Table of Contents

Welcome to Central Piedmont Community College .......................... 7
About Central Piedmont .................................................................. 8
  Academic Calendar ..................................................................... 8
  Accreditations ......................................................................... 8
  Administrators, Full-Time Faculty and Professional Staff .......... 10
  Broadcasting Service of Central Piedmont ......................... 36
  Campuses, Addresses, Maps ...................................................... 37
  Central Piedmont Foundation / Institutional Advancement .... 37
  Central Piedmont Terminology .................................................... 37
  College Administration ............................................................... 39
  College Policies and Procedures ................................................. 40
  Disclosure ............................................................................. 40
  Global Engagement ................................................................. 41
  History of the College ............................................................. 41
  Memberships, Professional Associations ..................................... 42
  Mission, Values, Goals ........................................................... 44
  NCCCS Performance Measures .................................................... 45

Enrollment .................................................................................. 47
  Campus Tours ........................................................................ 48
  Course Credit and Placement ....................................................... 48
    Advanced Placement Examination Course Credit Guidelines .... 48
    International Baccalaureate Course Credit Guidelines ............ 49
  Student Affairs Directors ........................................................... 50
  First Year Experience / Orientation .............................................. 50
  International Student Admission ................................................. 51
  Student Educational Records / FERPA ........................................... 51
  Testing and Assessment ............................................................ 53
    College-Level Examination Program (CLEP) ...................... 53
  Transcript Evaluation Process ....................................................... 54
  Tuition and Fees .................................................................... 55
  Student Services ..................................................................... 59
    College Security Services ........................................................ 59
    Counseling Services ............................................................... 59
    Disability Services .................................................................. 60
    Emergency Food Pantries ....................................................... 61
  Financial Aid .......................................................................... 61
    Financial Aid Processes, Federal Regulations ....................... 63
    Financial Aid Programs .......................................................... 65
    Financial Aid Satisfactory Academic Progress (SAP) ............ 66

Appealing Ineligibility for Financial Aid ........................................... 69
International Programs and Services .......................................... 71
Lost and Found ......................................................................... 71
Single Stop ............................................................................. 71
Transfer Resource Center ........................................................... 71
TRIO Student Support Services .................................................... 71
Veterans Resources ................................................................... 72
  Veterans Affairs Education Benefits ......................................... 73
  Veterans Education Benefits Regulations ................................... 76

Programs of Study ...................................................................... 80
  Career & College Promise (CCP) High School Enrollment .......... 80

College and Career Readiness Programs ...................................... 81
  Adult High School Diploma ....................................................... 81
  Adult English as a Second Language (Adult ESL) .................... 81
  High School Equivalency Testing .............................................. 81
  High School Equivalency (HSE) Instruction ............................... 82
  Independence and Literacy Education for Adults with Disabilities (I-LEAD) ........................................ 82
  Accelerated Career Training (ACT) ............................................. 82
  Career Development ................................................................ 82
  NC Works NextGen .................................................................. 82
  Pathways to Careers ................................................................ 83
  Rise 2 Work .......................................................................... 84

Developmental Studies ................................................................ 84
College-Level Curriculum Programs .......................................... 84
  Central Piedmont General Education Goals ............................... 85
  College Transfer Programs ....................................................... 85
  Associate in Applied Science Degrees, Diplomas, Certificates ... 86
    Accounting and Finance .......................................................... 88
    Advertising + Graphic Design .................................................. 92
    Air Conditioning, Heating and Refrigeration Technology ....... 93
    Architectural Technology ....................................................... 96
    Automotive Systems Technology .............................................. 97
    Baking and Pastry Arts ........................................................... 100
    Basic Law Enforcement Training ............................................ 103
    Biomedical Equipment Technology ......................................... 104
    Broadcasting and Production Technology ................................. 105
    Business Administration ........................................................ 106
    Cardiovascular Technology ...................................................... 109
    Civil Engineering Technology .................................................. 111
    Collision Repair and Refinishing Technology ............................... 112
Computer Engineering Technology ........................................ 114
Computer-Integrated Machining Technology ........................ 116
Construction Management Technology ................................. 119
Cosmetology .................................................................. 122
Criminal Justice Technology ........................................... 124
Culinary Arts ................................................................. 127
Cytotechnology .............................................................. 129
Dental Assisting ............................................................ 130
Dental Hygiene .............................................................. 131
Diesel and Heavy Equipment Technology ............................ 132
Early Childhood Education ............................................. 134
Electrical Engineering Technology ..................................... 137
Electrical Systems Technology .......................................... 139
Electronics Engineering Technology ................................... 142
Emergency Management .................................................. 143
Emergency Medical Science ............................................ 143
Fire Protection Technology .............................................. 144
Geomatics Technology .................................................... 146
Graphic Arts and Imaging Technology ................................. 147
Health Information Technology ........................................ 150
Horticulture Technology ................................................ 151
Hospitality Management .................................................. 154
Human Services Technology ............................................ 157
Information Technology .................................................. 162
Interior Design ................................................................ 168
Interpreter Education ....................................................... 170
Lateral Entry Teacher ........................................................ 173
Mechanical Engineering Technology .................................... 173
Mechatronics Engineering Technology ............................... 175
Medical Assisting ........................................................... 176
Medical Laboratory Technology ........................................ 178
Medical Office Administration ......................................... 179
Non-Destructive Examination Technology ............................ 181
Nurse Aide .................................................................. 184
Nursing, Associate Degree ............................................... 185
Occupational Therapy Assistant ........................................ 186
Office Administration ....................................................... 188
Ophthalmic Medical Personnel .......................................... 191
Paralegal Technology ....................................................... 192
Pharmacy Technology ..................................................... 194
Physical Therapist Assistant ............................................. 196
Polysomnography .......................................................... 197
Respiratory Therapy ......................................................... 198
Simulation and Game Development ..................................... 198
Speech Language Pathology Assistant ............................... 200
Supply Chain Management ............................................. 203
Surgical Technology ......................................................... 204
Sustainability Technologies ............................................. 205
Turfgrass Management Technology .................................... 206
Welding Technology ......................................................... 209
Corporate and Continuing Education .................................. 210
Business and Industry ....................................................... 216
Computer Learning Center ............................................. 216
Small Business Center .................................................... 216
Workplace Learning and Apprenticeship Charlotte .............. 217
Continuing Education ....................................................... 217
Audio Engineering ........................................................ 218
Business Processes ........................................................ 218
Communication .......................................................... 218
Computer and Information Technology ............................... 218
Construction ................................................................. 218
Cosmetology ................................................................. 218
Entrepreneurship and Small Business ................................. 218
Financial Services ........................................................ 219
General Business .......................................................... 219
Graphic Design, Printing and Digital Photography ............... 219
Healthcare ................................................................. 219
Hospitality and Food Services ............................................ 219
Human Resources and Payroll .......................................... 219
Insurance ................................................................. 219
Languages and Culture .................................................... 219
Leadership and Management ........................................... 220
Marketing and Social Media ............................................. 220
Notary Public ............................................................... 220
Public Safety ............................................................ 220
Public Safety for Healthcare Providers .............................. 220
Real Estate and Appraisal ................................................. 221
Transportation, Distribution and Logistics ......................... 221
Teaching Education ......................................................... 221
Welding and Inspection .................................................. 221
Courses / Course Registration ........................................... 224
Career & College Promise Courses During High School ....... 224
Developmental Courses .................................................. 224
College-Level Curriculum Courses ................................... 227
<table>
<thead>
<tr>
<th>Academic Related (ACA)</th>
<th>229</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting (ACC)</td>
<td>229</td>
</tr>
<tr>
<td>Agriculture (AGR)</td>
<td>231</td>
</tr>
<tr>
<td>Air Cond, Heating, and Refrigeration (AHR)</td>
<td>231</td>
</tr>
<tr>
<td>Alternative Energy Technology (ALT)</td>
<td>232</td>
</tr>
<tr>
<td>American Sign Language (ASL)</td>
<td>233</td>
</tr>
<tr>
<td>Anthropology (ANT)</td>
<td>234</td>
</tr>
<tr>
<td>Architecture (ARC)</td>
<td>235</td>
</tr>
<tr>
<td>Art (ART)</td>
<td>237</td>
</tr>
<tr>
<td>Astronomy (AST)</td>
<td>240</td>
</tr>
<tr>
<td>Automation &amp; Robotics (ATR)</td>
<td>240</td>
</tr>
<tr>
<td>Automotive (AUT)</td>
<td>241</td>
</tr>
<tr>
<td>Automotive Body Repair (AUB)</td>
<td>242</td>
</tr>
<tr>
<td>Baking and Pastry Arts (BPA)</td>
<td>243</td>
</tr>
<tr>
<td>Banking and Finance (BAF)</td>
<td>244</td>
</tr>
<tr>
<td>Biology (BIO) Courses</td>
<td>244</td>
</tr>
<tr>
<td>Biomedical Equipment Technology (BMT)</td>
<td>246</td>
</tr>
<tr>
<td>Blueprint Reading (BPR)</td>
<td>246</td>
</tr>
<tr>
<td>Broadcasting and Production Technology (BPT)</td>
<td>246</td>
</tr>
<tr>
<td>Business (BUS)</td>
<td>247</td>
</tr>
<tr>
<td>Cardiovascular Tech (Invasive) (ICT)</td>
<td>250</td>
</tr>
<tr>
<td>Cardiovascular Tech (Non-Invasive) (NCT)</td>
<td>250</td>
</tr>
<tr>
<td>Carpentry (CAR)</td>
<td>251</td>
</tr>
<tr>
<td>Chemistry (CHM)</td>
<td>251</td>
</tr>
<tr>
<td>Chemistry Concepts (CHM)</td>
<td>253</td>
</tr>
<tr>
<td>Civil Engineering (CIV)</td>
<td>253</td>
</tr>
<tr>
<td>Civil Engineering and Geomatic (CEG)</td>
<td>253</td>
</tr>
<tr>
<td>Communication (COM)</td>
<td>254</td>
</tr>
<tr>
<td>Computer Information Technology (CTS)</td>
<td>255</td>
</tr>
<tr>
<td>Computer Science (CSC)</td>
<td>256</td>
</tr>
<tr>
<td>Computer Tech Integration (CTI)</td>
<td>258</td>
</tr>
<tr>
<td>Construction (CST)</td>
<td>259</td>
</tr>
<tr>
<td>Construction Management (CMT)</td>
<td>259</td>
</tr>
<tr>
<td>Cosmetology (COS)</td>
<td>260</td>
</tr>
<tr>
<td>Criminal Justice (CJC)</td>
<td>262</td>
</tr>
<tr>
<td>Culinary (CUL)</td>
<td>264</td>
</tr>
<tr>
<td>Cyber Crime Technology (CCT)</td>
<td>267</td>
</tr>
<tr>
<td>Cytotechnology (CYT)</td>
<td>268</td>
</tr>
<tr>
<td>Dance (DAN)</td>
<td>269</td>
</tr>
<tr>
<td>Database Management Technology (DBA)</td>
<td>271</td>
</tr>
<tr>
<td>Dental (DEN)</td>
<td>271</td>
</tr>
<tr>
<td>Design: Creative (DES)</td>
<td>274</td>
</tr>
<tr>
<td>Developmental Disabilities (DDT)</td>
<td>276</td>
</tr>
<tr>
<td>Digital Media Technology (DME)</td>
<td>276</td>
</tr>
<tr>
<td>Drafting (DFT)</td>
<td>277</td>
</tr>
<tr>
<td>Drama/Theatre (DRA)</td>
<td>277</td>
</tr>
<tr>
<td>Economics (ECO)</td>
<td>278</td>
</tr>
<tr>
<td>Education (EDU)</td>
<td>279</td>
</tr>
<tr>
<td>Electrical Utility Substation (EUS)</td>
<td>283</td>
</tr>
<tr>
<td>Electrical (ELC)</td>
<td>283</td>
</tr>
<tr>
<td>Electronic Commerce (ECM)</td>
<td>286</td>
</tr>
<tr>
<td>Electronics (ELN)</td>
<td>286</td>
</tr>
<tr>
<td>Emergency Medical Science (EMS)</td>
<td>286</td>
</tr>
<tr>
<td>Engineering (EGR)</td>
<td>288</td>
</tr>
<tr>
<td>English (ENG)</td>
<td>289</td>
</tr>
<tr>
<td>English As a Foreign Language (EFL)</td>
<td>291</td>
</tr>
<tr>
<td>Entertainment Technologies (ENT)</td>
<td>291</td>
</tr>
<tr>
<td>Environmental Science (ENV)</td>
<td>291</td>
</tr>
<tr>
<td>Fire Protection (FIP)</td>
<td>292</td>
</tr>
<tr>
<td>French (FRE)</td>
<td>294</td>
</tr>
<tr>
<td>Geographic Information Systems (GIS)</td>
<td>295</td>
</tr>
<tr>
<td>Geography (GEO)</td>
<td>296</td>
</tr>
<tr>
<td>Geology (GEL)</td>
<td>296</td>
</tr>
<tr>
<td>German (GER)</td>
<td>297</td>
</tr>
<tr>
<td>Gerontology (GRO)</td>
<td>297</td>
</tr>
<tr>
<td>Graphic Arts (GRA)</td>
<td>298</td>
</tr>
<tr>
<td>Graphic Design (GRD)</td>
<td>299</td>
</tr>
<tr>
<td>Health (HEA)</td>
<td>301</td>
</tr>
<tr>
<td>Health Information Technology (HIT)</td>
<td>301</td>
</tr>
<tr>
<td>Heavy Equipment Maintenance (HET)</td>
<td>302</td>
</tr>
<tr>
<td>History (HIS)</td>
<td>303</td>
</tr>
<tr>
<td>Horticulture (HOR)</td>
<td>305</td>
</tr>
<tr>
<td>Hotel &amp; Restaurant Management (HRM)</td>
<td>308</td>
</tr>
<tr>
<td>Human Services (HSE)</td>
<td>309</td>
</tr>
<tr>
<td>Humanities (HUM)</td>
<td>310</td>
</tr>
<tr>
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<td>310</td>
</tr>
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<td>Information Systems (CIS)</td>
<td>311</td>
</tr>
<tr>
<td>Information Systems Security (SEC)</td>
<td>311</td>
</tr>
<tr>
<td>International Business (INT)</td>
<td>311</td>
</tr>
<tr>
<td>Interpreter Preparation (IPP)</td>
<td>312</td>
</tr>
<tr>
<td>Journalism (JOU)</td>
<td>313</td>
</tr>
<tr>
<td>Landscape Architecture Technology (LAR)</td>
<td>313</td>
</tr>
<tr>
<td>Legal Education (LEX)</td>
<td>313</td>
</tr>
<tr>
<td>Logistics Management (LOG)</td>
<td>316</td>
</tr>
</tbody>
</table>
Low Impact Development (LID) ........................................ 317
Machining (MAC) ..................................................... 317
Marketing and Retailing (MKT) .................................. 318
Mathematics (MAT) .................................................. 320
Math Skills Support (MAT) ........................................ 322
Mechanical (MEC) .................................................... 326
Medical Assisting (MED) ........................................... 327
Medical Laboratory Technology (MLT) ....................... 328
Music (MUS) ............................................................ 329
Network Operating Systems (NOS) .............................. 336
Networking Technology (NET) .................................. 337
Nondestructive Examination (NDE) ............................. 337
Nursing (NUR) .......................................................... 339
Nursing Assistant (NAS) ............................................ 340
Nutrition (NUT) .......................................................... 341
Occupational Therapy Assistant (OTA) ......................... 341
Office Systems Technology (OST) .............................. 343
Operations Management (OMT) ................................. 345
Opticianry (OPH) ..................................................... 345
Pharmacy (PHM) ...................................................... 346
Philosophy (PHI) ....................................................... 348
Physical Education (PED) .......................................... 348
Physical Science (PHS) ............................................. 349
Physical Therapy (PTA) ............................................. 349
Physics (PHY) .......................................................... 351
Political Science (POL) .............................................. 351
Polysomnography (PSG) .......................................... 352
Printing (PRN) .......................................................... 353
Process Control Instrumentation (PCI) ......................... 354
Psychology (PSY) ...................................................... 354
Race Car Technology (RCT) ...................................... 355
Religion (REL) .......................................................... 355
Respiratory Care (RCP) ............................................. 356
Simulation & Game Development (SGD) .................... 357
Sociology (SOC) ....................................................... 360
Spanish (SPA) .......................................................... 361
Substance Abuse (SAB) ............................................ 362
Surgery (SUR) ........................................................... 363
Surveying (SRV) ...................................................... 364
Sustainability Technologies (SST) ............................. 365
Transportation Technology (TRN) ............................. 365
Turfgrass Management (TRF) .................................... 366
Web Technologies (WEB) .......................................... 367
Welding (WLD) ....................................................... 368
Wheels of Learning (WOL) ...................................... 370
Work-Based Learning (WBL) .................................. 370
Registering for Classes ........................................... 375
Dual Enrollment during High School ......................... 376
Register for College Credit Classes ......................... 376
Register for Corporate and Continuing Education Classes . 377
Student Handbook ................................................... 378
Student Life ............................................................ 383
Grievance Process for Students ............................... 384
Student Conduct .................................................... 384
Learning Resources .................................................. 386
Academic Learning Center (ALC) ............................ 386
Academic Regulations ............................................. 386
Grading Policy ........................................................ 387
Bookstores .............................................................. 388
Online Learning ....................................................... 389
Global Learning ....................................................... 389
Library ................................................................. 389
Service-Learning ..................................................... 390
Workplace Learning Options ................................. 390
Graduation ............................................................. 392
Career Resources ..................................................... 395
Career Services ....................................................... 395
Small Business Center ............................................ 395
Index .................................................................. 397
Welcome to Central Piedmont Community College

Central Piedmont Community College prides itself on accomplishing its mission of ensuring that the college is comprehensive, inclusive, and accessible by reducing financial, environmental, social, and educational barriers to all members of our community as they pursue their diverse goals.

The heart of that mission is the college’s commitment to students and their success. It is the collective responsibility of each of us to provide a student-centered and supportive environment that fosters life-long learning.

- Dr. Kandi W. Deitemeyer, Central Piedmont Community College President
About Central Piedmont

Founded in 1963, Central Piedmont Community College has eight locations to best serve Mecklenburg County as a champion of students, a catalyst for opportunity, and a provider of exceptional learning experiences. Central Piedmont Community College provides real-world, affordable, hands-on education that will transform their lives and strengthen the economic, social, and cultural environment of Mecklenburg County. Central Piedmont is also a smart investment. At a fraction of the cost, students learn by doing, receiving a combination of technical and soft skills training from quality faculty who prepare them to enter the workforce and make a difference in their family, business, community, and world. Founded in 1963, Central Piedmont Community College has eight locations throughout Mecklenburg County, offering nearly 300 degree, diploma, and certification programs; customized corporate training; market-focused continuing education; and special interest classes.

Academic Calendar

- The Academic Calendar is subject to change. For the most current version, view the online Academic Calendar from the college's website (cpcc.edu).
- Advisement week and registration dates for each term are announced on the Admissions, Registration & Records website.
- Corporate and Continuing Education registration is ongoing throughout every term through Customer Service and Registration for Corporate and Continuing Education at 704.330.4223.
- Central Piedmont is closed on the holidays listed below.
- For additional information, contact the Central Piedmont Information Call Center at 704.330.2722.

