eLearning courses will find a full complement of support services and resources designed to foster engagement, excellence and ultimately, success. They include but are not limited to the following:

- Admissions and Registration
- Bookstore Services
- Career Services
- Academic Advising
- Assistance with Financial Aid
- Library and Media Services
- Testing and Assessment

For more information regarding eLearning program offerings, visit www.cpcc.edu/distance.

For technical assistance, students may call the CPCC ITS Helpdesk at 704.330.5000.

**Global Learning**

A goal of the CPCC Global Learning Office (GLO) is to prepare students and faculty for life and work in a global society. The GLO accomplishes this by facilitating the Global Issues Forums, expanding international service-learning opportunities and study abroad as well as strengthening ties with local and international organizations to increase opportunities for workforce development.

CPCC provides opportunities for students, faculty and staff to increase their global awareness and competencies. The College encourages faculty to globalize curriculum, host speakers on international topics and support participation in international community events. Global Learning provides an outstanding opportunity to broaden one’s perspective and boost language skills, by offering short-term international programs in more than 10 countries.

In 2015, the College joined the N.C. Scholars of Global Distinction Program. This partnership between UNC-Chapel Hill and N.C. Community Colleges is designed to equip students with the global competencies and skills needed for the 21st century workforce. Participating students expand their intercultural awareness and understanding of the global relevance of their college studies by completing the program’s requirements.

Students also are exposed to cultures through the “Global Classroom,” a virtually equipped class that connects CPCC students with classes around the world. Study abroad programs have included:

- language immersion in Peru, Germany and France,
- business courses in China and Brazil,
- liberal arts in Italy, France, and the United Kingdom, and
- service projects in Brazil and Tanzania.

A full year work-study scholarship to Germany also is possible through a liaison with the Congress Bundestag Youth Exchange. For more information, contact the Director of Global Learning at 704.330.6167 or visit www.cpcc.edu/study-abroad. The Office is located in Room 303 of the Overcash Building on Central Campus.

**Library Services**

Library Services at Central Piedmont Community College seeks to support and strengthen teaching and learning by providing access to student-centered and learning-centered resources, services and environments that lead to life-long educational development.

Library Services is comprised of seven full-service libraries on six college campuses. The library’s website serves as the gateway to all library resources: online resources, print books, periodicals, media, scholarly journals, e-books, audio-books and videos. Resources are available on and off campus and are shared among the campus libraries through courier, fax, email, mobile and the Web, for the convenience of all users. The library is accessible every day, 24 hours a day online at www.cpcc.edu/academics/library-and-research.

CPCC libraries provide library instruction, interlibrary loan, reserve service, group study facilities, presentation support, in-person and virtual research assistance as well as integrated IM/webchat reference service available every day, 24 hours a day. A comprehensive description of the library, its locations, array of resources, and services can be found on the library website at www.cpcc.edu/library.

**Cato Campus Library**
8120 Grier Road
Charlotte, NC 28213
704.330.4818

**Cato Law Library**
8120 Grier Road
Charlotte, NC 28213
704.330.2722 ext. 7819

**Central Campus Library**
1201 Elizabeth Avenue
Charlotte, NC 28204
704.330.6885

**Harper Campus Library**
315 Hebron Street
Charlotte, NC 28273
704.330.4418

**Harris Campus Library**
3210 CPCC Harris
Campus Drive
Charlotte, NC 28208
704.330.4618

**Levine Campus Library**
2800 Campus Ridge Road
Matthews, NC 28105
704.330.4212
Service-Learning Center

Service-learning is an innovative teaching method that combines meaningful community service with academic instruction. Instructors who incorporate a service-learning component into their courses offer grade-based incentives for students to commit to service projects that are relevant to course learning objectives. National research data shows that student service-learners learn more about the course content, are more engaged in the classroom, explore career options and assume greater civic responsibility in their community. CPCC research data shows that service-learning has a high correlation with student success.

The CPCC Service-Learning Center serves as a liaison between instructors, students and the partnering community agencies that provide service opportunities for students. The Center is an on-campus resource for information about non-profit organizations. It is also a resource for faculty development and training opportunities related to service-learning teaching methods.

In addition to its curriculum-based service, the Service-Learning Center sponsors, supports and coordinates additional service opportunities for students outside the classroom. These programs include Service in Action!, Alternative Spring Break, Martin Luther King Challenge, environmental service projects supporting local initiatives, tutoring programs in local schools and volunteer fairs.

The Service-Learning Center is located on:

- Central Campus in Room 257 of the Overcash Building,
- Harper Campus in Room 344,
- Cato Campus in Room 110,
- Levine Campus in Room 3435,

Information is available in the Office of Student Life on each CPCC campus, by calling 704.330.6445 and online at www.cpcc.edu/service-learning.