Spring Semester 2020

<table>
<thead>
<tr>
<th>Classes Begin</th>
<th>Monday, Jan. 13</th>
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<tbody>
<tr>
<td>First Short Session</td>
<td>Monday, Jan. 13 - Friday, March 6</td>
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<tr>
<td>Martin Luther King, Jr. Holiday</td>
<td>Monday, Jan. 20</td>
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<tr>
<td>Spring Break (Central Piedmont Open)</td>
<td>Monday, March 9 - Sunday, March 15</td>
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<tr>
<td>Second Short Session</td>
<td>Monday, March 16 - Tuesday, May 12</td>
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<tr>
<td>Spring Holidays</td>
<td>Friday, April 10 - Sunday, April 12</td>
</tr>
<tr>
<td>Semester Ends</td>
<td>Tuesday, May 12</td>
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<tr>
<td>Graduation</td>
<td>Thursday, May 14</td>
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Summer Term 2020 (8 weeks)

<table>
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<th>Classes Begin</th>
<th>Wednesday, May 20</th>
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<tr>
<td>Memorial Day Holiday</td>
<td>Monday, May 25</td>
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<tr>
<td>Independence Day Holiday</td>
<td>Friday, July 3</td>
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<tr>
<td>Term Ends</td>
<td>Thursday, July 16</td>
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Fall Semester 2020

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<td>Central Piedmont Closed</td>
<td>Saturday, Aug. 22 - Friday, Aug. 28</td>
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<tr>
<td>Labor Day Holiday</td>
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<tr>
<td>Fall Break</td>
<td>Monday, Oct. 12 - Tuesday, Oct. 13</td>
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<tr>
<td>Second Short Session</td>
<td>Wednesday, Oct. 14 - Friday, Dec. 11</td>
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<tr>
<td>Thanksgiving Holiday</td>
<td>Thursday, Nov. 26 - Sunday, Nov. 29</td>
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<tr>
<td>Semester Ends</td>
<td>Friday, Dec. 11</td>
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<tr>
<td>Winter Holidays</td>
<td>Saturday, Dec. 12 - Sunday, Jan. 10</td>
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Spring Semester 2021

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<tr>
<td>First Short Session</td>
<td>Monday, Jan. 11 - Friday, March 5</td>
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<tr>
<td>Martin Luther King, Jr. Holiday</td>
<td>Monday, Jan. 18</td>
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<tr>
<td>Spring Break (Central Piedmont Open)</td>
<td>Monday, March 8 - Sunday, March 12</td>
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<tr>
<td>Second Short Session</td>
<td>Monday, March 15 - Tuesday, May 11</td>
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<td>Spring Holidays</td>
<td>Friday, April 2 - Sunday, April 4</td>
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<td>Semester Ends</td>
<td>Tuesday, May 11</td>
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<td>Graduation</td>
<td>Thursday, May 13</td>
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Summer Term 2021 (8 weeks)

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<td>Monday, July 5</td>
</tr>
<tr>
<td>Terms Ends</td>
<td>Thursday, July 13</td>
</tr>
</tbody>
</table>

Accreditations / NCCCS Performance Measures

Accreditations

Central Piedmont 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 saccoc.org for questions about the accreditation of Central Piedmont. The Commission on Colleges should be contacted only for questions relating to the College's accreditation. Inquiries regarding the programs and services of Central Piedmont should be directed to the College.
The following organizations also have accredited and approved Central Piedmont programs:

**Accreditation Commission for Education in Nursing (ACEN);** acenursing

- Christa A. Overcash Associate Degree Nursing Program

**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

- 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);** 7272 Wisconsin Ave., Bethesda, MD, 20814; ashp.org

- Pharmacy Technology

**American Welding Society** – Accredited Welder Test Facility

**Association of Nutrition & Foodservice Professionals (ANFP);** anfponline; 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);** cahiim.org

- Health Information Technology

**Commission on Accreditation for Respiratory Care (CoARC);** 1248 Harwood Rd., Bedford, TX 76021; 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; capteonline.org; 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; caahep.org; 303.694.9262**

- Surgical Technology

**Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Cytotechnology Programs Review Committee (CPRC) of the American Society of Cytopathology (ASC), 1361 Park Street, Clearwater, FL 33756; caahep.org; 727.210.2350**

- Cytotechnology

**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; The Commission on Accreditation of Allied Health Education Programs (CAAHEP), 25400 US Highway 19 North, Suite 158, Clearwater, FL 33763; 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; caahep.org;727.210.2350**

- Medical Assisting

**Commission on Dental Accreditation (CODA)**

- 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);** cahiim.org

- Health Information Technology

**Council for Standards in Human Service Education, cshse.org**

- Human Services 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

**Engineering Technology Accreditation Commission of ABET, abet.org**

- Civil Engineering Technology
- Computer Engineering Technology
- Electrical Engineering Technology
About Central Piedmont

- Electronics Engineering Technology
- Mechanical Engineering Technology

National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Rd., Suite 720, Rosemont, IL 60018-5119; 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
- General Motors Automotive Service Educational Program
- Honda Professional Automotive Career Training

National Center for Construction Education and Research Accredited Training and Education Facility

National Coalition of Certification Centers (NC3)
- Air Conditioning, Heating and Refrigeration
- Transportation Systems Technology

National Institute for Metalworking Skills
- Computer Integrated Machining

Nationwide Mortgage Licensing System

North American Board of Certified Energy Practitioners

North Carolina Appraisal Board

North Carolina Bar Certified
- William K. Diehl, Jr. Paralegal Technology Program

North Carolina Commissioner of Banks

North Carolina Criminal Justice Education and Training Standards Commission
- Basic Law Enforcement Training Technology
- Criminal Justice Technology
- General Instructor Training
- Lidar Certification/Recertification
- Radar Certification/Recertification
- Time/Distance Certification/Recertification

North Carolina Department of Health and Human Services, Division of Health Service Regulation, Center for Aide Regulation and Education (CARE)
- Nurse Aide

North Carolina Department of Insurance

North Carolina Fire and Rescue Commission
- Firefighter Training

North Carolina Office of Emergency Medical Services (NCOEMS)
- Emergency Medical Technician
- Paramedic

North Carolina Real Estate Commission

North Carolina Board of Nursing
- Christa A. Overcash Associate Degree Nursing Program

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About Central Piedmont

Broadcasting Service of Central Piedmont

WTVI PBS Charlotte presents the best in news, drama, performance, ideas, and culture to viewers across a 13-county service area in North and South Carolina. A viewer-supported service of Central Piedmont, PBS Charlotte reaches 1.2 million households and offers high-quality, noncommercial programs that educate, inspire and entertain.

The station’s broadcasts include award-winning children’s programming, ground-breaking documentaries and original performances as well as in-depth field reporting of local issues. This commitment to local coverage sets PBS Charlotte apart from other public broadcasting stations in the area.

PBS Charlotte is committed to serving the community and as outreach for the station’s licensee, Central Piedmont. For additional information about the station, visit PBScharlotte.org or access the station’s Facebook page at facebook.com/wtvicharlotte.

Local Programs

In addition to producing documentaries and specials, PBS Charlotte provides five regular programs:

- **Carolina Impact** explores the issues, people, and places that impact the region (Tuesday at 8 p.m. & 11 p.m., Thursday and Saturday at 5:30 p.m., Sunday at 11:30 a.m.).
- **Trail of History** showcases historical figures and events that have influenced the Charlotte region (Tuesday at 8:30 p.m. & 11:30 p.m., Saturday at 5 p.m.).
- **Off The Record** talks about the latest news of the week. (Friday at 8:00 p.m., Sunday at noon)
- **Charlotte Cooks** teaches viewers how to expand their culinary talents (Tuesday at 5:30 p.m.).
- **Carolina Business Review** focuses on business and industry in the Carolinas (Friday at 8:30 p.m., Sunday at 12:30 p.m.).

A complete listing of PBS Charlotte's local and national programming is available at PBScharlotte.org under ‘Schedule.’

3-D Project (Dreamers•Doers•Destiny)

To assist with the upward mobility crisis, PBS Charlotte is proposing a four-year community engagement campaign beginning Fall 2017 through Spring 2021.

This three-part project uses media to show people how to not just be dreamers, but doers with an emphasis on pathways to success and career exploration to broaden their horizons about how their destiny could look.

Educational Outreach

A large portion of PBS Charlotte’s educational outreach involves partnerships with local educators, nonprofits, and community leaders. The station’s support of American Graduate, Cyberchase, Raising Readers, and many other PBS educational initiatives impact the community daily.

In 2016, PBS Charlotte offered 100 free literacy workshops affecting more than 6,000 children. The station also deepens community engagement by hosting panel discussions, sneak previews of PBS programs, and other events.

NHK WORLD and Create

While WTVI broadcasts PBS on its primary channel (42.1), the station’s two secondary channels broadcast NHK WORLD in HD (42.2) and Create (42.3). NHK WORLD is the international service of NHK, Japan’s largest broadcasting organization. Create is an American digital broadcast television network that broadcasts how-to, DIY, and other lifestyle-oriented instructional programming 24-hours a day.

Internships

A limited number of internships are available in the spring, summer, and fall. For consideration, applicants must be enrolled in a college program and apply by the deadline date. More details are available at PBScharlotte.org/internships/.

Central Piedmont TV

PBS Charlotte also produces high-quality content for Central Piedmont TV, a 24/7 cable channel that began airing local educational programming in 1994. Spectrum Cable and AT&T U-verse air Central Piedmont TV on Channel 17. Central Piedmont TV broadcasts several programs like Charlotte Cooks, Perfiles Latinos de Charlotte, and Trail of History. All of these programs are available on-demand at youtube.com/my_videos?o=U
Central Piedmont Community College

Digital Media Programs of Study for Students

PBS Charlotte supports community service outreach goals of the College and its commitment to learning. The station collaborates with the Digital Media, Journalism, and Communication Division in giving students access to PBS Charlotte as a learning lab. Course information is available at cpcc.edu/digital-media-comm.

Campus Addresses and Websites

Site Locations

Cato Campus
704.330.4800  8120 Grier Road, Charlotte, NC
web address  cpcc.edu/campuses/cato

Central Campus
704.330.2722  1201 Elizabeth Avenue, Charlotte, NC 28020
web address  cpcc.edu/campuses/central

City View Center
704.330.5455  1609 Alleghany Street, Charlotte, NC 28203
web address  cpcc.edu/campuses/cityview

Harper Campus
704.330.4400  315 West Hebron Street, Charlotte, NC 28273
web address  cpcc.edu/campuses/harper

Harris Campus
704.330.4600  3210 CPCC Harris Campus Drive, Charlotte, NC 28208
web address  cpcc.edu/campuses/harris

Levine Campus
704.330.4200  2800 Campus Ridge Road, Charlotte, NC 28215
web address  cpcc.edu/campuses/levine

Merancas Campus
704.330.4100  11930 Verhoeff Drive, Huntersville, NC 28078
web address  cpcc.edu/campuses/merancas

WTVI PBS Charlotte
704.330.5942  3242 Commonwealth Avenue, Charlotte, NC 28205
web address  cpcc.edu/campuses/wtvi

Central Piedmont Terminology

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

Academic or 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 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 the 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

Central Piedmont Foundation / Institutional Advancement

The Central Piedmont Community College Foundation was established in 1965. Its purpose is to generate financial support to further the mission of Central Piedmont Community College. The Foundation partners with individuals, corporations, and foundations to impact students’ lives through student scholarships, programs, and other areas of need as identified by the college’s leadership.

Annual Swirl and Sporting Clays Classic events are sponsored by the Foundation to raise support and visibility for the college and its programs. The Foundation also works to engage college alumni in the life of their alma mater.

Ways to support the work of the college include gifts of cash or securities, bequests, estate plans, honorariums and memorial funds made payable to the Central Piedmont Community College Foundation, Inc. Contributions may be unrestricted or 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 Inc., a 501(c)(3) organization qualified to receive tax-deductible contributions. Student clubs wishing to raise financial support should contact the Foundation at the beginning of their planning phase. Students, faculty, and staff may be interested in learning more about Central Piedmont's Project Funder, focused, short-term fundraising drives designed to build support for specific projects across the college.

Contact:

The Central Piedmont Foundation Inc.
PO Box 35009
Charlotte, NC 28235-5009

For more information, call the Central Piedmont Foundation at 704.330.6869 or visit the Central Piedmont Foundation website.

Information Call Center

704.330.2722 • 704.330.CPCC  TTY 704.330.6131

Critical College Information Hotline Number: 704.330.6888

College Internet Address  cpcc.edu

College Mailing Address

Central Piedmont
P.O. Box 35009
Charlotte, NC 28235-5009

College Package Delivery

Central Piedmont
1325 E. 7th Street
Charlotte, NC 28204
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 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

Career & 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 four-year senior institutions including the Associate in Arts, Associate in Science, and Associate in Fine Arts

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; Central Piedmont has identified four core competencies critical to the success of every Central Piedmont graduate: 1) Communication, 2) Critical Thinking, 3) Personal Growth and Responsibility, and 4) Information Technology and Quantitative Literacy; All Central Piedmont 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 Central Piedmont 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 Central Piedmont 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

Online Learning: 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 Central Piedmont 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 Central Piedmont 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

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

College Administration

Board of Trustees

Edwin A. Dalrymple — Chairman
Benton S. Bragg — Vice Chairman
Dr. Kandi W. Deitemeyer — Secretary

Appointed by the Governor
Edwin A. Dalrymple
Michael S. Hawley
Caldwell R. Rose
Judith N. Allison

Appointed by the Mecklenburg County Board of Commissioners
Benton S. Bragg
Madelyn L. Caple
Michael D. Evans
Arthur Griffin, Jr.

Student Government Association President, Ex Officio Member

College President and Cabinet

Dr. Kandi Deitemeyer — President
Dr. Heather Hill — Vice President of Academic Affairs
Jeff Lowrance — Vice President of Communications, Marketing, and Public Relations
Dr. Kevin McCarthy — Interim Lead of Student Affairs
Mike Whiteman — Vice President of Finance and Administrative Services
David Kim — Vice President of Information Technology Services/Chief Information Officer
Dr. Kevin McCarthy — Vice President of Institutional Advancement
Dr. Tracie Clark — Vice President of Strategy and Organizational Excellence

Associate Vice Presidents

Mark Short — Chief Human Resource Officer
Michelle Miller — Executive Director, Corporate and Workplace Learning
Vicki Saville — Associate Vice President, Facilities and Construction
Jessica Boyce — Associate Vice President, Financial and Auxiliary Services
Michael Horn — Associate Vice President, Government Relations and Grants
About Central Piedmont

Katie Jones  
Associate Vice President, Institutional Advancement

Greg Stanley  
Dean, Admissions, Records and Registration

George Henderson  
Dean, Cato Campus / Professional Careers

Dr. Paul Koehnke  
Dean, Central Campus / Culinary, Digital Media, Journalism, Communication and Fine Arts

Karen Pauly  
Dean, College and Career Readiness

Dr. JJ McEachern  
Dean, Enrollment Management

Dr. April Jones  
Dean, Enrollment Services

Michael Matlock  
Campus Administrator, Harris Campus

Steve Corriher  
Interim Dean, Harper Campus / Applied Technologies and Construction Institute

Karen Summers  
Interim Dean, Health Professions and Human Services

Dr. Edith McElroy  
Dean, Levine Campus / Business, International and General Studies

Gloria Kelley  
Dean, Library Services

Tamara Williams  
Dean, Merancas Campus / Public Safety and Transport Technologies

Dr. Clint McElroy  
Dean, Retention Services

Chris Paynter  
Dean, Science, Technology, Engineering and Math

Mark Helms  
Dean, Student Life and Service Learning

College Deans

College Policies and Procedures

Policies and Procedures for Central Piedmont are accessible on the college's website at cpcc.edu/administration/policies-and-procedures. Questions about the college's policies and procedures can be directed to Human Resources.

College policies and procedures are organized into seven categories with three appendices:

1. The Equal Opportunity Program
2. The Board of Trustees
3. The College Organization
4. Personnel
5. Education Programs
6. College Operations
7. Students

Appendices
A. Bylaws: Classified Staff Council
B. Constitution: College Senate
C. Constitution: Student Government Association

Frequently requested student regulations are listed below under section headings where they are found in the catalog.

Enrollment (p. 47)
- CLEP - College-Level Examination Program (p. 53) (Testing and Assessment section)
- Transcript Evaluation Process (p. 54)
- Course Credit and Placement (p. 48)
  - Credit by Examination
  - Course Credit Guidelines for Military Service
  - Course Waiver
- Advanced Placement Examination Course Credit Guidelines (p. 48)
- International Baccalaureate Course Credit Guidelines (p. 49)

Course Registration (p. 375)
- Auditing Courses
- Course Load Regulation
- Course Substitution
- Repeating Courses

Learning Resources
- Academic Regulations (p. 386)
  - Attendance
  - Changing Grades
  - Late Entry
  - Readmission from Suspension
  - Student Academic Integrity Policy
- Grading Policy (p. 387)

College Life
- Student Code of Conduct
- Student Grievance Procedure

Graduation (p. 392)
- Graduation Ceremony
- Graduation Ceremony Honors
- Graduation Process for Adult High School Diplomas
- Graduation Process for Certificates
- Graduation Process for Degrees & Diplomas
- Graduation Requirements

Disclosure

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

Disclaimer: Please Note

Information in the catalog is verified as correct at the time of publishing. However, readers should be aware that programs, regulations, policies and other sources of information contained in the catalog are subject to change without notice. Central Piedmont students also may wish to contact their faculty advisor, program chair, or instructor for additional information.

Institutional Equity

Central Piedmont 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
Central Piedmont 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 ten business days in advance of the activity. To request an 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'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 titleixcorrespondence@cpcc.edu.

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

Washington D.C. (Metro)
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: ed.gov/ocr

Graduation and Transfer Rates
Graduation and transfer rates for Central Piedmont are available on the Consumer Information page of the Financial Aid & Veterans Affairs website.

Open Door Policy
Central Piedmont 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 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.

Safe College Statistics
Campus crime statistics are available for review at the campus security office on each campus, under College Safety on the College Security Services page of the college website or in the Student Handbook. (p. 378)

Tuition
Tuition is set by the North Carolina State Board of Community Colleges and is subject to change without notice.
works to enhance the lives and success of individuals and employers, making Mecklenburg County stronger and more prosperous.

For a more comprehensive review of the history of Central Piedmont Community College, consult the following resources:

Central Piedmont Archives
cpcc.edu/about-central-piedmont/college-archives


Memberships, Professional Associations

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

Accreditation Commission for Education in Nursing
Accreditation Council for Occupational Therapy Education (ACOTE)
Accreditation Review Council Surgical Technology and Surgical Assisting
Adult Education National Honor Society
AIGA, the Professional Association for Design
Alliance of Cardiovascular Professionals
American Association for Paralegal Education
American Association of Collegiate Registrars and Admissions Officers
American Association of Community Colleges
American Culinary Federation
American Heart Association
American Hotel & Lodging Education Institute (AHLEI)
American Institute of Architecture Students
American Occupational Therapy Association
American Production and Inventory Control Society
American Sign Language Honor Society
American Sign Language Teachers Association
American Society for Nondestructive Testing
American Society for Quality
American Society of Echocardiography
American Society of Health-System Pharmacists
American Society of Safety Professionals
American Welding Society
Area Chiefs and Directors
Arrowood Business Association
ASIS International
Association for General and Liberal Studies
Association for Student Conduct Administration
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 Community College Facility Operations
Association of Community College Trustees
Association of Nutrition and Foodservice Professionals
Association of Surgical Technologists
Association of Training and Development
ATIXA: The Association of Title IX Administrators
Blackboard Analytics Client Advisory Board
Business Continuity Planners Association
Campus Safety, Health and Environmental Management Association
Carolina Associated General Contractors
Carolina Clinical Education Consortium
Carolina Consortium
Carolina IT Professionals Group
Center for the Advancement of Food Service (CAFE)
Charlotte Area Compensation Council, Inc.
Charlotte Area Society of Human Resource Management
Charlotte Chapter of the American Payroll Association
Charlotte Regional Business Alliance
Charlotte Regional Collaborative for a Global Economy
Charlotte Regional Visitors Association
Cisco Networking Academy
Club Managers Association of American Membership (CMAA)
Coalition of Community College Architecture Programs
College and University Personnel Association
College Board, The
College News Association of the Carolinas
College Transfer Program Association
COMBASE
Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)
Commission on Accreditation for Respiratory Care (CoARC)
Commission on Accreditation in Physical Therapy Education
Commission on Accreditation of Allied Health Education Programs
Commission on Accreditation of Allied Health Education Programs—Cardiovascular Technology
Commission on Accreditation of Ophthalmic Medical Programs
Commission on Dental Accreditation
Community Colleges for International Development, Inc.
CompTIA
CompTIA Authorized Academy Partner
Conference of Interpreter Trainers
Council for Advancement and Support of Education
Council of Supply Chain Management Professionals
Disaster Recovery Institute International—DRI International
Economic Research Institute
EDUCAUSE
Enactus
Financial Planning Association
Flexographic Technical Association
Gastonia City Sisters
German Language and Culture Foundation
Google Advisory Board – Educational Clients
Health Occupation Students of America
Hyland User Group
Home Builders Association of Charlotte
Hospitality Tourism Alliance
Innovative Interfaces User Group
In-Plant Printing and Mailing Association
Institute of Internal Auditors, The
Institute of Internal Controls
Institute of International Education
International Association of Campus Law Enforcement Administrators
International Association of Conference Centers
International Game Developers Association
Journal of Business Continuity & Emergency Planning
Lake Norman Chamber of Commerce
League for Innovation in the Community College
Learning Resources Network
Lyrasis
Major Market Group PBS Stations
Manufacturing Institute
Master Calendar
Matthiews Chamber of Commerce
Mecklenburg County Volunteer Firemen’s Association, Inc.
Metrolina Association of Volunteer Administrators
Metrolina Theatre Association
Microsoft Imagine Academy
Microsoft IT Academy
Monterey Institute National Repository of Online Courses Network
Mu Alpha Theta
MyVA Community
NAFSA: Association of International Educators
National Academic Advising Association
National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
National Association for Community College Entrepreneurship
National Association of ADA Coordinators
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 Educational Procurement
National Association of Student Financial Aid 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 Coalition of Advanced Technology Centers
National Community College Council for Research and Planning
National Cyberwatch Center
National Educational Television Association
National Institute for Staff and Organizational Development
National Institute of Governmental Purchasing Inc
National Institute of Metal Working Skills
National Kitchen and Bath Association
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 Student Employment Association
National Technical Honor Society
NC Live
NC Real Estate Educators Association
NC Tech
North American Board for Certified Energy Practitioners
North American Council of Automotive Teachers
North Carolina Area Health Education Centers
North Carolina Association of Campus Law Enforcement Administrators
North Carolina Association of Colleges and Employers
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 Developmental Education
North Carolina Association of International Educators
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 Community College Association of Distance Learning
North Carolina Community College Chief Information Officer Association
North Carolina Community College Cosmetology Instructors Association, The
North Carolina Community College Institutional Information Processing System User’s Group
North Carolina Comprehensive Community College Student Government Association
North Carolina Computer Instruction Association
North Carolina Police Executives Association
North Carolina Public Risk Management Association
North Carolina Registry of Interpreters for the Deaf
North Carolina Restaurant and Lodging Association
North Carolina Sustainable Energy Association
North Carolina Technology Association
North Carolina Theatre Conference
North Carolina Work-Based Learning Association
Online Computer Library Center
Online Learning Consortium
Phi Theta Kappa
Piedmont Culinary Guild (PCG)
Printing Industry of the Carolinas, Inc., The
Project Management Institute
Psi Beta
Public Media Business Association
Public Risk Management Association (PRIMA)
Risk and Insurance Management Society
Rotaract
Safety and Health Council of North Carolina
Sigma Chi Eta
Skills-USA Automotive
Society for College and University Planning
Southeastern EDucation Users Group
Southeastern Theatre Conference
Southern Association of Colleges and Schools Commission on Colleges
Southern Association of Colleges and University Business Officers
Southern Association of Collegiate Registrars and Admissions Officers
Southern Association of Community, Junior, and Technical Colleges
Southern Organization for Human Services
SRA–Society of Research Administrators International
Tau Upsilon Alpha National Organization for Human Services Honor Society
U.S. Green Building Council
United States Institute of Theatre Technology
University City Chapter Chamber of Commerce
University Licensee Association
University Risk Management and Insurance Association
Visit Charlotte
VMware IT Academy
World Affairs Council of Charlotte
World at Work
World Safety Organization
World View
Mission, Values, Goals

Central Piedmont's future will be built on a well-defined set of mission, vision, and value statements that guide our every action.

Our Vision

Central Piedmont will be a champion of students, a catalyst for opportunity, and an exceptional provider of learning experiences that transform lives and strengthen community.

Our Mission

To facilitate student learning, success, and completion, Central Piedmont provides exceptional education and globally competitive training in an engaging, supportive environment.

Our Values

- **Student-Centered**: We are committed to students and learning. Student success is the heart of everything we do.
- **Collaboration**: We recognize the power of partnerships and effective communication and work collaboratively within our organization and externally in the Charlotte-Mecklenburg Community and beyond.
- **Excellence**: We strive to achieve excellence by recognizing opportunities, solving problems, and innovatively serving our students and community.
- **Accountability**: We demonstrate integrity, transparency, and effective use of resources by assessing our programs and services and using data to inform our decisions.
- **Equity**: We believe all individuals have the potential to succeed and we will provide student-focused pathways to achievement.
- **Courage**: We are passionate about our work. We are willing to acknowledge our strengths and weaknesses and confront challenges with intentionality.

Our Strategic Goals

**Strategic Goal #1: Creating a Unified and Focused Vision for Student Success**

Central Piedmont will create and communicate a cohesive vision to promote student success and implement targeted strategies to improve learning outcomes for all students.

- **Objective 1.1 – Student success**
  - Provide a unified definition of student success and consistent metrics of college-wide student success, including but not limited to completion, retention, and persistence rates
- **Objective 1.2 – Continuous Improvement**
  - Foster a culture of evidence, inquiry, and continuous improvement of educational programs and holistic, integrated student support strategies
- **Objective 1.3 – External Measures**
  - Meet or exceed the North Carolina Community College System, regional and program accreditors, and governmental student success measures
- **Objective 1.4 – Learning Outcomes**
  - Develop and assess learning outcomes and provide the results to faculty and staff

**Strategic Goal #2: Promoting Academic Excellence through Community Engagement and Partnerships**

Central Piedmont will continuously refine programs to ensure that they are high-quality and relevant and provide support services that optimize career pathways and college transfer. This effort requires focused collaboration to align academic programs with relevant knowledge and skills needed to drive economic success.

- **Objective 2.1 - Pathways**
  - Promote successful student transitions from K-12 educational systems to Central Piedmont and then to employment and/or transfer
- **Objective 2.2 – Completion**
  - Cultivate and nurture relationships with university partners, business, and industry to promote student completion prior to transfer or entering the workforce
- **Objective 2.3 – External Relationships**
  - Cultivate and nurture external relationships to best assess academic programs and student support services for relevancy and their ability to maximize economic opportunities for students
- **Objective 2.4 – Economic Success**
  - Offer academic programs and services that prepare students to thrive in a local and global economy

**Strategic Goal #3: Advancing our Organizational Culture**

Central Piedmont will recruit, develop, and retain a diverse, respectful, and responsible workforce who will foster an organizational culture of transparency and collaboration dedicated to mission-driven allocation of financial, physical, technological, and human resources.

- **Objective 3.1 – Employee Empowerment**
  - Empower employees to make intentional, collaborative, data-informed decisions regarding aligning resources to support student success
- **Objective 3.2 – Talent Development**
  - Create a clear standard of professional excellence, purposeful onboarding, and talent development that contributes to employee growth
- **Objective 3.3 – Strategic Stewardship of Financial and Facility Resources**
  - Apply strategic decision-making to ensure the most efficient and effective use of financial and facility resources to contribute to student success

**Strategic Goal #4: Making Equity a Priority**

Central Piedmont will make equity and inclusion intentional measures of college-wide student success by developing an understanding of achievement gaps and utilizing evidence-based practices to promote success for all students.

- **Objective 4.1 – Equity and Inclusion Awareness**
  - Increase college-wide awareness of performance and persistence for all students
- **Objective 4.2 – Achievement Gaps**
  - Make data-informed decisions to close achievement gaps and build pathways from non-credit to curriculum programs
Strategic Goal #5: Telling Our Story

Central Piedmont is a community asset for people of all backgrounds. We will expand efforts to position the College as the best choice for accessible, affordable, real-world education.

• **Objective 5.1 – Brand Launch**
  - Introduce the new logo, brand name, and website to the community

• **Objective 5.2 – Internal Communication**
  - Promote cross-functional teams to increase internal understanding of the roles and functions within the college

• **Objective 5.3 – External Communication**
  - Serve as brand ambassadors who increase awareness of the value of a post-secondary credential and the diverse, comprehensive offerings at Central Piedmont

• **Objective 5.4 – Leverage Supporters**
  - Provide alumni and community members opportunities to formally support the vision and mission of the College

North Carolina Community College System Performance Measures

The North Carolina Community College System (NCCCS) establishes and monitors performance measures for student success for the 58 community colleges in North Carolina to ensure public accountability for programs and services. For each performance measure, the NCCCS sets system-wide baseline and excellence levels. Central Piedmont’s level of performance for each measure is available in the state’s annual Performance Measures Report.

The NCCCS has also created a Performance Measures Dashboard. To view performance measure data on the dashboard, use the “Select College” drop-down box to select Central Piedmont CC.

**NCCCS Performance Measures for 2018-2020:**

1. Basic Skills Student Progress
2. Student Success Rate in College-level English Courses
3. Student Success Rate in College-level Math Courses
4. First Year Progression
5. Curriculum Completion
6. Licensure and Certification Passing Rate Index
7. College Transfer Performance
Enrollment
Enrollment

Quick Reference:
Admission to the College
First Year Experience / Orientation (p. 50)
First Year Financial Aid (p. 47)
International Student Admission (p. 51)

Admission to Programs of Study
Career and College Promise (high school enrollment) (p. 80)
College and Career Readiness Programs (p. 47)
College Credit Curriculum Programs (p. 47)
Corporate and Continuing Education (p. 48)
Program Changes (p. 48)

College Admission
Central Piedmont follows an open-door policy that welcomes all students without regard to color, creed, disability, race, national origin, or gender. Steps for admission vary, depending on the learning goals of each student. An admissions office is available on every campus. On Central Campus, it is on 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 Admission 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 on the Admissions, Records & Registration website. New college applicants are encouraged to contact the college early in order to complete enrollment steps before the class registration period begins.

ENROLLMENT STEPS ARE FOUND AT cpcc.edu/getstarted.

Tuition and Fees
For complete information regarding costs to attend the college see the Tuition and Fees section of the catalog.

First Year Experience (FYE)
The First Year Experience program provides support for new and returning students. The program is designed to help students get started, be comfortable on campus, and connect with student services. Find complete information under First Year Experience / Orientation (p. 50) section of the catalog.

First Year Advising
The Office of First Year Advising serves the academic and course needs of all first-time college students. These services are available in Room 360 of the Central High Building on Central Campus or by calling 704.330.6454.

First Year Financial Aid
The First Year Financial Aid Office helps students create a personal education plan, evaluate costs and apply for financial assistance. Visit the First Year Financial Aid office on Central Campus in Room 112 of the Central High building, or call 704.330.2722, ext 3671.

Career and College Promise (high school enrollment)
Students currently enrolled in North Carolina high schools who want to take courses at Central Piedmont may call 704.330.6637 or visit the Career and College Promise website.

College and Career Readiness Programs
Several programs are available to assist students in completing high school credentials or prepare for a successful transition into a college-level study or the workforce. Find complete information about these programs under these sections of the catalog:

- Adult English as a Second Language (Adult ESL) (p. 81)
- High School Credentials
  - Adult High School Diploma (HSD) Program (p. 81)
- High School Equivalency (HSE) Instruction
  - High School Equivalency (HSE) Testing (p. 81)
- Workplace and Career Readiness
  - Accelerated Career Training (ACT)
  - Career Development
    - NC Works NextGen (p. 82)
  - Pathways to Careers (p. 83)
  - Rise 2 Work (p. 84)

Admission to Programs of Study
Admission to the college itself does not mean 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

College Credit Curriculum Programs
Non-Degree Students
Enrollment

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 from Get Started on the college website.

**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 from Get Started on the college website. Help in completing the enrollment steps is available through First Year Experience at 704.330.6100 or by emailing fye@cpcc.edu.

**Corporate and Continuing Education Programs**
Students may choose non-degree courses and programs – from beginner to more advanced – for personal enrichment or career enhancement. Most continuing education courses and programs are open enrollment and do not require prerequisites, enrollment applications or transcripts. Registration is ongoing throughout each semester with registration dates and new classes typically announced in late April, early July and late November.

See the Corporate and Continuing Education section of the catalog or visit the Corporate and Continuing Education website.

**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 Central Piedmont 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.

**Campus Tours**
Central Piedmont has six area campuses throughout Mecklenburg County. Each campus offers a selection of General Education and College Transfer classes, while some programs or classes are offered at a specific campus. Taking a tour of Central Piedmont is a great way to become familiar with the many academic programs and student services the college has to offer.

Walking tours are provided by Student Ambassadors and Student Affairs staff. Tours last approximately 45 minutes. On the Outreach and Recruitment website, sign up online for:
- individual campus tours on the Campus Tours web page or
- group campus tours on the Group Tours web page.

**Course Credit and Placement**

**Credit by Examination**
To receive credit by examination, a student must show convincing evidence of particular aptitude or knowledge in the course material. A written, oral, or performance examination is 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 typically assigned to that course at Central Piedmont. For further information, see policy 5.02 Credit by Examination.

Financial Aid and Veterans Affairs do not cover credit by examination.

**Course Credit Guidelines for Military Service**
Central Piedmont approves academic credit for military basic training equivalent to specific physical education activity courses. Another military training that is deemed to be college level is evaluated and academic credit may be awarded when it is considered equivalent to a 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 Substitution**
Course substitutions are permitted with final approval by the Division Director of the academic area in which the replacement 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, a student must be 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. Veterans Affairs students are approved only by the North Carolina State Approving Agency for two course substitutions per program. For more information, go to 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.). No credit hours are granted.

General Education requirements may not be waived for any reason.

For more information, go to 5.12 Audits, Substitutions, and Waivers.

**Advanced Placement Examination Course Credit Guidelines**
Students must request that their official Advanced Placement Test results be sent to:
Office of Admissions
Central Piedmont
PO Box 35009
Charlotte, NC 28235

The table below shows course credit that may be granted for specific exam results.
<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>Art History</td>
<td>3</td>
<td>3</td>
<td>ART 111</td>
</tr>
<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 Studio Drawing</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>Biology</td>
<td>5</td>
<td>8</td>
<td>BIO 111 and BIO 112</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>Chemistry</td>
<td>3</td>
<td>4</td>
<td>CHM 151</td>
</tr>
<tr>
<td>Chemistry</td>
<td>4</td>
<td>8</td>
<td>CHM 151 and CHM 152</td>
</tr>
<tr>
<td>Comparative Government &amp; Politics</td>
<td>3</td>
<td>3</td>
<td>POL 210</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>Computer Science Principles</td>
<td>3</td>
<td>3</td>
<td>CSC 122</td>
</tr>
<tr>
<td>English Language 3 &amp; Composition</td>
<td></td>
<td></td>
<td>ENG 111</td>
</tr>
<tr>
<td>English Literature 3 &amp; Composition</td>
<td></td>
<td></td>
<td>ENG 241</td>
</tr>
<tr>
<td>European History (3)</td>
<td>(6)</td>
<td></td>
<td>Do Not Offer (HIS 121, HIS 122)</td>
</tr>
<tr>
<td>French Language 3 &amp; Culture (or Language, older version)</td>
<td>3</td>
<td>4</td>
<td>FRE 111/181</td>
</tr>
<tr>
<td>French Language 4 &amp; Culture (or Language, older version)</td>
<td>4</td>
<td>8</td>
<td>FRE 112/182 and 211/281</td>
</tr>
<tr>
<td>French Language 5 &amp; Culture (or Language, older version)</td>
<td>5</td>
<td>8</td>
<td>FRE 211/281 and 212/282</td>
</tr>
<tr>
<td>French Literature (older version)</td>
<td>3</td>
<td>8</td>
<td>FRE 211/281 and 212/282</td>
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<tr>
<td>German Language &amp; Culture (or Language, older version)</td>
<td>3</td>
<td>4</td>
<td>GER 111/181</td>
</tr>
<tr>
<td>German Language &amp; Culture (or Language, older version)</td>
<td>4</td>
<td>8</td>
<td>GER 112/182 and 211/281</td>
</tr>
<tr>
<td>German Language &amp; Culture (or Language, older version)</td>
<td>5</td>
<td>8</td>
<td>GER 211/281 and 212/282</td>
</tr>
<tr>
<td>German Language &amp; Culture (or Language, older version)</td>
<td>6</td>
<td>8</td>
<td>GER 211/281 and 212/282</td>
</tr>
<tr>
<td>Human</td>
<td>3</td>
<td>3</td>
<td>GEO 111</td>
</tr>
<tr>
<td>Geography</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>3</td>
<td>3</td>
<td>ECO 252</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>3</td>
<td>3</td>
<td>ECO 251</td>
</tr>
<tr>
<td>Music Listening/Literature (older version)</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 1</td>
<td>3</td>
<td>4</td>
<td>PHY 151</td>
</tr>
<tr>
<td>Physics 2</td>
<td>3</td>
<td>4</td>
<td>PHY 152</td>
</tr>
<tr>
<td>Physics B</td>
<td>3</td>
<td>8</td>
<td>PHY 151 and 152</td>
</tr>
<tr>
<td>Physics C: Electricity &amp; Magnetism</td>
<td>3</td>
<td>4</td>
<td>PHY 252</td>
</tr>
<tr>
<td>Physics C: Mechanics</td>
<td>3</td>
<td>4</td>
<td>PHY 251</td>
</tr>
<tr>
<td>Psychology</td>
<td>3</td>
<td>3</td>
<td>PSY 150</td>
</tr>
<tr>
<td>Spanish Language &amp; Culture (or Language, older version)</td>
<td>3</td>
<td>4</td>
<td>SPA 111/181</td>
</tr>
<tr>
<td>Spanish Language &amp; Culture (or Language, older version)</td>
<td>4</td>
<td>8</td>
<td>SPA 112/182 and 211/281</td>
</tr>
<tr>
<td>Spanish Language &amp; Culture (or Language, older version)</td>
<td>5</td>
<td>8</td>
<td>SPA 211/281 and 212/282</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
<td>4</td>
<td>MAT 152</td>
</tr>
<tr>
<td>United States Government &amp; Politics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States History</td>
<td>3</td>
<td>6</td>
<td>HIS 131 and 132</td>
</tr>
<tr>
<td>World History</td>
<td>3</td>
<td>8</td>
<td>HIS 111 and 112</td>
</tr>
</tbody>
</table>

**International Baccalaureate Course Credit Guidelines**
<table>
<thead>
<tr>
<th>IB Exam</th>
<th>Score of 4</th>
<th>Score of 5</th>
<th>Score of 6 or 7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cr. Hrs</td>
<td>CPCC Courses</td>
<td>Cr. Hrs</td>
</tr>
<tr>
<td>English HL</td>
<td>No Credit</td>
<td>6</td>
<td>ENG 111, ENG 113</td>
</tr>
<tr>
<td>Mathematical Studies SL</td>
<td>No Credit</td>
<td>3</td>
<td>MAT 165*</td>
</tr>
<tr>
<td>Mathematical Studies SL</td>
<td>No Credit</td>
<td>4</td>
<td>MAT 271</td>
</tr>
<tr>
<td>Mathematical Studies HL</td>
<td>No Credit</td>
<td>8</td>
<td>MAT 271, MAT 272</td>
</tr>
<tr>
<td>Biology HL</td>
<td>No Credit</td>
<td>4</td>
<td>BIO 110 or BIO 111 or BIO 120</td>
</tr>
<tr>
<td>Chemistry HL</td>
<td>No Credit</td>
<td>8</td>
<td>CHM 151, CHM 152</td>
</tr>
<tr>
<td>Geography HL</td>
<td>No Credit</td>
<td>3</td>
<td>GEO 111</td>
</tr>
<tr>
<td>The Americas HL</td>
<td>No Credit</td>
<td>6</td>
<td>HIS 131, HIS 132</td>
</tr>
<tr>
<td>Twentieth Century World</td>
<td>No Credit</td>
<td>3</td>
<td>HIS 165</td>
</tr>
<tr>
<td>French HL</td>
<td>4</td>
<td>FRE 112, FRE 182</td>
<td>8</td>
</tr>
<tr>
<td>German HL</td>
<td>4</td>
<td>GER 112, GER 182</td>
<td>8</td>
</tr>
<tr>
<td>Spanish HL</td>
<td>4</td>
<td>SPA 112, SPA 182</td>
<td>8</td>
</tr>
<tr>
<td>Economics HL</td>
<td>No Credit</td>
<td>6</td>
<td>ECO 251, ECO 252</td>
</tr>
<tr>
<td>Computer Studies</td>
<td>No Credit</td>
<td>4</td>
<td>CSC 120</td>
</tr>
<tr>
<td>Art &amp; Design</td>
<td>No Credit</td>
<td>No Credit</td>
<td>No Credit</td>
</tr>
<tr>
<td>Psychology</td>
<td>No Credit</td>
<td>3</td>
<td>PSY 150</td>
</tr>
</tbody>
</table>

* MAT165 Finite Math-in Common Course Library, not currently taught at Central Piedmont.

**Directors of Student Affairs**

Directors of Student Affairs (DSA) provides campus leadership to ensure efficient operation of Student Affairs functions on each campus. The DSA coordinates student services schedules, assist with campus-wide programming, and serve as liaisons for student conduct and issues. Recommendations or concerns about student services on area campuses should be directed to the DSA.

Area campus tours are coordinated by the DSA and are given with advance notice.

Future students are welcome to contact the DSA for general questions about services offered at area campuses:

**Cato Campus**
Ezell Ellington, Director of Student Affairs  
704.330.4829

**Harper Campus**
Erin Corbera, Director of Student Affairs  
704.330.4441

**Harris Campus**
Howard Byrd, Director of Student Affairs/Registrar  
704.330.4628

**Levine Campus**
Reggie Pincham, Director of Student Affairs  
704.330.4207

**Merancas Campus**
Andrea Abercrombie, Director of Student Affairs  
704.330.4175

For more information, visit the DSA website.

**First Year Experience**

The First Year Experience program is designed to help students get started, become comfortable on campus, and connect with student services. You can contact First Year Experience:

**By email:** fye@cpcc.edu  
**By phone:** 704.330.6100

**At campus offices:**
On Cato Campus (Charlotte), Cato I Building, Room 230  
On Central Campus (Charlotte), Central High Building, Room 110  
On Levine Campus (Matthews), Levine I Building, Room 2100

First Year Experience offers the following services:

- General support and enrollment help for students  
- Facilitation of orientation at all six Central Piedmont campuses and online  
- Peer Mentoring and Affordable Technology  
- General questions answered
First Year Advising:
The Office of First Year Advising serves the academic and course needs of all first-time, college students. These services are available in Room 365 of the Central High Building on Central Campus or by calling 704.330.6454.

First Year Financial Aid:
Funding an education is a significant financial commitment for students and, perhaps, for their families as well. Central Piedmont’s Financial Aid office encourages each student to apply for financial aid. The First Year Financial Aid office is dedicated to helping students and families plan for the future by helping to create a personal education plan, evaluate costs, apply for financial assistance and by providing various types of financial support such as scholarships, grants, and campus employment opportunities. Our goal is to make the college experience affordable.

The First Year Financial Aid office is located in the Central High Building on Central Campus in Room 112. Contact the First Year Experience Financial Aid office by phone at 704.330.2722, ext. 3389 or ext. 3380.

International Student Admission
Applications for international student enrollment at Central Piedmont 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 the International Programs and Services website.

F-1 Visa students
F-1 Visa students should follow the enrollment steps for Enrolling International Students - F-1 Visa:

1. Evidence of English Competency: In order to enter a college-level program, F-1 students must meet the TOEFL, IELTS requirement, or complete the Academic English as a Foreign Language (EFL).
2. Internet-based Test of English as a Foreign Language (IBT TOEFL) Test scores: 65, with no single score below 16. Central Piedmont no longer accepts paper-based or computer-based TOEFL.
3. Academic International English Language Testing System (Academic IELTS) Test scores: 6.0, with no single score below 5.5.
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 Central Piedmont under an F-1 student visa must purchase medical insurance before registration each semester.

Permanent Resident Aliens or Other Visa Holders
Alien registration cardholders and others holding certain valid work visas are admitted to the College in the same manner as native citizens of the United States. Individual visa holders are not eligible to begin any course of study until they can obtain a visa that permits academic study. (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 based 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 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.

Contact information for international students:

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: 704.330.6129; College and Career Readiness, Room 1104 & 1108, North Classroom Building, Central Campus
Academic ESL Program: 704.330.6032; Foreign Languages & Academic ESL Division, Room 349-351, Central Campus

Student Educational Records / FERPA
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 7.02 Student Records (Transcripts)

Annual Notice to Students of Their Rights under Family Educational Rights and Privacy Act of 1974 (FERPA)

Central Piedmont, 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 accordance with existing College policy and FERPA - Family Educational Rights and Privacy Act of 1974 (Buckley Amendment).

Definition of Term "Educational Records"

Educational records, as defined under the provisions of the Family Educational Rights and Privacy Act of 1974, include files, documents, and other materials that 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 the 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 a 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 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 the 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:
Testing and Assessment Centers

Testing and Assessment Centers available on five CPCC campuses support the learning process by serving students, faculty and community testing needs. The centers administer a wide variety of tests for academic placement, course, distance learning, certification, licensure, and other specialized purposes. Physically attractive atmospheres and a low-key method of operation are designed to help reduce test anxiety. The Testing and Assessment website provides hours of operation, test-taking strategies, placement test review materials, and additional testing information.

Testing Rules

- Fees may apply for certain testing services.
- A photo ID is required 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.

Hours of Operation

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.

To see hours at all campus locations, to schedule a placement test, or to learn about other testing services, contact the Testing Center

- online at the Testing and Assessment website
- by email at testingcenter@cpcc.edu, or
- by phone at 704.330.6886.

College-Level Examination Program (CLEP)

Central Piedmont Community College is a national test center for administering computer-based CLEP exams. Central Piedmont 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 on the Testing and Assessment Center website or call 704.330.6886 for additional information.