Workplace Learning

Workplace Learning Programs (formerly Co-op)

Work-based Learning (formerly Co-op) is an academic class that blends classroom learning with practical work experience. Instead of attending class in a traditional classroom, students work with an employer in a position directly related to their field of study. Work-based Learning is similar to an internship but students receive academic credit either as an elective or as a required class. Through partnerships with the business community, students gain work experience that increases their chances of finding career-related employment upon completion. Employers have the opportunity to connect with students as faculty support them throughout the experience. Work-based Learning experiences may be paid or unpaid.

Eligibility

Students are accepted from various programs of study, provided they meet the following criteria:

1. They must be enrolled in an approved CPCC Work-based Learning curriculum program of study.
2. They must meet GPA and course completion eligibility requirements as established by the programs of study and/or state regulations.
3. They must be recommended by the program faculty coordinator.
4. They must be approved by the Workplace Learning office. Placement is not guaranteed for all eligible students.
5. Students who meet certain criteria may qualify to receive academic credit for a Work-based Learning experience at their current job.

For more information, contact the Central Campus Workplace Learning Office, Terrell Building, Room 326, call 704.330.6217, email workplace.learning@cpcc.edu, or visit www.cpcc.edu/workplacelearning. Locations for Workplace Learning offices on all CPCC campuses are listed on the website.

Internships

Internships are flexible, non-credit bearing work experiences that allow students and recent graduates to gain exposure to their field. Internships enable students to further build related work experience and enhance their portfolios, and are an option in programs where work-based learning is unavailable. Upon successful completion of an internship, participants will receive a certificate acknowledging their achievement.

Eligibility to participate in a non-credit internship varies based on the program of study. Please contact the Workplace Learning office for details.

Apprenticeship Charlotte

Apprenticeship Charlotte is an unprecedented effort by CPCC to connect talented students to local employers. By combining classroom and workplace learning, both the employers and selected students share a valuable experience that produces immediate results. Students gain part-time employment and valuable work experience. Employers often cover the cost of tuition, fees and books for apprentices, and many times offer full-time employment upon successful completion of an apprenticeship. Employers benefit from having highly skilled employees in positions that are difficult to fill. In North Carolina, formal or registered apprenticeships are created in agreements between employers and the N.C. Department of Commerce (NCDOC).

To learn more about participating in an apprenticeship, potential students should visit www.cpcc.edu/apprenticeships or send an email to workplace.learning@cpcc.edu.
Career Resources

Career Services

Career Services helps students and graduates discover and implement their career plans and find job opportunities to meet their goals. The following services are provided:

- Career Counseling
- Online Career Information
- Online Job Postings (employeNC.com)
- Résumé Assistance
- Mock Interviews
- Career Fairs
- On-Campus Recruitment

Career Services is available on all campuses. For further information, contact Career Services through the website at www.cpcc.edu/career, by calling 704.330.6433, or by email at: career.services@cpcc.edu.

Small Business Center

The Small Business Center expands the College’s role in supporting small business owners and promoting entrepreneurship as a career option. It continuously develops innovative continuing education programs to help entrepreneurs start a business, grow a business, or keep pace with the ever-changing small business environment. The Small Business Center is a part of the statewide Small Business Center Network, a community college-funded initiative with a vision to foster and support entrepreneurship, small business training and economic development in local communities across the state.

Components of the Small Business Center include

- Continuing education courses (non-degree) focused on critical practical skills with classes ranging from start up and financing to marketing, as well as a comprehensive certificate course in entrepreneurship. Courses focus on:
  - How to Start a Business
  - Business Plan Writing
  - International Business
  - Accounting with QuickBooks®
  - Funding and Financing
  - Nonprofit Essentials
  - Business Growth and Development

- Introductory seminars, workshops and forums to promote awareness and answer student questions
- Business Resource Center located on Central Campus with books, periodicals, videos and lending library collection, plus client touch-down computer research stations equipped with specialized business software
- Individual counseling to assist small business owners and to offer referrals for those who need additional skills or consulting
- Small business networking events to showcase small business owners, their services and products

For more information, visit the Small Business Center (http://www.cpcc.edu/sbc) online and by phone at 704.330.6736 or contact the Continuing Education Customer Service Center at 704.330.4223.

Career Services

Career Services helps students and graduates discover and implement their career plans and find job opportunities to meet their goals. The following services are provided:

- Career Counseling
- Online Career Information
- Online Job Postings (employeNC.com)
- Résumé Assistance
- Mock Interviews
- Career Fairs
- On-Campus Recruitment

Career Services are available in person available on all campuses. For further information, contact Career Services through the website at www.cpcc.edu/career, by calling 704.330.6433, or by email at: career.services@cpcc.edu.
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