Central Piedmont 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 Central Piedmont. Each academic department is responsible for determining the maximum amount of CLEP credit awarded within its own program(s). CLEP credit is based on the policy in place 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>
</tbody>
</table>

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 the correction of a student file will be acted upon within 45 workdays 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 Student Affairs. 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.
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>American Literature</strong></td>
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<tr>
<td><strong>Biology</strong></td>
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<tr>
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<td>3*</td>
<td>BUS 115</td>
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<tr>
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<td>ENG 111</td>
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<tr>
<td><strong>College Mathematics</strong></td>
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<td>3</td>
<td>MAT 241, MAT 242</td>
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<tr>
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<td><strong>History of the U.S. I: Early Colonization to 1877</strong></td>
<td>50</td>
<td>3*</td>
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<tr>
<td><strong>History of the U.S. II: 1865 to the Present</strong></td>
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<td>3*</td>
<td>HIS 132</td>
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<tr>
<td><strong>Human Growth and Development</strong></td>
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<td>3*</td>
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<td>3*</td>
<td>ECO 252</td>
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<tr>
<td><strong>Management, Principles of</strong></td>
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<td>3*</td>
<td>BUS 137</td>
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<tr>
<td><strong>Marketing, Principles of</strong></td>
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<td>3*</td>
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<tr>
<td><strong>Microeconomics, Principles of</strong></td>
<td>50</td>
<td>3*</td>
<td>ECO 251</td>
</tr>
<tr>
<td><strong>Natural Sciences</strong></td>
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<td>3</td>
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<tr>
<td><strong>Precalculus</strong></td>
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<td>MAT 175</td>
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<tr>
<td><strong>Psychology, Introductory</strong></td>
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<td>3*</td>
<td>PSY 150</td>
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<tr>
<td><strong>Sociology, Introductory</strong></td>
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<td>3*</td>
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<td><strong>Spanish, Level I</strong></td>
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<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”

**Transcript Evaluation Process**

**US Institutions**

Enrolling students must request institutions they have previously attended to send official Transcript(s) to Central Piedmont. Central Piedmont accepts electronic transcripts through secure transcript providers such as CFNC, Parchment, eScrip, Scribbles and the National Clearinghouse. Select Central Piedmont in the recipient drop-down field when applicable. Official paper transcripts mailed to Central Piedmont should be sent to the following address:

Student Records
Central Piedmont Community College
P.O. Box 35009
Charlotte, NC 28235-5009

After official college transcripts are received in Student Records, they are evaluated automatically by the Transcript Evaluation Department. Students are notified by email when their evaluations have been completed. Previous courses completed with a grade of “C” or higher from regionally accredited institutions that match Central Piedmont courses are transferred for credit. To see courses accepted for transfer, students should:

1. Log into their MyCollege account
2. Click on the Graduation Cap Icon on the left (this will open the Academics menu)
3. Click on Student Planning
4. Click on Unofficial Transcript
5. Click on Combined CU/CE Transcript
6. The unofficial transcript will download into a pdf which can be opened at the bottom of the page. Students will be able to view all of their courses accepted for transfer here.

**International Institutions**

Students are advised to submit their record of courses to an agency recognized by the National Association of Credential Evaluating Services (NACES) 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.

Send certified transcript copies with English translations and their international evaluations to:

Student Records
Central Piedmont Community College
P.O. Box 35009
Charlotte, NC 28235-5009

After an official international college transcript evaluation is received in Student Records, it automatically will be evaluated by the Transcript Evaluation Department. Students are notified by email when their evaluation has been completed. Previous courses completed with a grade of “C” or higher from regionally accredited institutions that match Central
Piedmont courses are transferable. To see courses accepted for transfer, students should:

1. Log into their MyCollege account
2. Click on the Graduation Cap Icon on the left (this will open the Academics menu)
3. Click on Student Planning
4. Click on Unofficial Transcript
5. Click on Combined CU/CE Transcript
6. The unofficial transcript will download into a pdf which can be opened at the bottom of the page. Students will be able to view all of their courses accepted for transfer here.

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.

Tuition and Fees

Quick Reference:

- Tuition (p. 55)
- Fees (p. 55)
- Refund Policy (p. 56)
- Sponsored Programs (p. 56)
- Student Insurance (p. 56)

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)
- student accident and student professional liability insurance fees
- GED Testing fees

Cash, checks, money orders, and 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: $76 per credit hour.
- 16 semester hours or more: $1,216 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: $268 per credit hour.
- 16 semester hours or more: $4,288 per semester.

High School Diploma or High School Equivalency Courses

No tuition or fee.

North Carolina Residence Status

For students enrolling in college credit curriculum classes, an initial residence classification is made by Residency Determination Services (RDS) upon application to the college. It is the student’s responsibility to supply documenting evidence of residence status if requested. The decision is based on the preponderance of the evidence presented.

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

The information provided here is not intended to be comprehensive. The residence policy is based on North Carolina General Statute 116-143.1. More information can be located at ncresidency.org.

Fees

Applied Music Study Fee

A fee of $200 is charged for applied music classes for materials and supplies.

Campus Access Parking and Security (CAPS) Fee

The Campus Access, Parking and Security Fee (CAPS Fee) is charged to college credit curriculum and continuing education students who attend classes and/or labs 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 Central Piedmont campuses and centers.

- $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

Corporate and Continuing Education

Fees are published per class.

Forensics Fee

A fee of $50 per class is charged for forensics courses for materials and supplies.

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: $27 per lab hour with $216 maximum

Occupational Extension Lab Fees: $27 per lab with $216 maximum
Enrollment

Introduction

The term 'lab hours' includes both lab and clinical hours. Lab fees are used to provide supplies and equipment in the respective programs.

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.

Technology Fees

A technology fee of $48 is charged per term for college credit curriculum classes, and a technology fee of $5 is charged for occupational extension classes.

Inclusive Access Fees

Inclusive Access fees are required for specific courses for online course materials. The fees are subject to change. More information can be found on the Inclusive Access Web page.

The Business (BUS-110) inclusive access fee is $107.25.
The Economics (ECO-251 and ECO-252) inclusive access fee is $124.18.
The Music (MUS-110) inclusive access fee is $83.92.
The Art (ART-111) inclusive access fee is $80.43.
The Academic Related Courses (ACA-122) inclusive access fee is $29.49.

Refunds for Corporate and Continuing Education - Occupational Extension Courses

- A 100 percent tuition refund is paid by the college to students who officially withdraw from class prior to the first day of the class.
- A 75 percent tuition refund 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.
- All Corporate and Continuing Education refunds are issued by check or to the credit card used for tuition payment.

Refunds for Corporate and Continuing Education - Self-Supporting Courses

- A 100 percent refund is paid by the college to students who officially withdraw from class prior to the first day of the class.
- All Corporate and Continuing Education refunds are issued by check or to the credit card used for tuition payment.

Refunds for Fees

Student fees are nonrefundable for curriculum and Corporate and Continuing Education courses, unless the course is canceled by the college or dropped before the first day of the academic semester. Fees are not refunded after the term begins, including during the 75 percent refund period. This policy applies to all student fees, including student activity fees, lab fees, technology fees, CAPS fees, and student insurance.

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. 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 Central Piedmont campus before they register, but no later than the same day they register for classes. For further information, visit the Sponsored Programs web page or call the Sponsored Programs office at 704.330.4262.

Student Insurance

Insurance coverage is available to students through Central Piedmont on the Student Insurance webpage.

Student Accident Insurance Plan

Student Accident Insurance is required for specific classes and is billed at the time of registration. 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 Student Insurance webpage. For more information, contact the Office of Enterprise Risk Management at 704.330.6684.

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

Administrative Support

Central Piedmont 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 use of personnel and facilities. These 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 Central Piedmont. 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.

Student Affairs

Student Affairs is committed to providing quality educational support to facilitate student success for a diverse student population. Services provided include first-year experience support, enrollment, financial aid, graduation, academic advising and tutoring, career and personal counseling, disability services, international services, recruitment, student conduct, security services, student activities, testing, college transfer support, and veterans’ services. Another available student support connects students to benefit services and food pantries. Student Affairs collaborates with Academic Affairs to support comprehensive student-centered initiatives.

International Programs and Services

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

College Security Services

College Security and Police Officers at Central Piedmont Community College are here to help. No matter what kind of situation arises at the College, the 24-hour Security and Police Dispatch Center at Central Piedmont, located in the Drumm Facilities Services Building on Central Campus, is the first step toward resolving safety issues. As soon as a call for assistance is received, a radio call goes out to the nearest security or police officer. Additional resources such as Emergency Medical Services (EMS), Fire and Municipal Police also are immediately dispatched, based on the incident.

- For emergencies, or immediate assistance, dial 704.330.6911.
- For non-emergencies, dial 704.330.6632.
- For parking assistance, dial 704.330.6117.
- For a security tip, send a text message to 67283. Start the message with CPCCTIP, then include the tip.

The college seeks to promote a teaching and learning environment that is safe for all students, faculty, staff and visitors while on the premises. Contributing to the safety of the teaching and learning environment are: controlled access to facilities and distribution of keys, the presence of both sworn law enforcement officers and security officers, and a heightened awareness of criminal activity through regular reporting and educational programs. Within these measures, the college complies with all crime awareness education and reporting requirements of the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act. The Annual Security Report contains important information about safety, security, and crime statistics at Central Piedmont. It is available on the College Security Services website.

Counseling and Advisement

Student Success Services

The Student Success Services Center helps connect students with resources throughout the college. It is located in Room 365 on the third floor of the Central High Building on Central Campus for face-to-face information or assistance. For information by phone, call 704.330.6433.

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 in their program of study
- Advising for students in pre-nursing/pre-health careers programs
- Academic counseling for students in meeting their educational goals
- Personal counseling, crisis interventions, and referrals
Disability Services

The Disability Services office at Central Piedmont provides academic accommodations, auxiliary aids, and 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 Central Piedmont students with disabilities have equal access to educational opportunities. Believing that individuals are better able to advocate for their needs with greater success, efforts are made 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. The Disability Services department is located in Suite 331 in Central High building on Central Campus. Visit 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.

Primary elements of documentation are:
1) diagnosis of a disabling condition, and
2) 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
- 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 students through their Central Piedmont email accounts to set up an intake meeting with a Disability Services counselor. At the 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 provides an Accommodations Form for each class, based on approved accommodations. New Accommodations Forms must be requested each semester the student is enrolled. Approved classroom/testing accommodations are not effective until Accommodation Forms are signed by the counselor and student. The Accommodation Forms must be delivered by the student and signed by his/her instructor(s).

Interpreting Services

For students who are deaf/hard of hearing, interpreting services are among 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.
Grievance Procedure

To appeal the denial of a requested accommodation, students should follow these steps:

1. Students who believe they are not reasonably accommodated by their approved accommodation should first discuss their concern with their Disability Services counselor.
2. Any students not satisfied with the outcome after meeting with their Disability Services counselor may request a second meeting with the Director of Disability Services.
3. The Director of Disability Services will meet with the student, the assigned Disability Services counselor, and others necessary to determine a reasonable outcome. The director’s review is completed within seven business days.
4. The Director of Disability Services will provide an explanation of the decision in writing to the student.
5. If the student is unsatisfied with the director’s decision, the student may request reconsideration be made by members of the ADA Compliance committee.

For any questions about this process, contact Disability Services at 704.330.6621 or disability.counselingservices@cpcc.edu (disability.counselingservices@cpcc.edu?subject=Regarding%20the%20grievance%20procedure).

Counseling Services

In conjunction with other Central Piedmont counselors, Disability Services counselors can assist students in many capacities, including, but not limited to, providing referrals (within Central Piedmont and in the community), advocating for students, providing academic accommodations and offering support to students. 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, Central Piedmont 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 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.

Emergency Food Pantries

Service-Learning partners with a local non-profit, Loaves & Fishes, to establish Emergency Food Pantries on Central Piedmont campuses for students who are facing food insecurities. The Emergency Food Pantries provide individuals and households within the Central Piedmont community two days worth of non-perishable food per visit. The amount of food received depends on how many people live in the household.

Individuals are eligible to visit the food pantry two times each month, every month. Students need to bring their college identification cards with them when visiting a pantry.

Emergency Food Pantries are located on:
- Cato Campus, Cato III Bldg, Room 185
- Central Campus, Worrell, Room 2167
- Harper Campus, Lower Level, Room 111
- Harris Campus, Harris I Bldg, Room 1239
- Levine Campus, Levine II Bldg, Room 1323
- Merancas, TS, First Floor on Faculty Wing

Information including hours of operation is available online at the Service-Learning website under Emergency Food Pantries.

Financial Aid

Financial Aid Mission Statement

The mission of Central Piedmont’s Financial Aid Office is to provide excellent assistance to all students and to make every effort to ensure that the students who desire to attend the college but cannot afford to do so, are provided financial assistance to complete their educational goals. The Financial Aid Office is committed to providing quality service to students, parents, the college and the community.

In pursuing our mission, we strive to uphold the highest degree of professionalism, confidentiality, honesty, and integrity; embrace emerging technologies; and work collaboratively with all areas of the college, recognizing that only together we can achieve our common goal to enhance enrollment, retention and academic success for our students.

Steps to Obtain Financial Aid

Step 1: Determine Eligibility for Financial Aid

To be eligible for financial aid, potential candidates must:

- Apply for an FSA identification number at fsaid.ed.gov.
- Complete a new Free Application for Federal Student Aid (FAFSA), or submit a renewal application, using the Central Piedmont school code: 002915 at the FAFSA website: fafsa.gov.
- Be enrolled or accepted for enrollment in a program of study that is eligible for financial aid. Typically, degree, diploma or certificate programs consisting of at least 16 credit hours are eligible. (Please check with the Financial Aid Office for a complete list of eligible programs.) (NOTE - Federal and state grants only pay for courses required for the degree or certificate programs in which students are enrolled. Courses not required to earn a degree or certificate cannot be counted in determining enrollment level for purposes of Title IV eligibility. Additional courses not eligible for financial aid may include: 1) courses audited or completed by examination, or 2) Career Development or Continuing Education non-credit courses.)
- Demonstrate financial need.
• Be a U.S. citizen or eligible non-citizen.
• Have a valid Social Security number.
• Be registered with the Selective Service (males only).
• Have a High School Diploma or GED.
• Complete a Drug Conviction Worksheet to determine eligibility, if ever convicted of possessing or selling illegal drugs. A federal or state drug conviction may disqualify candidates for Title IV funds.
• Be in good standing (not in default) with any Title IV student loan borrowed to attend any institution.
• Maintain Satisfactory Academic Progress.

To be eligible for financial aid, potential candidates must not:

• have borrowed over Title IV loan limits.
• be enrolled concurrently in an elementary or secondary school

Step 2: Activate a Central Piedmont Student Email Account

All communication from the Financial Aid Office (as well as all official college communication) is sent through Central Piedmont student email accounts. To receive communications, students must establish a Central Piedmont email account from the home page of the college website, cpcc.edu. To do that, they first click Central Piedmont Login on the home page to create a user ID. Next, they are able to click Student Email to log in to their student email account.

Step 3: Apply for Financial Aid

Financial Aid Priority Dates

To provide adequate time to process and award financial aid to students before the start of classes, priority dates are identified for each semester for submitting the requested documentation. Priority deadline dates are:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Deadline</th>
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<tbody>
<tr>
<td>Fall</td>
<td>July 1</td>
</tr>
<tr>
<td>Spring</td>
<td>December 1</td>
</tr>
<tr>
<td>Summer</td>
<td>May 1</td>
</tr>
</tbody>
</table>

Once requested documentation is received, students receive an email stating that they have been awarded financial aid. Students may view their award letters through their MyCollege accounts.

Missed Priority Deadlines

Students are strongly encouraged to apply for financial aid. All applications are accepted and processed; however, late applications may not be processed in time for financial aid awards to pay for tuition or books. Students who submit applications after priority deadlines should plan to pay for tuition and books to avoid cancellation of class registration. If they then qualify for financial aid after their applications are processed, deposits to their selected refund preference are issued to them later in the term.

Application Process

Award Year - The financial aid award year runs from July 1 to June 30. Students need to complete an application for financial aid each year.

FAFSA - Students can apply for federal financial aid by completing the Free Application for Federal Student Aid (FAFSA) available online at fafsa.ed.gov. If web access is unavailable, or assistance is needed, FAFSA workshops are held on Fridays. For times and locations of the workshops, or to make an appointment, call the Financial Aid Office at 704.330.6942.

Corrections - If a mistake is made in what is reported on the FAFSA, a correction must be made.

Note: The online FAFSA does not permit the Social Security number (SSN) to be changed. If a mistake is made in reporting the SSN, the FAFSA must be completed again.

College Code Number – The Federal Title IV School Code for Central Piedmont: #002915 must be included as one of the top three schools on the FAFSA. The Financial Aid Office receives results of the FAFSA electronically within two weeks. The number to call to inquire about application status, request a duplicate student aid report, or add another college to the FAFSA is 1.800.4FED.AID / 1.800.433.3243.

Transfer Students - Students transferring to Central Piedmont must add the college’s federal school code (#002915) to the FAFSA. It is the student’s responsibility to notify the Financial Aid Office if he/she attended another college during the semester. A student cannot receive financial aid at two colleges during the same semester.

IRS Data Retrieval Tool - The IRS Data Retrieval Tool allows applicants who have already filed their federal income tax returns to pre-fill answers to some questions on the FAFSA by transferring data from their federal income tax returns. This can save the family time in completing the FAFSA. It also may reduce the likelihood that a FAFSA is selected for verification.

FSA ID - The FSA ID allows students and parents to access and electronically sign the online version of the FAFSA with a user-selected username and password. The FSA ID is a username and password that has replaced the Federal Student Aid PIN and must be used to log in to certain U.S. Department of Education websites.

The FSA ID confirms accurate identity when financial aid information is accessed and electronically signs Federal Student Aid documents. It also provides a single sign-on for accessing all Department of Education’s student/parent websites, such as FAFSA on the Web, National Student Loan Data System (NSLDS) and StudentLoans.gov.

This login process is more secure, eliminating the need for students and parents to provide personally identifiable information (such as name, date of birth and Social Security Number) every time they access the U.S. Department of Education websites. It also permits self-service password retrieval by email and name changes (for example marriage).

FSA ID Requirements:

• FSA ID usernames must be at least six alphanumeric characters.
• Passwords must be 8-30 alphanumeric characters.
• Passwords may not match the individual’s name, social security number or date of birth.
• Everyone is required to change his/her password at least once every two years.
• When choosing a password, remember that the FSA ID is also an electronic signature used to sign the FAFSA, loan promissory notes and other legal documents.
• Each FSA ID must be associated with a different email address, so parents and students must have their own email address.
• Parents may not use their own email address for a dependent student; students must have their own email addresses.
• A test email message is sent to the email address to confirm its validity.
The FSA ID can be created by logging into the Federal Student Aid website and following the steps provided.

**Step 4: Verification**

The Financial Aid Office is required by the Department of Education to verify files for applicants selected for verification by the Federal Processor. Verification is a process to confirm that the information provided on the FAFSA is accurate. The Financial Aid Office reserves the right to select files for verification if there is inconsistency or discrepancy in the information submitted. All requested documentation must be submitted to the Financial Aid Office before awards can be finalized.

**Financial Aid Calendar**

View the Financial Aid Calendar to learn more about financial aid deadlines, bookstore dates, disbursement dates, and other important dates.

**Year-Round Federal Pell**

Eligible students may receive a full Federal Pell Grant for a summer semester, even if they received a full Federal Pell Grant during fall and spring semesters. Year-round Federal Pell allows students to receive up to 150 percent of a regular grant award over the academic year so that they can continue taking classes in the summer and finish their degrees faster than they would otherwise. With careful planning, Federal Pell Grant recipients may take advantage of this new regulation to earn their degree faster.

Note: The provisions of the law state that any Federal Pell Grant received is included in determining the student’s Federal Pell Grant duration of eligibility and Lifetime Eligibility Used (LEU). To be eligible for additional Federal Pell Grant funds, students must be:

- otherwise eligible to receive Federal Pell Grant funds for the payment period
- enrolled at least half-time in the payment period(s) (6 credit hours) during the summer term
- maintaining satisfactory academic progress

**Financial Aid Processes and Federal Regulations**

**Financial Aid Freeze Dates**

Following federal regulations, the Central Piedmont Financial Aid Office establishes a freeze date each semester to set enrollment status for disbursing federal and state financial aid. Financial Aid freeze dates are the dates when enrollment status is frozen or locked for financial aid purposes. The current enrollment status on freeze dates is considered to be the official enrollment status for reporting purposes and financial aid eligibility. At these times, financial aid is adjusted for the term to reflect currently enrolled credits eligible for financial aid. For example, if a student registers for full-time status at the beginning of a term and later drops credits before the freeze date, financial aid is revised to match eligibility, based on the new number of enrolled credits as of the freeze date and the types of aid awarded. Credits added after the Freeze Date cannot be used to increase financial aid eligibility. For students who are retroactively awarded financial aid (after the freeze date), credit hours are frozen at the time the award is made and payment is based on current enrollment status.

The courses for which the student is registered on the freeze date will determine financial aid eligibility as long as the completed results from the student’s Free Application for Federal Student Aid (FAFSA) are on file by that date. For students whose completed FAFSA results are received after the freeze date, financial aid will be based on the student's enrollment on the date that the completed FAFSA results are received. “Completed FAFSA results” means that an Expected Family Contribution (EFC) has been calculated by the U.S. Department of Education. This EFC may change once all documentation is submitted and processed.

Before financial aid freeze dates, students should plan accordingly to register for courses in their program of study and the correct number of credit hours.

**Things to Remember about Financial Aid Freeze Dates:**

- Information or corrections to the Free Application for Federal Student Aid (FAFSA) submitted after the Freeze Date might affect financial aid.
- Enrollment status (full-time, 3/4 time, 1/2 time, less than 1/2 time) is locked for financial aid eligibility; actual courses are not locked.
- Financial aid is adjusted for enrollment level, as appropriate, if course credit load is increased or reduced before the Freeze Date. Students are responsible for payment of any balance on their accounts due to reduced financial aid created by reduced credit load.
- Adding credits after the Freeze Date does not increase financial aid received.
- Taking courses that begin after the freeze date may affect financial aid. For example, after the freeze date, the Federal Pell Grant is not disbursed until after courses have started. The grant is reduced accordingly for students who fail to begin attendance in all classes.

**Class Changes Made Before the Freeze Date:**

If a student adds or drops classes before the freeze date, the amount of financial aid the student is eligible for may be affected.

**Class Changes Made After the Freeze Date:**

Financial aid will not be adjusted if classes are added or dropped after the freeze date.

**Attendance Verification**

Students must be registered and attending classes to meet the eligibility requirements for federal and state financial aid programs. For federal and state grant recipients, the student's award amount will be based on the courses for which he/she is registered on the freeze date. Federal and state grants are disbursed on the number of credit hours for which the student is registered and attending while enrolled in an eligible program of study. The student will not be eligible for grant funds for courses not attended.

Registration for eligibility for all financial aid awards will be verified prior to disbursement and on each semester's freeze date.

**Awarding Financial Aid**

The financial aid package should be completed before course registration, or tuition and fees must be paid before the designated due dates. If tuition and fees are not paid by designated due dates, registration is canceled.

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 or 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

- the information on which they were based changes,
- federal regulations require a change, or
- an over-award occurs.

The Central Piedmont Financial Aid Office adjusts student awards throughout the drop/add period. After the drop/add period or freeze date, 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 Conversion Programs

Per Federal regulations, the determination of enrollment status (full, 3/4, 1/2, or less) is different for the following program(s) of study:

- Dental Assisting - D45240
- Diesel & Heavy Equipment Technology Diploma - D60460-D3
- Hospitality Management Diploma in Hotel Management - D25110-D1
- Hospitality Management Diploma in Restaurant Management - D25110-D2
- Nurse Aide - D45970

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. 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 restriction to tuition, books, and transportation for students who are enrolled less than half time. If a less-than-half-time enrollment status is a 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.

Transferring to Another College

Financial Aid awards cannot automatically be transferred from one college to another. Students need to have FAFSA results released to the new college. All student financial aid documents are the property of Central Piedmont and cannot be released.

Financial aid cannot be received simultaneously at two or more colleges.

Refunds

Students receive a GREEN information packet from BankMobile approximately 2-3 weeks after enrollment. Once the packets are received, the student needs to create an account with BankMobile.

Remaining financial aid funds (after tuition/fees and books) are released for disbursement according to the schedule on the Financial Aid Calendar.

The actual dates on which students receive refunds are based on their preferred designated method for receiving refunds:

- **Electronic Deposit to Another Account**
  Money is transferred to another account the same business day BankMobile receives funds from Central Piedmont. Typically, it takes 1-2 business days for the receiving bank to credit funds to an account.

- **Electronic Deposit to a BankMobile Vibe Account**
  For students who open a BankMobile Vibe Account (upon identity verification), money is deposited the same business day BankMobile receives funds from Central Piedmont.

**Funds may be delayed up to two weeks for students who do not select a preferred refund preference.**

It is important to keep student addresses, telephone numbers and email addresses updated. Changes in personal information can be made online at mycollege.cpcc.edu or in-person at Admissions, Records & Registration on any Central Piedmont 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).

Programs/Courses Ineligible for Financial Aid

Diploma or certificate programs containing less than sixteen (16) credit 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) credit hours to be eligible for federal aid.

Please note: Not all diploma or certificate programs consisting of 16 or more credit hours are eligible for federal student aid. Also, Career Development, Continuing Education, courses for which credit by examination was received and/or courses being audited by the student are ineligible for financial aid. For a list of ineligible programs, students may contact their academic counselor or a Financial Aid representative.

Policy on Return to Title IV Funds

Federal regulations require a recalculation of federal financial aid eligibility for students who withdraw, drop out, or are dismissed before completing 60 percent of an academic term. The Return to Title IV recalculation is computed using the 50 percent point of the semester for students who stop attending classes within a term without formally withdrawing if the last date of attendance cannot be determined. (An example of the Return to Title IV Fund calculation is available in the Financial Aid/Veterans Affairs Office.) Financial aid students should notify the Central Piedmont Financial Aid Office before withdrawing.

Recalculation for percent of aid earned is based on the following formula:
Percent Earned equals [Number of Days Completed Before Withdrawal Date] divided by [Total Days in a Semester/Term]. If the calculation results in an overpayment, the student owes the balance to Central Piedmont. If
the student fails to pay the debt 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.

FERPA Confidentiality
The Central Piedmont Financial Aid Office communicates with students through their Central Piedmont email accounts. Due to the Family Educational Rights and Privacy Act (FERPA), only general questions may be answered via email unless students use their Central Piedmont email address and include their student ID numbers. Due to confidentiality requirements described in FERPA regulations, information cannot be disclosed to parents. Students may access their Central Piedmont MyCollege account to obtain information regarding their grades, financial aid awards, satisfactory academic status, and student billing. When visiting the Central Piedmont Financial Aid Office, students should bring their Central Piedmont student ID card.

Financial Aid Fraud and Forgery
The falsification and misrepresentation of information submitted to receive financial assistance will result in the cancellation of future assistance and repayment of all prior assistance received under false pretense. Examples of fraud and forgery are: signing another person's name and falsification of income. A student who purposely provides false or misleading information to receive federal financial aid violates the college's Rules of Conduct and may face prosecution under state and federal laws.

Financial Aid Programs

Financial Aid Programs
Applicants must complete the Free Application for Federal Student Aid (FAFSA) to determine eligibility for federal and/or state student aid and institutional scholarships.

Federal Programs

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

Pell Grant awards are based on full-time enrollment which is 12 credit hours or more. This applies to all programs. Students enrolled in less than 12-credit hours may use the Pell Grant Calculator to determine their estimated Pell Grant.

Federal Supplemental Educational Opportunity Grant
A Federal Supplemental Educational Opportunity Grant (FSEOG) is for undergraduates with exceptional financial need who are students with the lowest Expected Family Contributions (EFC). FSEOG awards do not have to be repaid and priority is given to students who receive a Federal Pell Grant.

The Federal Supplemental Educational Opportunity Grant program is a campus-based program administered directly by the Central Piedmont Financial Aid Office. The amount of aid awarded depends on students' financial need, the amount of other aid they receive and 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 enrolled at least 6 credit hours may work an average of 15 to 20 hours per week. FWS employment is determined by students' total financial need, their class schedule, their credit hours of enrollment and their academic progress each term.

Awarded FWS funds are limited to the 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.

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

All available FWS positions are advertised on the Central Piedmont Human Resources website under Careers at Central Piedmont.

America Reads I America Counts I Community Service
America Reads, America Counts, and Community Service are Federal Work-Study programs offered in fall and spring semesters. These programs allow Central Piedmont students to partner with local elementary schools and nonprofit agencies 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 initiated in 1997, challenges every American to help 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 1999 as an effort to assist students in mastering challenging mathematics, including the foundations of algebra and geometry, and improve student achievement in mathematics by the end of the ninth 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 for students with disabilities as well as activities in which students serve as mentors for purposes such 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 money
Applicants must:
- 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 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 finance post-secondary education costs while offering those same students an opportunity to pursue community service. – Richard W. Riley

For more information about these programs please contact Service-Learning at 704.330.6445, visit Central Piedmont Service-Learning or call the Financial Aid Office at 704.330.6942

State Programs

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 the Central Piedmont 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 the Central Piedmont Financial Aid Office and the college
- meet all other eligibility requirements for Federal Student Aid

Scholarships

Institutional scholarship funds are provided to eligible learners through the continued generosity of the Central Piedmont Foundation, individuals, industries, businesses, organizations, civic clubs, and other community partners. Completing a Free Application for Federal Student Aid (FAFSA) is an essential part of applying for scholarships through the Central Piedmont Scholarship Program. Candidates also must complete the general scholarship application on Central Piedmont’s scholarship management system to be considered for opportunities that match their profiles.

Central Piedmont’s scholarship management system is a comprehensive database designed to simplify the application process in searching for multiple Central Piedmont Institutional scholarship offerings. Scholarship applications are accepted until all funds are awarded. Students are encouraged to apply early for scholarship consideration.

- Contact the Central Piedmont Financial Aid Office at 704.330.6942 or find Central Piedmont Scholarships on the Financial Aid website to see scholarship deadline dates and a comprehensive list of scholarships.
- Find outside scholarship opportunities on the Central Piedmont Financial Aid website under Community Scholarship Listings.

Scholarship donors should direct contributions to the Central Piedmont Foundation, which supports and supplements educational programs, projects and scholarships for which other funds are unavailable or inadequate. Questions about the establishment of scholarships or requests for other information regarding scholarship donations should be directed to the Central Piedmont Foundation at 704.330.6869. The Central Piedmont Foundation is a 501(c)(3) organization eligible to receive tax-deductible contributions.

Scholarships are available for entering first-year students and for continuing students and can cover the full cost of attendance for recipients. 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 usually are restricted to tuition assistance and require recipients to maintain a minimum grade point average to continue receiving the scholarship. Each scholarship is awarded for one academic year beginning with the fall semester. Students need to reapply each year by completing both the Free Application for Federal Student Aid (FAFSA) at studentaid.gov/h/apply-for-aid/fafsa and the scholarship application.

Financial Aid Satisfactory Academic Progress (SAP)

Satisfactory Academic Progress (SAP) to be Eligible for Financial Aid

Federal regulations require students receiving federal financial aid to maintain satisfactory progress according to standards set by Central Piedmont and the federal government. This policy applies to students applying for or receiving federal and state funds. Failure to fulfill any part of the agreement may result in the cancellation of financial aid awards and students may be responsible for repaying any funds received. At Central
Piedmont, Satisfactory Academic Progress (SAP) standards also apply to non-federal aid, including state funds, institutional funds, and Foundation scholarships. Students are expected to maintain at least a minimum level of progress toward the successful completion of course requirements for a degree, certificate or diploma. Progress is measured both qualitatively and quantitatively. As recipients of federal or state financial aid, students also have individual rights and responsibilities.

**Definition of Satisfactory Academic Progress**
Satisfactory Academic Progress (SAP) is defined as passing 67% of all hours attempted (67% Rule) with a required grade point average of 2.0 (GPA Rule), not exceeding 150% of total attempted hours needed to complete an approved program defined by the Department of Education (150% Rule).

**Semester Increments**
To ensure students make sufficient progress throughout their courses of study, a maximum time frame for completion, divided into increments, is required. At the end of each increment (semester), the college must determine whether students have completed a minimum percentage of work toward their educational objective, degree or certificate for all semesters thus far completed. Progress is measured throughout the academic program by:

1. cumulative grade point average (qualitative measure) and
2. credits earned as a percentage of credits attempted, known as the "pace of completion" (quantitative measure).

**Evaluating Progress**
The Central Piedmont Financial Aid Office evaluates Satisfactory Academic Progress before aid is awarded and again after grades are posted for every term, starting with the first semester of enrollment. To reasonably measure satisfactory progress toward completion of a degree, diploma or certificate, a student's total academic record at Central Piedmont is evaluated, regardless of whether or not financial aid was received for the entire period of enrollment. Some career studies certificate programs are ineligible for student financial aid, but those credits are counted for all SAP requirements if the student enrolls later in an eligible program.

**Quantitative Standard**

**Cumulative GPA Requirements (GPA Rule):** To remain eligible for financial aid consideration, students must meet minimum cumulative grade point average requirements, based on a progressive scale. The calculation includes grades of A, B, C, D, F, P, and R. The GPA evaluation excludes transfer credits.

**Quantitative Standards or Pace of Completion**

**Completion Rate (67% Rule):** Students must, at a minimum, receive satisfactory grades in 67% of all credits attempted. This calculation divides the cumulative total number of credits completed by the cumulative total number of credits attempted. All credits attempted at Central Piedmont are included, except any audited courses for which a status of "AU" was received by the time of the class census date. All credits accepted for transfer count as both attempted and completed credits. Credits with satisfactory grades at the college are those for which a grade of A, B, C, D or P was earned.

**Maximum Hours (150% Rule):** To continue receiving financial aid, students must complete their programs of study before attempting 150% of the credits required for a program. The 150% calculation excludes developmental coursework. Attempted credits from the entire enrollment period at Central Piedmont, plus all applicable transfer credits, are counted - regardless of whether or not financial aid was received for the entire period of enrollment.

**Transfer Students**
To calculate satisfactory academic progress, transfer students who apply for financial aid must request official transcripts from all other colleges attended. Official transcripts must be submitted directly to one of the campus Student Records Office. Credits officially accepted in transfer are counted in the 67% Rule and in determining the maximum number of allowable credit hours for financial aid eligibility. The college has the option, on an individual student basis, to place transfer students on either Financial Aid Warning or Suspension status immediately upon evaluation for financial aid, if academic history at previous colleges indicates a pattern of unsuccessful academic work.

**Changing Programs or Completing a Second Program**
For students who switch programs or attempt a second degree or certificate, all credits earned from the first degree or certificate are included in hours attempted and completed. Depending on circumstances, an appeal may be warranted.

**Developmental Studies**
Students may receive financial aid for a maximum of 30 semester hours of developmental courses, as long as all of the following criteria are met:

1. they are required to take developmental classes, based on their placement test results,
2. they are in a program of study eligible for financial aid, and
3. they meet Satisfactory Academic Progress (SAP) requirements.

Developmental courses (designated by course numbers below 100, or beginning with DMA or DRE) are included in the calculation of Satisfactory Academic Progress. Students enrolled in developmental courses must receive grades of A, B, C or P to remain in good standing. Developmental hours beyond the required 30 semester hours cannot count towards enrollment status for federal and state grants, nor can they count toward the cost of attendance for any campus-based programs.

**Cumulative Credit Hours Attempted**
Cumulative credit hours attempted are defined as all credit hours attempted at Central Piedmont, and all credit hours transferred from other institutions. Attempted credits include those for which grades of "A" through "F," "P," "R," "W," "I/A," "I/B," "I/C," "I/D," "I/F" or "I" were earned.

**Cumulative Credit Hours Completed**
Cumulative credit hours completed are defined as those for which grades "A" through "D," "P," "I/A," "I/B," "I/C," "I/D" or "I/F" were earned. Credit hours not completed are defined as those for which "I," "I/F," "F," "R" or "W" were received.

**Repeated Courses**
Repeated courses are counted among hours attempted and also toward maximum credits allowed for each type of program for which financial aid is received. Repeated courses may enable students to achieve a higher cumulative grade point average. Students may repeat courses with financial aid until successfully completed, but repeating courses adversely affects the completion rate requirement. Financial aid will pay only once to financial aid was received for the entire period of enrollment.

**Audited Courses**
Credit hours completed to audit a course ("AU" grade received) do not apply toward an associate degree, diploma or certificate program; therefore, credit hours with this designation cannot be included in determining enrollment status for financial aid or Satisfactory Academic Progress. An enrollment status change is made if students wish to have a grade changed to audit status ("AU") after financial aid is disbursed. 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 treated as an "F" and are considered as credit hours attempted and not completed in the SAP calculations. Students who make arrangements with an instructor to finish required coursework are not required to re-register for the same class during the next semester to complete the work. If the unfinished course causes a student to be placed on financial aid probation or suspension, the student may appeal once the course is completed. A student may appeal for a re-evaluation of Satisfactory Academic Progress by completing Steps to Appeal. 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.

Students should contact the Financial Aid office before changing programs and/or withdrawing from any courses.

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 ("W" grade status) counts as attempted, not completed, credits in the Financial Aid GPA calculation. Financial Aid recipients should discuss the possibility of withdrawing with a financial aid representative before doing so.

NOTE: Reducing enrollment during a semester may create adverse consequences for financial aid recipients:

1. Satisfactory Academic Progress may be affected.
2. Students may be required to repay a percentage of financial aid received for the semester in cases of complete withdrawals. (See Return of Title IV Funds.)

Change of Major
Students who change their major (program of study) still are responsible for maintaining Satisfactory Academic Progress by the procedures outlined. A review of Satisfactory Academic Progress is based only on students’ current programs of study. Students changing from an associate program to a diploma or certificate program may lose federal and state eligibility immediately upon making the change.

EFL-English as a Foreign Language Studies
Allowable credits for EFL-English as a Foreign Language courses are limited, as long as they are taken as part of an eligible program and satisfactory academic requirements are met.

Dual Enrollment
Students may not receive federal aid from more than one institution at the same time. Students transferring to Central Piedmont from other schools must have any aid received at former schools canceled.

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

Student Financial Aid Status
Satisfactory Status (S)
Students who continue to meet all aspects of the satisfactory academic policy will continue receiving financial aid.

Warnings
- Warning/GPA Probation (WG)
  Students not meeting the 2.0-grade point average required for Satisfactory Academic Progress receive a probationary status of "WG".
- Warning/Pass Rate Probation (WP)
  Students not meeting the 67% pass rate required for Satisfactory Academic Progress receive a probationary status of "WP".
- Warning/GPA & Pass Rate Probation (WB)
  Students not meeting the 2.0 GPA nor the 67% pass rate required for Satisfactory Academic Progress are placed on a probationary status of "WB".

Suspension from Receiving Financial Aid
Students who previously held a warning status and failed to meet financial aid Satisfactory Academic Progress standards during the following semester, are placed on financial aid “Suspension” status. While on financial aid suspension, students cannot receive federal, state, or institutional financial aid during the next attending semester. Students placed on financial aid suspension may appeal the decision by completing the Satisfactory Academic Appeal Process (see below).

Suspension/GPA (SG)
Students who had a warning status and are now suspended from receiving financial aid for not meeting the 2.0 GPA required for Satisfactory Academic Progress are assigned a status of "SG".

Suspension/Pass Rate (SP)
Students who had a warning status and are now suspended from receiving financial aid for not meeting the 67% pass rate required for Satisfactory Academic Progress are assigned a status of "SP".

Suspension/GPA & Pass Rate (SB)
Students who had a warning status and are now suspended from receiving financial aid for not meeting the 2.0 GPA nor the 67% pass rate required for Satisfactory Academic Progress are assigned a status of “SB”.

Standards of Progress (SOP)
Academic requirements for avoiding a warning status and staying in school differ from financial aid requirements for Satisfactory Academic Progress. Academic standing or Standards of Progress (SOP) is noted on registration records. Financial aid status is noted on financial aid screens in the Student Information System. Any student suspended from Central Piedmont for academic or behavioral reasons is automatically ineligible for financial aid.

After Financial Aid is Suspended
Except for appeals 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 time frame requirement.

Students are notified through their student email when placed on warning or suspension. If students take necessary actions to comply with the qualitative and quantitative components of the Financial Aid Satisfactory Academic Progress Standards, the 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 they are otherwise eligible. When approved by the Financial Aid Appeals Committee, the financial aid status upon reinstatement is “Probation.”

### Appealing Ineligibility for Financial Aid

Students suspended from receiving financial aid for not meeting required Satisfactory Academic Progress (SAP) guidelines, may appeal a suspension if unusual or extenuating circumstances contributed to their failure to meet the guidelines. If the appeal is granted, students are placed on SAP Continued Probation status and are allowed to receive financial aid for the next semester.

Students may appeal the termination/suspension of financial aid by completing the Steps to Appeal. Appeals must be submitted with supporting documentation explaining any unusual circumstances that caused the student’s academic progress to be less than required. Appeals should also include:

- a) reasons why minimum standards were not met (what happened), and
- b) reasons why eligibility should be reinstated instead of terminated (what changed).

Appeals must be submitted with supporting documentation explaining the unusual circumstances that caused their academic progress to be less than required. Federal law gives some examples where allowances might be made for mitigating circumstances; for instance, a serious illness or injury, or the death of a relative. An appeal may not be based upon the need for financial aid or a lack of knowledge that the assistance was in jeopardy. Failure of the student to adequately explain circumstances and actions may result in an appeal being denied.

### Regaining Federal Student Aid Eligibility

Except for 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. A student for whom an SAP appeal is approved is expected to complete 100% of all attempted credit hours with a minimum 2.0 grade point average the semester following the approved appeal. Satisfactory progress must be demonstrated by the end of the specified probationary term before further aid can be awarded.

### Financial Aid Academic Plan

Students may successfully appeal a financial aid suspension, but have an academic situation making it mathematically impossible for them to regain Satisfactory Academic Progress (SAP) eligibility for the next semester. Per Federal SAP guidelines, the Financial Aid Office may use discretion in whether to place such a student on a Financial Aid Academic Plan. This plan is designed to outline steps of progress that, if followed each semester by the student, would lead to regaining SAP eligibility within a specified time frame. If the student does not meet the progressive steps each semester, financial aid is immediately terminated. 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.

### Appealing Financial Aid Ineligibility due to Exceeding Maximum Credits Allowed

Students who attempt more than 150% of the credits required for their program of study do not meet requirements for satisfactory academic progress. Students disqualified from receiving financial aid due to exceeding the 150% maximum time frame may appeal that decision by completing the Steps to Appeal Maximum Credits Time Frame.

### Regaining Federal Student Aid Eligibility

Students who successfully appeal the 150% time frame are required to complete 100% of all course credits attempted from that point forward to complete their degree. They may not earn any grade lower than a “C,” they may not withdraw from any class, and they may not take an Incomplete status in any class. Students who have been suspended from receiving financial aid, due to exceeding the maximum credits allowed, cannot take action to reestablish progress unless an appeal is approved.

Note: Students participating in the Federal Work-Study program who are suspended from financial aid due to exceeding the maximum time frame allowed, cannot continue working.

### Appealing Financial Aid Ineligibility due to Not Registering with Selective Service

Male students who fail to register with the Selective Service before turning age 26 are ineligible for federal and state grants, including Federal Pell Grants and Federal Work-Study.

### Students Required to Register with the Selective Service

- **Male U.S. citizens** (regardless of where they live) and male permanent resident aliens living in the U.S. who were born after December 31, 1959, must register within 30 days of their 18th birthday (30 days before and after). If they fail to register during this time period, male students may submit a late registration up until their 26th birthday.
- **Male non-citizens** (including illegal aliens, legal permanent residents, seasonal agricultural workers, and refugees) who take up residency in the U.S. before their 26th birthday must register. All relevant INS forms (e.g., the Application for Resident Alien status, I-485, and so on) include a clear statement regarding the requirement to register.
- **Dual nationals of the U.S. and another country** must register, regardless of where they live.
- **Conscientious objectors** must register. If a draft is established, they will have an opportunity to file a claim for exemption based on their religious or moral objections, but they nevertheless, must register with the Selective Service.
- **Disabled men who can move about independently in public with or without assistance** must register, even if their disability would disqualify them from military service.
- **Members of the Reserve and National Guard who are not on full-time active duty** must register.
- **Men attending the Merchant Marine Academy** must register.
- **Men who attempted to enlist and were rejected before age 26** must register.
Students Not Required to Register with the Selective Service

- Men born from March 29, 1957, to December 31, 1959, were never required to register because the Selective Service program was not in operation at the time they turned 18. The requirement to register was reinstated in 1980 and applies to all men born on or after January 1, 1960 (50 USC 453). Although men born before March 29, 1957, were required to register, failure to register makes one ineligible for student aid only if one was born on or after January 1, 1960.
- Men who are hospitalized, institutionalized, or incarcerated are not required to register during their confinement.
- Men who are serving in the military on full-time active duty or who are attending the service academies are not required to register.
- Disabled men who are continually confined to a residence, hospital or institution are not required to register. However, if they are released before their 26th birthday, they must register within 30 days of their release.
- Non-immigrants visiting the U.S. on student or visitor visas or men and their families who are part of a diplomatic or trade mission.
- Citizens of the Federated States of Micronesia, the Republic of the Marshall Islands, or the Republic of Palau.
- Non-citizens who first entered the U.S. after turning age 26.
- Non-citizens who entered the U.S. as lawful non-immigrants on a valid visa and remained in the U.S. on the terms of that visa until after they turned 26. (The date of entry on Form I-94 will be relevant.)
- Students who are not yet 18. For federal aid purposes, students not yet 18 years old as of the date their FAFSA was submitted are eligible for federal student aid this award year, even if they turned 18 shortly afterward and have not yet registered. Such students would need to register to be eligible for federal student aid in subsequent years.

Male students, now age 26 or older, who did not register with the Selective Service are ineligible for Federal student aid and other federal and state benefits. For those students, there are only two circumstances for regaining eligibility. Evidence must be shown that:

1) he was not required to register, or
2) failure to register was not knowing and willful.

Factors determining knowing and willful failure to register:

Knowing
Was he aware of the requirement to register or not? If he knew about the requirement to register, was he misinformed about the applicability of the requirement to him (e.g., veterans who were discharged before their 26th birthday were occasionally told that they did not need to register)?
On what date did he first learn he was required to register? Where did he live when he was between the ages of 18 and 26? Does the status information letter indicate that Selective Service sent letters to him and did not receive a response?

Willful
Was the failure to register done deliberately and intentionally? In other words, did he have the mental capacity to choose whether or not to register and choose not to register?

Evidence a Student 26 or Older was not Required to Register for Selective Service

A student not required to register must obtain a status information letter from Selective Service. This letter indicates whether he was, or was not, required to register. To obtain such a letter, he may call 1-847-688-6888 or 1-888-655-1825 (stay on the line until the operator answers) or write to Selective Service System, PO Box 94638, Palatine, IL 60094-4638 and ask for a status information letter.

Evidence that Failure to Register was not Knowing and Willful

A student who did not knowingly or willfully fail to register must complete the Selective Service Appeal Form. He must describe, in detail, the circumstances which prevented him from registering (e.g., hospitalization, institutionalization, incarceration, military service) and provide documentation of those events. The documentation must specify the dates of events. (For example, if he served in the military and was released before age 26, he still would have been required to register within 30 days of his release.)

A student who was not a U.S. citizen must provide documentation of when he entered the United States and also provide his name, Social Security Number, date of birth, and mailing address. Additionally, he must submit a statement as to why his failure to register was not knowing or willful.

Appealing Financial Aid Ineligibility due to Unusual Enrollment

The U.S. Department of Education has established new regulations to prevent fraud and abuse in the Federal Pell Grant Program by identifying students with unusual enrollment histories. Some students with an unusual enrollment history (UEH) have legitimate reasons for their enrollment at multiple institutions. However, the Central Piedmont Financial Aid Office is required to review files of students with unusual enrollment history to determine future federal financial aid eligibility. If selected by the Department of Education (via the FAFSA), a resolution must be determined before they can receive financial aid.

Definition of Unusual Enrollment History

The Department of Education selects students for review who received a Federal Pell Grant at multiple institutions during the past three academic years. Once the Department of Education indicates students with an unusual enrollment history, the Central Piedmont Financial Aid Office must review the educational history of those students to determine their federal financial aid eligibility.

Review Process

- The Central Piedmont Financial Aid Office notifies students who are selected by the Department of Education for unusual enrollment.
- Those students must complete the Unusual Enrollment History Appeal Form and provide a copy of all transcripts from previous institutions attended during the past three years. They must have received academic credit at any school, while receiving the Federal Pell Grant, during those relevant academic years.
- The Financial Aid Office verifies whether academic credit was obtained at each school during the relevant years. Students are notified when the requirement is satisfied. If students failed to receive academic credit at any institution during the relevant award years, their federal and state financial is denied and they are notified.

Steps to Appeal Denial of Financial Aid

Students can appeal the financial aid denial by submitting the following three items.

1. An Unusual Enrollment History (UEH) Appeal Form
2. A letter explaining the unusual enrollment history
3. Documentation supporting the explanation provided in the appeal letter
All appeal forms and documentation are reviewed by the Financial Aid Office, before notifying students of the decision.

**Processing Appeals**

Appeal forms and documentation must be submitted to the Central Piedmont Financial Aid Office at least fifteen working days before the semester start date. Appeals after that date are processed by the end of the semester. Students are informed of their appeal decision through their Central Piedmont student email account. Classes are not held by financial aid for students submitting an appeal.

**Regaining Federal Student Aid Eligibility**

Students denied federal student aid based on unusual enrollment history may have their financial aid eligibility reinstated once they have completed one academic term consisting of six credit hours of curriculum coursework in an eligible program of study. Students also must meet the standards of Satisfactory Academic Progress (SAP) for financial aid eligibility. Please note, in this situation, students may not drop or withdraw (officially or unofficially) from any course after the term begins. At the end of the completed semester, they must submit a letter requesting reinstatement with their final grade report.

Students who regain eligibility, either by appeal or by completing a successful term, will receive financial aid beginning in the payment period for which approval is given. For example, students denied in the fall term who complete a minimum of six credit hours, do not withdraw from any courses, maintain a 2.0 GPA and successfully meet stipulations at the end of the fall term, are eligible for federal aid in the spring term.

**International Programs and Services**

The International Programs and Services Office is committed to supporting the academic and personal growth of international students at Central Piedmont 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 the International Programs and Services Department at 704.330.6838, or visit the International Programs and Services website.

**Lost and Found**

Lost and Found is managed by College Security Services. Found items can be turned in by calling the Security Dispatch Center at 704.330.6632. College Security Services will send an officer to pick up the item. Found items also may be returned to Security at each campus. Lost items are stored by College Security 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 Services Office at the campus where the item was lost. To determine if someone has turned in a lost item to Security, call 704.330.6632 to describe the item. Found items are electronically recorded by a description in the database for all Dispatchers and Security Officers to access. If Security has an item similar to an item described, directions are given as to how and where the lost item may be identified and claimed.

**Single Stop**

Single Stop strives to transform the lives of students with critical needs. This purpose is accomplished by providing wrap-around services that connect students to college support systems and community resources. The goal is to offer support that assists students in overcoming financial barriers to persistence and success.

Services available through Single Stop include:

- Free tax preparation
- Benefits counseling
- Financial counseling
- Legal
- Emergency grants
- Referrals for other campus and community resources

All services are free for qualified Central Piedmont students.

For more information and to locate a Single Stop office near you, visit the Single Stop website or contact us at 704.330.6435.

**Transfer Resource Center**

**Preparation for Successful Transfer to Four-Year Institutions**

The Transfer Resource Center offers advising and support services to Central Piedmont students who plan to transfer to a four-year college or university. Transfer advisors assist students in selecting courses at Central Piedmont aligned with their intended major at their intended four-year institution and facilitate a smooth transition into their program. To assist transfer students in gathering information about senior (four-year) institutions, the office maintains a comprehensive website of resources which includes transfer degree plans for all UNC System schools.

The Transfer Resource Center houses and manages various transfer student programs, including the 49erNext Program (UNC-Charlotte), C-STEP (UNC-Chapel Hill), and the Passport Program (UNC-Charlotte).

**Transfer Tuesdays and Transfer Fairs**

The Transfer Resource Center also brings admissions representatives from four-year institutions to Central Piedmont 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 representatives from colleges and universities from across North Carolina and the southeast to Central Piedmont.

The Transfer Resource Center is on the third floor of the Central High Building on Central Campus. Transfer advisors also are available at the Student Success Centers on Levine, Cato, and Merancas campuses. For more information regarding transferring, advising and programs sponsored by the Transfer Resource Center, students should visit the Transfer Resource Center website.

**TRIO Student Support Services**

TRIO - Student Support Services is funded by the U.S. Department of Education to provide opportunities for academic development to first-generation, low-income, and students with disabilities enrolled at Central Piedmont Community College. Student Support Services is a
Financial aid and Scholarships

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

Federal Application for Student Aid (FAFSA)
Central Piedmont Financial Aid website
Central Piedmont Scholarships

Tuition Assistance

Veterans

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 has been designated as an institutional member of Servicemembers Opportunity Colleges (SOC), a group of more than 1,900 institutions pledged to work with service members and veterans pursuing degrees. As a SOC member, Central Piedmont 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.

For more information, visit the Center for Military Families and Veterans in Room 323 or call the TRIO office (704.330.6126 or email sponsoredprograms@cpcc.edu).

Student Services

Central Campus
Student Support Services-TRIO

For more information about the Central Piedmont TRIO - SSS program:

- visit the program office in Room 117 of the Central High Building on Central Campus
- view the Student Support Services-TRIO Web page
- call the TRIO-Student Support Services office at 704.330.6394

Centers for Military Families and Veterans

Centers for Military Families and Veterans on Central Piedmont campuses are places where armed forces members (including National Guards/Reservists), veterans and their immediate family members engage in services promoting their personal and professional development. They provide resources that address many aspects of education, military and civilian life. Services provided by the centers include:

- academic advising
- assistance filing a VA claim
- career coaching
- community resource linking
- computer lab with study space
- goal-setting
- mentoring
- personal counseling
- scholarships
- spousal and family support
- 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 323 of Central High on Central Campus. Office hours are Monday through Friday, from 8 a.m. to 5 p.m. The center also may be reached by phone at 704.330.6126 or online from the Center for Military Families and Veterans website.
Veterans Affairs Education Benefits

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

Quick Reference:

- Eligibility, Enrollment Certification Process (22-1999) (p. 73)
- Verification of Enrollment (Chapters 30 and 1606) (p. 74)
- Notification from the Department of Veterans Affairs (p. 74)
- Satisfactory Academic Progress (SAP) (p. 74)
- Changes to: Address/Phone Information, Enrollment Status, Program of Study (p. 75)
- Websites for Further Information (p. 76)

Central Piedmont 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 Central Piedmont 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. Central Piedmont 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 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).

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

- U.S. Department of Veterans Affairs - 1.888.442.4551
- Mecklenburg County Veterans Service Office - 704.336.2102
- District Office of the North Carolina Division of Veterans Affairs - 704.563.2037
- Central Piedmont Veterans Affairs Education Benefits Office - 704.330.6552
- Central Piedmont Center for Military Families and Veterans - 704.330.6126

Priority Registration for Veteran Students

Central Piedmont offers priority registration to students using veterans' benefits and veterans who submit a member 4 or service 2 copy of their DD214 to Student Records. Veteran students are encouraged to register early to achieve timely program completion and certification processing.

Eligibility for Enrollment Certification Process (Electronic Form 22-1999)

Veteran 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 Central Piedmont 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.”

For eligibility to receive VA education benefits, students are required to complete the following 6 steps:

1. Apply for VA education benefits.
   - All Veterans, National Guard/Selected Reserve, and Survivors and Dependents of Disabled Veterans can apply online for benefits. Applications are available at ebenefits.va.gov. From there, applicants are directed to the eBenefits website, for the online application. A Certificate of Eligibility from the Department of Veteran Affairs is sent to the student after the application is processed.

2. Complete all Central Piedmont admission steps.
   - All admission steps are found under Veterans from Get Started on the Central Piedmont home page.

3. Submit official transcripts to Central Piedmont 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 or service 2 copy of the DD214.

Evaluation of Transcripts

Students receiving Veterans Affairs education benefits need to request official academic transcripts be sent from all previous schools to the Central Piedmont Student Records Office, regardless of whether they received credit for the courses. VA regulations require that all prior college credit be evaluated toward the student’s current degree plan and re-evaluated if/when the student changes programs or place of training. Students are not eligible to be certified for any course for which they already have received credit, even if the course was completed prior to the establishment of eligibility for benefits.

Important Notice: A VA file is not complete until all official high school, military (including DD214 member 4 copy) and college transcripts are evaluated by the Student Records office.

4. Meet with an Academic Counselor to be admitted into a VA Approved Program of Study.

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 that do not lead to the completion of this objective. Courses that 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. Since only required courses can be certified, students need to access their MyCollege account with their student ID and password to run a report and confirm all courses are required for their program of study before they register for classes.

Important Notice: Chapter 35 students must pursue a degree program to be eligible for certification in virtual/distance learning courses. Chapter 35 students seeking a diploma or
Developmental Courses
Per Federal guidelines, all developmental courses are required to be taken in seated classroom settings for VA certification. Developmental courses are courses with numbers less than 100 such as DRE 096, DMA 020, etc.

Dual Degrees
Central Piedmont is approved for VA students to pursue dual degrees simultaneously. Diplomas and certificates do not qualify for the dual degree program. Students must 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 (VAEBO) for more information.

5. Submit forms for education benefits.

Students are required to complete and submit a VA Student Packet along with other required documents to the VAEBO. The VA Student Packets are located at cpcc.edu/veterans. Click on the FORMS tab and access the packet for the type of benefit that utilized at Central Piedmont. The original signed forms are required to be submitted to the Central Piedmont VA office.

6. Attend a mandatory VA Annual Certification Workshop to be eligible for certification.

Students are required to complete a VA Certification Workshop each academic year to meet the requirements for VA certification of education benefits. The purpose of the annual workshop is to inform students of:

- VA regulations that may affect their eligibility for certification,
- VA and college attendance policies, and
- how to avoid financial liabilities.

The VA Education Benefits Office workshop link can be found at https://www.cpcc.edu/admissions/veterans-affairs-education-ben

Verification of Enrollment (Chapters 30 and 1606)

After the Veterans Affairs Education Benefits Office has certified a student’s enrollment to the VA Regional Processing Office, students using Chapter 30 and 1606 benefits need to verify their hours have not changed. This action is required on the last calendar day of each month by calling 877.823.2378 or by using WAVE (Web Automated Verification of Enrollment) through benefits.va.gov/gibill/.

To prevent student debt, the Central Piedmont Veterans Affairs Education Benefits Office is responsible for transmitting all changes of enrollment, immediately to the VA Regional Processing Office. Students are responsible for notifying the Veterans Affairs Education Benefits Office immediately:

1. when changes are made to their enrollment, and
2. to complete a VA Schedule Adjustment Form.

Notification from the Department of Veterans Affairs

All enrollment certifications are electronically transmitted through the VA Once Reporting System. The Department of VA transmits an electronic message directly to a students’ Central Piedmont email account when any type of activity is transmitted by a VA Certifying Official to the VA Regional processing office. A student’s Central Piedmont email address is the official means of communication from the college. It is always important to notify the Department of Veterans Affairs, the Central Piedmont Veterans Affairs Education Benefits Office and the Student Records Department of address, phone number or email address changes to prevent delays in communication.

Satisfactory Academic Progress (SAP)

VA education benefits are discontinued for students who cease to make satisfactory progress toward completion of their program. Veterans and eligible dependents/spouses are required to seek academic assistance by contacting their instructor, counselor, advisor, or the Center for Military Families and Veterans before academic difficulties place them on “Probation” or “Suspension.” A grade point average at the end of each semester/term of 2.0 or higher is required to meet the criteria for satisfactory academic progress for VA eligibility.

Unsatisfactory Attendance: Unsatisfactory attendance in courses may result in an administrative withdrawal. An administrative withdrawal is reported to the VA Regional Office and education benefits are discontinued at that time. It is important for students to contact the VAEBO if they have absences of more than two weeks and/or have stopped attending.

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 the successful completion of DMA or DRE courses. The grade of “P” is included in a student’s SAP calculation as attempted and completed credit hours.

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

If a veteran student requesting benefits is currently on “Probation” or “Suspension”, a notification is sent to the student’s Central Piedmont 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, Probation: Students who fail to achieve a semester GPA of 2.0 are placed on academic probation for the next semester. Students on probation are required to attend an On Track meeting with a counselor in the Center for Military Families and Veterans during the probationary term before they can be certified.

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 both the term and cumulative GPA is brought up to a 2.0. VA Education benefits are discontinued by the Department of Veterans Affairs for any student reported for unsatisfactory progress. These standards are in accordance with the Department of Veterans Affairs.
Changes to: Address/Phone Information, Enrollment Status, Program courses or courses transferred in from other colleges cannot be certified. benefit may be used only once at Central Piedmont. Previously passed program of study) they are taking during their graduating semester. This benefit may be used only once at Central Piedmont. Previously passed courses or courses transferred in from other colleges cannot be certified.

Failing Grades: Veteran 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 overpayment is 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 re-certified if the college accepts the grade toward graduation.

Graduation: Students applying for Graduation must inform the Central Piedmont VA Education Benefits Office once they have verified they are in their last semester at the college. If students need additional hours for full-time status, they can be certified for all courses (whether or not in a program of study) they are taking during their graduating semester. This benefit may be used only once at Central Piedmont. Previously passed courses or courses transferred in from other colleges cannot be certified.

Changes to: Address/Phone Information, Enrollment Status, Program of Study

Changes to Address/Phone Number
To report a change of address/phone number, veteran students should update their address/phone number through the Student Records Department or at 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.

Veteran students are responsible for and required to notify the Central Piedmont 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. Veteran 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 Central Piedmont Veterans Affairs Education Benefits Office immediately to prevent overpayments. Students are required to complete a VA Schedule Adjustment form 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 officially 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 Regional Processing Office in Buffalo, New York, 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 Processing 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 Central Piedmont 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 in Program of Study
Changes in program of study must be submitted to the VA Regional Processing Office by the Veterans Affairs Certifying Official. This is necessary because the 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 or a counselor in the Center for Military Families and Veterans and the required form must be completed:

• Application for Change of Program, VA Form 22-1995 (Veterans, National Guard/Reservists, CH 33 Transfer of Entitlement)
• Application for Change of Program, VA Form 22-5495 (Dependent/Spouse & Fry Scholarship).

This form is accepted only after the program code has been officially updated by an Academic or VA Counselor.

Double Majors and Dual Objectives
Students using Veterans Affairs (VA) educational benefits generally are approved for only one program of study at a time. However, exceptions can be made for students pursuing two programs at the same school, if the veteran can provide reasonable justification that both programs apply to a single career field.

Double Major or Dual Objective

• Students have a double major when they are enrolled in two degrees at the same time, at the same school.
• Students have a dual objective when they are enrolled in and pursue a degree and a Non-College Degree (NCD) (certificate or diploma) at the same time, at the same school.

Conditions Permitting Double Majors or Dual Objectives

• School policy allows double majors and/or dual objectives
• Both programs are approved at the school by the North Carolina State Approving Agency (NCSAA)
• Both programs reasonably can be said to lead to the same career field

NOTE: Veterans Affairs now states that a general Associate in Arts or Associate in Science program may be used as a double major with most other programs, as they can reasonably relate to any
career field. Two Associate in Applied Science degrees still must be reasonably related to the same career field.

Conditions When Double Majors or Dual Objectives are Not Permitted:

- Students cannot enroll in two Non-College Degree programs (certificate or diploma)
- Ch35 students cannot be certified for a dual objective (i.e., a combined program with a degree and an NCD certificate or diploma program) - although, they can be certified for double majors
- If either program is not approved by the NCSAA

VA forms available at 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, Transfer of Entitlement
3. VA Form 22-5495 - Application for Change of Program or Place of Training for Survivors’ and Dependents’ Educational Assistance, Fry Scholarship

Websites for Further Information

American Legion: legion.org/
Apply for financial aid: fafsa.ed.gov
DD 214 online request: vetrecs.archives.gov
Department of Veterans Affairs: va.gov/
Disabled American Veterans: dav.org/
Education Benefits online application: ebenefits.va.gov
GI Bill Programs, Pay Rates, Applications, Forms: benefits.va.gov/gibill/
Returning service members: oeofv.va.gov/
VA Vocational Rehabilitation: benefits.va.gov/vorehab/
Veterans’ Benefits Administration: vba.va.gov/

Veterans Education Benefits Regulations

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 following:

- 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).

Forever GI Bill - Harry W. Colmery Veterans Educational Assistance Act

The majority of the changes enhance or expand education benefits for veterans, service members, families, and survivors. For additional information, visit benefits.va.gov/gibill/forevergibill.asp.

The 15-year time limitation to use Post-9/11 GI Bill benefits is eliminated for:

- veterans who left active duty on or after January 1, 2013,
- children who became eligible for the Fry Scholarship on or after January 1, 2013, and
- all Fry scholarship eligible spouses.

Veteran Benefits and Transaction Act of 2018

Veteran students who are GI Bill and VR&E (Chapter 33 and Chapter 31) beneficiaries may attend a course of education or training for up to 90 days from the date the beneficiary provides a certificate of eligibility or valid VAF 28-1905 to the VA Certifying Official. These students are allowed to attend the course until the Department of Veterans Affairs (VA) provides payment to the college. Chapter 33 and Chapter 31 beneficiaries will not be imposed a penalty nor be required to borrow additional funds to cover tuition and fees due to late payments from the Department of Veterans Affairs.

Section 103 requires a State Approving Agency (SAA), or the VA, when acting in the role of the SAA, to disapprove certain courses of education. The VA can grant a waiver to these requirements.

Related information is included in Central Piedmont policies 7.03 In-State Tuition Requirements, and 7.08 Tuition and Registration Fee Refunds.

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 7/01/2015.

As of July 1, 2017, a "covered individual" is defined in the Choice Act as:

- A Veteran using Montgomery GI Bill-AD (CH30), Post 9/11 GI Bill (CH33), or VA/VR (CH31) who lives in a state in which the college is located (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 a state in which the college is located (regardless of the 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 of an active duty member using transferred benefits who lives in the state in which the college is located (regardless of the legal state of residence)
- A spouse or child using benefits under the CH33 Marine Gunnery Sergeant John David Fry Scholarship (FRY) who lives in the state in which the college is located (regardless of the legal state of residence)

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), Montgomery GI Bill-Active Duty (MGIB-AD CH30), or VA Vocational Rehabilitation (CH31) 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,
Situations Not Covered by the Choice Act:

- Once students change schools, they are no longer covered under Section 702
- Service members on active duty are not eligible for the Choice Act

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA).

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 vocational 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 benefits.va.gov/vocrehb/ or contact the VA Vocational Rehabilitation Office, 251 North Main Street, Winston-Salem, NC 27155. Telephone: 800.827.1000

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. Service members whose last date of active duty is on or after January 1, 2013, do not have a delimiting date for their benefit. Service members who separated before January 1, 2013, have 15 years from their last date of active duty to use their benefit.

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 gibill.va.gov. All applications will be submitted through the Transferability of Educational Benefits (TEB) website located at 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 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 spouse will lose eligibility for this benefit upon remarriage.
- Children are eligible for this benefit from ages 18 – 33. A child’s marital status does not effect eligibility.
- Fry Scholarship recipients who become eligible on or after January 1, 2013, no longer have a delimiting date.

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, who enroll after August 1, 2018, receive 36 months of benefits. Recipients are usually between the ages of 18-26.
• 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 the 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.
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. Central Piedmont offers career programs in a broad range of occupational areas. In addition, community colleges provide students opportunities to transfer to four-year colleges and universities. A commitment to affordability gives students the opportunity to earn a quality education at a fraction of the cost of other local higher education institutions.

To carry out the mission of the college, Central Piedmont offers educational programs among the broad learning domains below:

**Career & College Promise**

Central Piedmont provides educational pathways for qualified high school students to complete college credits or technical training, tuition free, while they are in high school, allowing them to get a jump-start on their workplace and college preparation.

**College and Career Readiness Programs**

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.

**College Curriculum Programs of Study**

**General Education Goals**

The General Education Foundation refers to general education course requirements within all programs of study, which serve to:

1. provide a foundational exposure to disciplines,
2. develop a sense of self, society, global issues and civic engagement, and
3. provide exposure to and attainment of proficiency in CRITICAL CORE skills.

**Degree Programs, Diplomas and Certificates**

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

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.

**College Transfer Programs to Four-Year Institutions**

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.), Associate in Fine Arts (A.F.A.), and Associate in Engineering (A.E.) degrees. Students are able to transfer an associate degree to four-year colleges prepared with the background and skills necessary to succeed in further studies.

**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 & College Promise**

Career & 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 & College Promise, qualified high school students 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.
For more information and a list of the full enrollment process and eligibility, visit the Career & College Promise website at cpcc.edu/admissions/enroll/high-school-students.

Career & College Promise provides the following educational or career training pathways for students while they are still in high school:

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.

Career & College Promise Dual Enrollment offers high school students the opportunity to get a jump start and earn college credit toward a two-year or four-year degree while still in high school. There are two types of options in this category:

- College Credit 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 Pathways lead to a certificate or diploma and are aligned with Applied Associate Degrees at Central Piedmont.

Specific criteria and eligibility requirements can be found in Part II (Operating Procedures) of the Career & College Promise Operating Procedures document on the North Carolina Community Colleges website at nccommunitycolleges.edu/academic-programs/career-college-promise.

College and Career Readiness Programs

Finish high school. Get job training and work experience. Learn English. Enhance your independent living skills. Whatever your goal, your success is our priority.

The College and Career Readiness (CCR) department provides academic, job readiness and college-prep opportunities for students to engage in exploring, choosing and moving successfully toward or into the career or college/training program of their choice. The CCR staff and faculty is committed to helping students develop the vital knowledge and skills required for future success in additional education or employment. Students are encouraged and supported in the development of an individual career path to help them track their educational and career development progress.

To ensure a successful transition into a post-secondary education institution or the workforce, CCR faculty and staff guide students through an assortment of CCR courses, including college and career-focused programs, high school completion, English as a Second Language and Special Learning Needs. 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 High School Diploma (p. 81)
English Classes (ESL) (p. 81)
High School Equivalency (HSE) Testing (p. 81)

High School Equivalency (HSE) Instruction (p. 82) including Adult Basic Education classes (ABE)
Independence and Literacy Education for Adults with Disabilities (I-LEAD (p. 82)

Career Development, Training, and Scholarship Programs

Accelerated Career Training (ACT) (p. 82)
Career Development (p. 82)
NCWorks NextGen (p. 82)
Pathways to Careers (p. 83)
Rise2Work (p. 84)

Adult High School Diploma

The Adult High School (AHS) Diploma program offers students a chance to earn the credits they need to complete a high school education. Students meet with an advisor to evaluate their transcript and determine the classes required to earn an Adult High School Diploma issued jointly through Charlotte-Mecklenburg Schools and Central Piedmont. There is no charge for classes. The program also is offered online. A strict attendance policy is enforced for all AHS courses. For more information, call College and Career Readiness Programs at 704.330.6129.

An Adult High School Diploma is awarded jointly through Charlotte-Mecklenburg Schools (CMS) and Central Piedmont. An accumulation of 24 credits is needed to earn the diploma which is based on the current graduation requirements and an agreement with CMS. This agreement is subject to change.

Adult English as a Second Language (Adult ESL)

Adult English as a Second Language (ESL) non-credit courses focus on helping students obtain a level of English language proficiency to meet personal and professional goals. 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 begin to develop the advanced language proficiency needed to transition into career training or higher education.

Students with refugee, asylee, or special immigration visa (SIV) status qualify for dedicated services for enrollment and navigation of all areas of the college.

Courses are free of charge to students. For more information, call the Adult ESL department at 704.330.6129.

High School Equivalency Testing

Central Piedmont offers two assessment options for earning a High School Equivalency Diploma. The two assessments cover the same content areas and allow test takers to demonstrate proficiency and the academic skills expected by employers and post-secondary institutions.

Applicants can take either the:

1. General Educational Development (GED®) Test
2. High School Equivalency Test (HiSET®)
Passing either of the two assessments in North Carolina results in the issuance of a High School Equivalency Diploma by the North Carolina State Board of Community Colleges.

Any person 18 and over may choose to take the GED® or HiSET®. Individuals who are 16 or 17 years of age must obtain approval to take the exam. The North Carolina High School Equivalency testing program requires all candidates 16 and 17 years of age to obtain special approval to take the High School Equivalency test.

To obtain transcripts or additional copies of a diploma, visit Diploma Sender.

High School Equivalency (HSE) Instruction

The High School Equivalency test preparation offers students an opportunity to gain the knowledge and skills needed to successfully pass a nationally recognized high school equivalency test, including the GED® or HiSET® exam. Topics include science, math, social studies, reading and writing.

Central Piedmont offers two assessment options for earning a High School Equivalency Diploma. Applicants can take either the:

1. General Educational Development (GED®) Test, or
2. High School Equivalency Test (HiSET®).

Successful passage of either test results in the same High School Equivalency Diploma issued by the North Carolina Community College System.

There is no charge for preparation classes; however, there is a fee for final testing.

For more information, please call 704.330.6129.

Independence and Literacy Education for Adults with Disabilities (I-LEAD)

I-LEAD (Independence and Literacy Education for Adults with Disabilities) serves adults with intellectual disabilities by combining literacy, independent living skills and employability skills.

The program’s hands-on and interactive classes are free of charge. Classes take place on Central Campus as well as community sites. The classes focus on areas such as employment, budgeting, transportation and daily living.

Program participants learn from instructors who understand their learning needs and design classes focused on the following areas:

- Community Living
- Functional Academics
- Health and Safety
- Leisure and Humanities

Participants who successfully complete I-LEAD may apply for the on-campus Transitions class or Project Search, a one-year internship class.

For more information, please call 704.330.6129.

Accelerated Career Training (ACT)

The Accelerated Career Training (ACT) Program offers opportunities to attain meaningful employment for individuals in the Charlotte region who are unemployed, underemployed, or limited to low-wage jobs. Get free job training fast in these high-growth career paths:

- Culinary Apprentice
- Early Childhood Teacher
- Information Technology
- Nurse Aide
- Phlebotomy
- Truck Driving, Commercial Driver’s License, Class A (CDLA)
- Air Conditioning, Heating, and Refrigeration (HVAC)

For more information, contact a Program Coordinator:

Samantha Smith at Samantha.Smith@cpcc.edu or at 704.330.2722, ext. 3817

Alicia Ibera-Cairon at Alicia.IberaCairon@cpcc.edu or at 704.330.2722, ext. 3826

Career Development

The Career Development (formerly HRD-Human Resources Development) program is designed to educate and train individuals to be successful in the workplace. This program provides career assessment, employability skills training and career advising to unemployed and underemployed adults. Courses taught in this program address:

- assessment of an individual’s assets and limitations,
- development of a positive self-concept and employability skills,
- job search and job retention strategies,
- communication and problem solving skills, and
- information technology in the workplace.

Individuals also can earn Working Smart (soft skills) and Career Readiness Certifications.

Eligibility

The classes are offered at no cost to individuals currently in one of the following situations:

- are unemployed,
- have received notice of a pending layoff,
- are working and are eligible for Federal Earned Income Tax Credit, or
- are working and earning at or below 200 percent of Federal Poverty Guidelines.

For more information, call the Career Development department at 704.330.2722, ext. 3885 or visit the Career Development website.

NC Works NextGen

The NCWorks NextGen Program helps young adults, ages 16 to 24, gain work experience, enter the job market, complete educational goals, and prepare for a career. The program targets out-of-school youth with one or more barriers to employment. NextGen provides career exploration, paid
internships, help to find employment, and scholarships for training and certifications. Eligible students can earn their high school diploma while being enrolled in the college's occupational programs at the same time. The program is funded by the Workforce Innovation and Opportunity Act under contract with Charlotte Works.

• tutoring and study skills training and academic support to improve reading and math skills
• GED®, HiSET® or adult high school classes (if needed) to complete a high school credential
• paid internships, work experiences, career exploration, and skill development
• scholarships and support to complete an occupational certificate in a high demand field or career pathway
• workforce preparation, job readiness, and career planning
• assistance with resumes, interview skills, and seeking employment
• soft skills certification (Working Smart)
• financial incentives (gift cards and more) for reaching success
• supportive services (transportation assistance and more) to overcome barriers
• knowledgeable and caring advisors help develop goals and assist students every step of the way
• guidance and counseling
• mentoring and leadership development
• financial literacy and empowerment
• entrepreneurial skills development and training
• employment and labor market information about in-demand occupations and sectors
• student success events, college, and workplace tours
• preparation and support to transition into postsecondary education and training (including colleges and universities)
• follow up to ensure employment and education success
• a renewed sense of hope, determination, and a plan for the future

For more information, call NextGen at 704.330.6794 or visit the NextGen website.

Working Smart Certification

Working Smart certification is issued by Charlotte Works, Mecklenburg County’s Workforce Development Board, to certify the recipient’s employability skills related to self-awareness, self-management, work ethics, communication skills, and problem solving skills. Satisfactory completion of the Working Smart course is necessary to receive the certification.

Occupational Skills Training

Funding is provided for students to complete certifications in a number of in demand career pathways such as:

• Nurse Aide (CNA)
• Phlebotomy
• Emergency Medical Technician (EMT)
• Air Conditioning, Heating and Refrigeration (HVAC)
• Welding
• Construction
• Information Technology
• Culinary Arts

A full list of Workforce Development Board approved Training Providers and Programs in available on NCWorks.

Pathways to Careers

Pathways to Careers offers qualified students an opportunity to work toward completion of their high school equivalency diploma while receiving occupational and work readiness training. Students receiving this scholarship must be dual enrolled in classes to receive their high-school diploma. To ensure student success, the program provides a variety of student support services, academic advising, and training to help students transition to higher-level certificates, degree programs or employment. More than 20 short-term training programs are available.

Tuition Assistance

Tuition assistance is available for eligible students through the Basic Skills Plus Program. Under this program, tuition is paid 100%. However, students are responsible for the cost of class textbooks, class supplies and other student-related fees associated with their chosen course under this program. In addition, students who are currently enrolled, are eligible for program amenities, e.g. suiting sessions from Dress for Success, etc.

Other pathways offering a full scholarship for all costs are available for eligible students through the Accelerated Career Training (ACT) Program.

Pathways to Careers supports several Central Piedmont certificates in various high-demand career industries.*

Certificates

• Air Conditioning, Heating and Refrigeration Technology with a specialization in Heating Service (C35100-C1)
• Certified Nurse Aide I
• Commercial Truck Driving
• Computer Integrated Machining Technology with a specialization in Basic Machining Skills (C50210-C3)
• Construction (NCCER CORE credential)
• EKG Technician
• Emergency Medical Technician
• Housekeeping
• Human Services Technology with a specialization in Supported Employment (C4538A-C2)
• Natural Hair Care
• Office Administration Specialist (C25370-C5)
• Phlebotomy
• ServSafe and Culinary Boot Camp
• Welding Technology with a specialization in Entry-Level Welding (C50420-C2)

Credentials

• Career Readiness Certificate
• NC State Early Childhood Credential
• PC PRO/COMP1A A+ Certification

*Certificates supported by Pathways to Careers may change.
Rise 2 Work

The College and Career Readiness Department at Central Piedmont has launched Rise2Work, a Mecklenburg County Department of Social Services and North Carolina Division of Health and Human Services program that seeks to connect low-income residents with the education and training opportunities they need to secure a better-paying job or family-sustaining career.

Rise 2 Work is a grant-funded program that is available to individuals enrolled in Mecklenburg County Food & Nutrition Services Employment and Training Program who want to increase their skills, earn new credentials, boost their career possibilities, and contribute to their family financial well-being. To be eligible, residents must qualify to receive SNAP/EBT/Food Stamps assistance and be able to work.

Through Rise2Work, you can receive:

• scholarships to college
• training and certifications for in-demand jobs
• advising and career coaching
• Education Navigator assistance to help you plan your career path
• support services and transportation assistance

For more information, contact Education Navigators:

Chasity Gardner, chasity.gardner@cpcc.edu and 704.330.2722, ext. 3139
Eric Hill, eric.hill@cpcc.edu and 704.330.2722, ext. 3077.

Developmental Studies

Developmental Mathematics Courses

DMA 010 Operations With Integers 1.0
DMA 020 Fractions and Decimals 1.0
DMA 030 Proportion/Ratios/Rates/Percents 1.0
DMA 040 Expressions, Linear Equations, Linear Inequalities 1.0
DMA 050 Graphs and Equations of Lines 1.0
DMA 060 Polynomial and Quadratic Applications 1.0
DMA 070 Rational Expressions and Equations 1.0
DMA 080 Radical Expressions and Equations 1.0

Developmental Reading and English Courses

DRE 096 Integrated Reading and Writing I 3.0
DRE 097 Integrated Reading and Writing II 3.0
DRE 098 Integrated Reading and Writing III 3.0

AC Academic Related Course

ACA 009 Student Success Strategies 3.0

Computer Information Technology Course

CTS 060 Essential Computer Usage 2.0

Chemistry Course

CHM 090 Chemistry Concepts 4.0

English as a Foreign Language Courses

EFL 050 English for Academic Purp 5.0
EFL 055 English for Special Purpo 3.0
EFL 062 Listening/Speaking II 5.0
EFL 063 Listening/Speaking III 5.0
EFL 064 Listening-Speaking IV 5.0
EFL 072 Reading II 5.0
EFL 073 Reading III 5.0
EFL 074 Reading IV 5.0
EFL 082 Grammar II 5.0
EFL 083 Grammar III 5.0
EFL 084 Grammar IV 5.0
EFL 092 Composition II 5.0
EFL 093 Composition III 5.0
EFL 094 Composition IV 5.0

College Curriculum Programs of Study

Central Piedmont has developed a variety of affordable, two-year degree and distance learning programs that respond to the immediate needs of the local workforce within the areas of science, technology, engineering, math, and many others.

Developmental Studies

Developmental Studies are prerequisite courses for students who have not reached college-level in the areas of English, reading, mathematics, biology or chemistry. Each Developmental course has stated objectives and a system to help students accomplish those objectives. Initial student placement in Developmental courses is based on individual college placement testing policies and procedures. Students should begin Developmental course work at the appropriate level indicated by their placement test. Each Developmental course has stated objectives and a system to help students accomplish those objectives.

Central Piedmont General Education Goals

Successful completion of General Education foundation courses establishes critical core competencies for students in the areas of:

1) communication,
2) critical thinking,
3) personal growth and cultural literacy, and
4) information technology and quantitative literacy.

College Transfer Programs

Transfer programs are for students interested in completing their general education requirements prior to transferring to a four-year institution. The programs offer courses comparable to the freshman and sophomore levels at four-year colleges and universities. 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 possess college-level academic skills and have successfully completed the general education core curriculum. More information is available on the Transfer Resource Center website.
Associate in Applied Science (A.A.S.) Degrees, Diplomas and Certificates

The college offers two-year Associate in Applied Science (A.A.S.) degree programs for students interested in completing a career-oriented program. 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.

The college also offers shorter-term diploma and certificate programs for students seeking other career goals such as updating job skills, career advancement or re-entry into the workforce. In support of these programs, the college continues to form partnerships with business and industry.

Central Piedmont General Education Goals

<table>
<thead>
<tr>
<th>Critical Core Competency</th>
<th>General Education Foundation Course Offerings</th>
<th>Student Learning Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMMUNICATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The ability to develop and effectively express in written and oral form ideas that are appropriate to audience and purpose.</td>
<td>ENG 111</td>
<td>Student collects, organizes, and analyzes subject-relevant information that results in written communication with minimal errors.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>COM 110/COM 231</td>
</tr>
<tr>
<td><strong>CRITICAL THINKING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The ability to interpret, analyze, synthesize, or evaluate information, issues and ideas and apply creative thought to formulate an opinion, solve a problem or reach a conclusion.</td>
<td>ECO 251/ECO 252/ POL 120/PSY 150/ SOC 210</td>
<td>Student selects and uses information appropriately to investigate a point of view or conclusion.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HIS 111/HIS 112/ HIS 131/HIS 132</td>
</tr>
<tr>
<td><strong>PERSONAL GROWTH AND CULTURAL LITERACY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>INFORMATION TECHNOLOGY AND QUANTITATIVE LITERACY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The ability to locate, understand, evaluate, and synthesize information and data in a technology and data-driven society.</td>
<td>MAT 110/MAT 121/ MAT 152/MAT 263</td>
<td>Student applies quantitative concepts to interpret data.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MAT 143/MAT 171/ MAT 271</td>
</tr>
</tbody>
</table>

College Transfer Programs

Students who intend to transfer to a four-year college or university should complete one of the following degrees:

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 in Music (A10700) which emphasizes music,
4. An Associate in Fine Arts (A.F.A.) Degree in Theatre (A10800) which emphasizes theatre,
5. An Associate in Fine Arts (A.F.A.) Degree in Visual Arts (A10600) which emphasizes art,
6. An Associate in Science (A.S.) Degree (A10400) which emphasizes science and mathematics,

Admission to a Transfer Program

New students wishing to enter a transfer program can visit the "Get Started" page at CPCC.edu/getstarted/curriculum. (p. 85) Current students wishing to enter a transfer program should meet with a transfer advisor at the Transfer Resource Center.
Programs of Study

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 Central Piedmont.

General Education Goals
See Central Piedmont General Education Goals (p. 85) for College-Level Programs for Core Competencies and approved general education courses for an Associate in Arts Degree.

Transfer Articulation Agreement
The Comprehensive Articulation Agreement (CAA) 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.

Important Guidelines from the CAA
The CAA assures admission to one of the 16 UNC institutions with the following stipulations:

- Admission is not assured to a specific campus or specific program or major.
- Students must meet all requirements of the CAA.
- 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 CAA 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.

The AA and AS degree programs of study are structured to include two components:

1. Universal General Education Transfer Component comprises a minimum of 30 semester hours of credit, and
2. Additional general education, pre-major, and elective courses that prepare students for successful transfer into selected majors at UNC institutions which bring the total number of hours in the degree programs to 60-61 semester hours.

To ensure maximum transferability of credits, students should select a transfer major and preferred transfer university before completing 30 semester hours of credit. Additional general education, pre-major, and elective courses should be selected based on a student’s intended major and transfer institution. (For additional information, students should check with the college or university to which they plan to transfer, or with a Central Piedmont transfer advisor.)

Community college graduates of these programs who have earned 60 semester hours in approved transfer courses with a grade of “C” or better and an overall GPA of at least 2.0 on a 4.0 scale will receive at least 60 semester hours of academic credit upon admission to a university. Requirements for admission to some major programs may require additional pre-specialty courses beyond the courses taken at the community college. Students entering such programs may need more than two academic years of course work to complete the baccalaureate degree, depending on program requirements.

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
- Louisburg 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 University
- Shaw University
- Warren Wilson College
- Wingate University

Associate in Applied Science Degrees, Diplomas, Certificates
The programs in the following section are primarily designed for students who intend to enter the workforce upon graduation. Some two-year degree programs also have one-year diplomas, as well as certificates that require
less than one year of full-time study. Certain programs are available at all campuses. Others are available only at certain campuses. General education requirements are offered at all Central Piedmont campuses.

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 Central Piedmont. 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 and Finance (p. 88)
- Advertising and Graphic Design (p. 92)
- Air Conditioning, Heating and Refrigeration Technology (p. 93)
- Architectural Technology (p. 96)
- Automotive Systems Technology (p. 97)
- Baking & Pastry Arts (p. 100)
- Biomedical Equipment Technology (p. 104)
- Broadcasting and Production Technology (p. 105)
- Business Administration (p. 106)
- Cardiovascular Technology (p. 109)
- Civil Engineering Technology (p. 111)
- Collision Repair & Refinishing Technology (p. 112)
- Computer Engineering Technology (p. 114)
- Computer-Integrated Machining Technology (p. 116)
- Construction Management Technology (p. 119)
- Cosmetology (p. 122)
- Criminal Justice Technology (p. 124)
- Culinary Arts (p. 127)
- Dental Hygiene (p. 131)
- Diesel and Heavy Equipment Technology (p. 132)
- Early Childhood Education (p. 134)
- Electrical Engineering Technology (p. 137)
- Electrical Systems Technology (p. 139)
- Electronics Engineering Technology (p. 142)
- Emergency Medical Science (p. 143)
- Fire Protection Technology (p. 144)
- Geomatics Technology (p. 146)
- Graphic Arts and Imaging Technology (p. 147)
  - Flexography Concentration (p. 147)
- Health Information Technology (p. 150)
- Horticulture Technology (p. 151)
- Hospitality Management (p. 154)
- Human Services Technology (p. 157)
  - Human Services Technology (p. 157)
  - Developmental Disabilities Concentration (p. 158)
  - Substance Abuse Concentration (p. 159)
- Information Technology (p. 162)
- Interior Design (p. 168)
- Interpreter Education (p. 170)
- Mechanical Engineering Technology (p. 173)
- Mechatronics Engineering Technology (p. 175)
- Medical Assisting (p. 176)
- Medical Laboratory Technology (p. 178)
- Medical Office Administration (p. 179)
- Nondestructive Examination Technology (p. 181)
- Nursing, Associate Degree (p. 185)
- Occupational Therapy Assistant (p. 186)
- Office Administration (p. 188)
- Ophthalmic Medical Personnel (p. 191)
- Paralegal Technology (p. 192)
- Pharmacy Technology (p. 194)
- Physical Therapist Assistant (p. 196)
- Polysomnography (p. 197)
- Respiratory Therapy (p. 198)
- Simulation and Game Development (p. 200)
- Speech Language Pathology Assistant (p. 203)
- Supply Chain Management (p. 204)
- Surgical Technology (p. 205)
- Sustainability Technologies (p. 206)
- Turfgrass Management Technology (p. 209)
- Welding Technology (p. 210)

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 Central Piedmont. 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. 88)
- Automotive Systems Technology (p. 97)
- Collision Repair and Refinishing Technology (p. 112)
- Computer-Integrated Machining Technology (p. 116)
- Dental Assisting (p. 130)
- Diesel and Heavy Equipment Technology Diploma (p. 132)
- Hotel Management (p. 154)
- Medical Assisting (p. 176)
- Nuclear Plant Inspection (p. 181)
- Office Administration/General Clerical Skills (p. 188)
- Office Administration/Word Processing Operator (p. 188)
- Ophthalmic Medical Personnel (p. 191)
- Paralegal Technology (p. 192)
- Residential Interior Decoration (p. 168)
- Residential Interior Decoration & Home Staging (p. 168)
- Restaurant Management (p. 154)
- Simulation & Game Development/Game Design (p. 200)
- Simulation & Game Design/Game Programming (p. 200)
- Simulation & Game Design/3D Modeling (p. 200)
- Simulation & Game Design/Animation (p. 200)
- Welding Technology (p. 210)
Certificates are awarded in the following areas:

- Basic Law Enforcement Training (p. 103)
- Cosmetology Instructor (p. 122)
- Cytotechnology (p. 129)
- Infant/Toddler Care (p. 134)
- Lateral Entry Teacher (p. 173)
- Nurse Aide (p. 184)
- School-Age Care (p. 134)

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 must be on file in the student’s record at Central Piedmont (when this is a certification requirement).
2. All required courses must be completed within the student’s program of study.
3. The final thirty percent (30%) of credits earned must be from Central Piedmont.
4. A Grade Point Average (GPA) of 2.0 or higher must be earned within the certificate program.

Accounting and Finance

The Accounting and Finance curriculum is designed to provide students with the knowledge and skills necessary for employment and growth in the accounting and finance profession. Accountants and finance professionals assemble, analyze, process, and communicate essential information about financial operations.

Course work may include accounting, finance, ethics, business law, computer applications, financial planning, insurance, marketing, real estate, selling, and taxation. 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 and finance positions in many types of organizations including accounting firms, small businesses, manufacturing firms, banks, hospitals, school systems, and governmental agencies.

Advancement in the accounting and finance profession is realized with work experience and additional education. For more information, call the Business and Accounting Division office at 704.330.4228.

For specific information about potential positions and wages in accounting and finance employment, visit the Central Piedmont Career Coach website.

Accounting and Finance (A25800)

Degree Awarded

The Associate in Applied Science Degree – Accounting and Finance is awarded by the college upon completion of this program. Two tracks are available:

- Accounting and Finance - Accounting Track (A25800A) (p. 88)
- Accounting and Finance - Financial Services (A25800F) (p. 89)

Admissions

- A high school diploma or equivalent is required.
- Complete the general application to Central Piedmont.
- Submit high school transcripts and any college transcripts to Admissions, Records, and Registration.
- Request that all former college transcripts be evaluated for transfer credit.
- Accounting, business and economic college-level courses taken more than 10 years ago are not accepted.
- Central Piedmont 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 developmental courses needed must be completed prior to beginning courses with these prefixes: ACC, BUS, ECM, INT, LOG and MKT.
- Attend a counseling/orientation appointment following placement testing.
- Meet with the program chair for advisement regarding program sequence of courses and course registration. Call the Business and Accounting Division at 704.330.4228 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 course MAT 143 or higher.

Contact Information

The Accounting and Finance program is in the Business and Accounting Division. For more information, call the Business and Accounting Division at 704.330.4228.

Accounting and Finance - Accounting Track (A25800A)

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>COM 231</td>
<td>Public Speaking</td>
<td></td>
</tr>
</tbody>
</table>
Select one of the following:  
- MAT 143 Quantitative Literacy  
- MAT 152 Statistical Methods I  
- MAT 171 Precalculus Algebra  

Select one of the following:  
- ART 111 Art Appreciation  
- ART 114 Art History Survey I  
- ART 115 Art History Survey II  
- HUM 120 Cultural Studies  
- HUM 130 Myth in Human Culture  
- MUS 110 Music Appreciation  
- MUS 112 Introduction to Jazz  
- PHI 215 Philosophical Issues  
- PHI 240 Introduction to Ethics  
- REL 240 World Religions  

Select one of the following:  
- ECO 251 Principles of Microeconomics  
- ECO 252 Principles of Macroeconomics  
- POL 120 American Government  
- PSY 150 General Psychology  
- SOC 210 Introduction to Sociology  
- HIS 111 World Civilizations I  
- HIS 112 World Civilizations II  
- HIS 131 American History I  
- HIS 132 American History II  

**Major Requirements**  
- ACC 120 Principles of Financial Accounting  
- ACC 121 Principles of Managerial Accounting  
- ACC 129 Individual Income Taxes  
- ACC 149 Introduction to Accounting Spreadsheets  
- ACC 220 Intermediate Accounting I  
- ACC 221 Intermediate Accounting II  
- ACC 269 Auditing & Assurance Services  

Select one of the following:  
- ACC 140 Payroll Accounting  
- ACC 150 Accounting Software Applications  

Other Major Requirements  
- BUS 115 Business Law I  
- CIS 110 Introduction to Computers  

Select one of the following:  
- BAF 143 Financial Planning  
- BUS 125 Personal Finance  
- BUS 225 Business Finance  

Select one of the following:  
- ECO 251 Principles of Microeconomics  
- ECO 252 Principles of Macroeconomics  

Select 11 hours from the following:  
- ACC 130 Business Income Taxes  
- ACC 140 Payroll Accounting  
- ACC 150 Accounting Software Applications  
- ACC 225 Cost Accounting  
- ACC 240 Gov & Not-For-Profit Acct  

**Accounting and Finance - Financial Services Track (A25800F)**  

**General Education Requirements**  
- ENG 111 Writing and Inquiry  
- ENG 112 Writing and Research in the Disciplines  
- ENG 114 Professional Research & Reporting  
- MAT 143 Quantitative Literacy  
- MAT 152 Statistical Methods I  
- MAT 171 Precalculus Algebra  
- ART 111 Art Appreciation  
- ART 114 Art History Survey I  
- ART 115 Art History Survey II  
- HUM 120 Cultural Studies  
- HUM 130 Myth in Human Culture  
- MUS 110 Music Appreciation  
- MUS 112 Introduction to Jazz  
- PHI 215 Philosophical Issues  
- PHI 240 Introduction to Ethics  

Total Credits: 68
### Programs of Study

**REL 110**  
World Religions  
Select one of the following:  
3.0  
**ECO 251**  
Principles of Microeconomics  
**ECO 252**  
Principles of Macroeconomics  
**POL 120**  
American Government  
**PSY 150**  
General Psychology  
**SOC 210**  
Introduction to Sociology  
**HIS 111**  
World Civilizations I  
**HIS 112**  
World Civilizations II  
**HIS 131**  
American History I  
**HIS 132**  
American History II  

**Major Requirements**  
**ACC 120**  
Principles of Financial Accounting  
4.0  
**ACC 121**  
Principles of Managerial Accounting  
4.0  
**ACC 149**  
Introduction to Accounting Spreadsheets  
2.0  
**ACC 220**  
Intermediate Accounting I  
4.0  
**ACC 269**  
Auditing & Assurance Services  
3.0  
**BAF 121**  
Economics for Bankers  
3.0  

**Other Major Requirements**  
**ACA 122**  
College Transfer Success  
1.0  
**BUS 115**  
Business Law I  
3.0  
**CIS 110**  
Introduction to Computers  
3.0  

Select 9 hours from the following:  
9.0  
**ACC 210**  
Enterprise Risk Management  
**BAF 143**  
Financial Planning  
**BUS 125**  
Personal Finance  
**BUS 225**  
Business Finance  

Select one of the following:  
3.0  
**ECO 251**  
Principles of Microeconomics  
**ECO 252**  
Principles of Macroeconomics  

Select 10 hours from the following:  
10.0  
**ACC 267**  
International Accounting  
**BUS 110**  
Introduction to Business  
**BAS 120**  
Introduction to Analytics  
**BAS 121**  
Data Visualization  
**BAS 150**  
Introduction to Analytical Programming  
**BAS 220**  
Applied Analytical Programming  
**BUS 228**  
Business Statistics  
**BUS 234**  
Training and Development  
**BUS 240**  
Business Ethics  
**BUS 253**  
Leadership and Management Skills  
**CJC 249**  
International Business  
**INT 110**  
Introduction to Logistics  
**LOG 110**  
Transportation Logistics  
**MKT 120**  
Principles of Marketing  
**MKT 123**  
Fundamentals of Selling  
**MKT 232**  
Social Media Marketing  
**WBL 111**  
Work-Based Learning I  
**WBL 112**  
Work-Based Learning I  
**WBL 121**  
Work-Based Learning II  

**WBL 131**  
Work-Based Learning III  
**FRE 111**  
Elementary French I  
& **FRE 181**  
and French Lab 1  
**FRE 112**  
Elementary French II  
& **FRE 182**  
and French Lab 2  
**GER 111**  
Elementary German I  
& **GER 181**  
and German Lab 1  
**GER 112**  
Elementary German II  
& **GER 182**  
and German Lab 2  
**SPA 111**  
Elementary Spanish I  
& **SPA 181**  
and Spanish Lab 1  
**SPA 112**  
Elementary Spanish II  
& **SPA 182**  
and Spanish Lab 2  

**Total Credits**  
67  

No diplomas are offered in Accounting and Finance.

**Accounting and Finance Certificates (C25800)**

- Accounting and Finance Certificate Specialization in Accounting (C25800-C1) (p. 90)
- Accounting and Finance Certificate Specialization in Tax (C25800-C2) (p. 91)
- Accounting and Finance Certificate Specialization in Professional Accounting Certificate I (C25800-C3) (p. 91)
- Accounting and Finance Certificate Specialization in Professional Accounting Certificate II (C25800-C4) (p. 91)
- Accounting and Finance Certificate Specialization in Individual Finance (C25800-C5) (p. 91)
- Accounting and Finance Certificate Specialization in Business Financial Services (C25800-C6) (p. 91)
- Accounting and Finance Certificate Specialization in Forensics and Fraud Examination (C25800-C7)

**Accounting and Finance Certificate with a Specialization in Accounting (C25800-C1)**

The certificate is designed to provide the student with a concentrated course of study in the field of accounting. Upon completion of the six courses, a certificate is awarded by the college. Courses for the certificate may be applied toward the Associate in Applied Science Degree – Accounting and Finance. For more information, call the Business and Accounting Division at 704.330.4228.

**Major Requirements**  
**ACC 120**  
Principles of Financial Accounting  
4.0  
**ACC 121**  
Principles of Managerial Accounting  
4.0  
**CIS 110**  
Introduction to Computers  
3.0  
**ACC 149**  
Introduction to Accounting Spreadsheets  
2.0  
**ACC 150**  
Accounting Software Applications  
2.0  

**Total Credits**  
15  

To add existing certificate under new Program (AFAP).
**Accounting and Finance Certificate with a Specialization in Tax (C25800-C2)**

The certificate is designed to provide the student with a concentrated course of study in the field of taxation. Upon completion of the six courses, a certificate is awarded by the college. Courses for the certificate may be applied toward the Associate in Applied Science Degree – Accounting and Finance. For more information, call the Business and Accounting Division at 704.330.4228.

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 120 Principles of Financial Accounting</td>
<td>4.0</td>
</tr>
<tr>
<td>ACC 129 Individual Income Taxes</td>
<td>3.0</td>
</tr>
<tr>
<td>CIS 110 Introduction to Computers</td>
<td>3.0</td>
</tr>
<tr>
<td>ACC 140 Payroll Accounting</td>
<td>2.0</td>
</tr>
<tr>
<td>ACC 130 Business Income Taxes</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**Accounting and Finance Certificate with a Specialization in Professional Accounting Certificate I (C25800-C3)**

This certificate is designed to provide the student with a concentrated course of study in the field of accounting with an emphasis on taxation and ethics. The courses included in this certificate helps prepare students for the Regulation portion of the CPA Exam. Upon completion of the six courses, 17 credit hours, a certificate is awarded by the College. The courses for the certificate may be applied toward the Associate in Applied Science Degree - Accounting and Finance. This certificate is an ideal path towards the 30 hours of accounting courses needed (along with a total of 150 hours) to sit for the CPA Exam. For more information, call the Business and Accounting Division at 704.330.4228.

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 120 Principles of Financial Accounting</td>
<td>4.0</td>
</tr>
<tr>
<td>ACC 121 Principles of Managerial Accounting</td>
<td>4.0</td>
</tr>
<tr>
<td>ACC 129 Individual Income Taxes</td>
<td>3.0</td>
</tr>
<tr>
<td>ACC 130 Business Income Taxes</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 240 Business Ethics</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

**Accounting and Finance Certificate with a Specialization in Individual Finance (C25800-C5)**

The certificate is designed to provide the student with a concentrated course of study in the field of individual finance. Upon completion of the five courses, a certificate is awarded by the college. Courses for the certificate may be applied toward the Associate in Applied Science Degree – Accounting and Finance. For more information, call the Business and Accounting Division at 704.330.4228.

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 120 Principles of Financial Accounting</td>
<td>4.0</td>
</tr>
<tr>
<td>ECO 251 Principles of Microeconomics</td>
<td>3.0</td>
</tr>
<tr>
<td>BAF 121 Economics for Bankers</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 125 Personal Finance</td>
<td>3.0</td>
</tr>
<tr>
<td>BAF 143 Financial Planning</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

**Accounting and Finance Certificate with a Specialization in Business Financial Services (C25800-C6)**

The certificate is designed to provide the student with a concentrated course of study in business financial services. Upon completion of the five courses, a certificate is awarded by the college. Courses for the certificate may be applied toward the Associate in Applied Science Degree – Accounting and Finance. For more information, call the Business and Accounting Division at 704.330.4228.

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th>Total Credits</th>
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<tbody>
<tr>
<td>ACC 120 Principles of Financial Accounting</td>
<td>4.0</td>
</tr>
<tr>
<td>ECO 251 Principles of Microeconomics</td>
<td>3.0</td>
</tr>
<tr>
<td>BAF 121 Economics for Bankers</td>
<td>3.0</td>
</tr>
<tr>
<td>ACC 210 Enterprise Risk Management</td>
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</tr>
<tr>
<td>BUS 225 Business Finance</td>
<td>3.0</td>
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<tr>
<td><strong>Total Credits</strong></td>
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</table>

**Accounting and Finance Certificate with a Specialization in Forensics and Fraud Examination (C25800-C7)**

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th>Total Credits</th>
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<tbody>
<tr>
<td>ACC 220 Intermediate Accounting I</td>
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<tr>
<td>ACC 221 Intermediate Accounting II</td>
<td>4.0</td>
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<tr>
<td>CJC 249 Course CJC 249 Not Found</td>
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</tr>
<tr>
<td>ACC 267 Course ACC 267 Not Found</td>
<td></td>
</tr>
<tr>
<td>ACC 269 Auditing &amp; Assurance Services</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>11</strong></td>
</tr>
</tbody>
</table>
Advertising and Graphic Design

The future belongs to those who are able to solve problems with courageous creativity. The Advertising and 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 in creative industries, including graphic and web design firms, advertising agencies, marketing communications, and in-house creative groups.

Students learn the development of concepts and design for a broad range of visual communication materials, including ads, brand identity programs, print collateral, web sites, and UX/UI applications.

For specific information about potential positions and wages in advertising and graphic design employment, visit the Central Piedmont Career Coach website.

Advertising and Graphic Design (A30100)

Degree Awarded

The Associate in Applied Science Advertising and Graphic Design Degree is awarded by the college upon completion of this program.

Admissions

- High school diploma or equivalent is required.
- Take placement tests to 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 the program office at 704.330.4481.

General Education Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
</tr>
<tr>
<td>COM 231</td>
<td>Public Speaking</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<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>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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</tr>
<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
<td></td>
</tr>
<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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<tr>
<td>PSY 150</td>
<td>General Psychology</td>
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<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
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Major Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GRD 110</td>
<td>Typography I</td>
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</tr>
<tr>
<td>GRD 280</td>
<td>Portfolio Design</td>
<td>4.0</td>
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<tr>
<td>GRD 121</td>
<td>Drawing Fundamentals I</td>
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</tr>
<tr>
<td>GRD 131</td>
<td>Illustration I</td>
<td>2.0</td>
</tr>
</tbody>
</table>

No diplomas are offered in Advertising and Graphic Design.

Advertising and Graphic Design Certificate Specilization in Introduction to Graphic Design (C30100-C6)

This certificate also is available to high school students through Career and College Promise.

MAJOR REQUIREMENTS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GRD 141</td>
<td>Graphic Design I</td>
<td>4.0</td>
</tr>
<tr>
<td>GRD 142</td>
<td>Graphic Design II</td>
<td>4.0</td>
</tr>
<tr>
<td>GRD 241</td>
<td>Graphic Design III</td>
<td>4.0</td>
</tr>
<tr>
<td>GRD 242</td>
<td>Graphic Design IV</td>
<td>4.0</td>
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<tr>
<td>GRD 151</td>
<td>Computer Design Basics</td>
<td>3.0</td>
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<tr>
<td>GRD 152</td>
<td>Computer Design Techniques I</td>
<td>3.0</td>
</tr>
<tr>
<td>GRD 111</td>
<td>Typography II</td>
<td>3.0</td>
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<tr>
<td>GRD 113</td>
<td>History of Graphic Design</td>
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</tr>
<tr>
<td>GRD 188</td>
<td>Graphic Design for Web I</td>
<td>3.0</td>
</tr>
<tr>
<td>GRD 265</td>
<td>Digital Print Production</td>
<td>3.0</td>
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<tr>
<td>GRD 271</td>
<td>Multimedia Design I</td>
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<tr>
<td>GRD 282</td>
<td>Advertising Copywriting</td>
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<tr>
<td>WBL 111</td>
<td>Work-Based Learning I</td>
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<td>GRD 288</td>
<td>Graphic Design for Web II</td>
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</tbody>
</table>

Total Credits | 17

Advertising and Graphic Design Certificate Specialization in Introduction to Graphic Design for Web (C30100-C8)

This certificate also is available to high school students through Career and College Promise.

Major Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GRD 141</td>
<td>Graphic Design I</td>
<td>4.0</td>
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<tr>
<td>GRD 188</td>
<td>Graphic Design for Web I</td>
<td>3.0</td>
</tr>
<tr>
<td>GRD 271</td>
<td>Multimedia Design I</td>
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<td>GRD 288</td>
<td>Graphic Design for Web II</td>
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</table>

Total Credits | 12
Central Piedmont Community College

Air Conditioning, Heating and Refrigeration Technology

The Air Conditioning, Heating and Refrigeration Technology (AHR) curriculum provides the basic knowledge for developing skills fundamental to working with residential and light commercial systems. Graduates are able to assist in the start-up, preventive maintenance, service, repair, and installation of residential and light commercial systems. A.A.S. graduates also can articulate an understanding of system selection, air balancing, building automation, system applications, and indoor air quality.

Topics include heating, comfort cooling, refrigeration, electricity, and schematic diagrams, along with residential and commercial controls methodologies. Two nationally recognized certificates in Building Automation are available, along with EPA 608 certification, as required by the Environmental Protection Agency for all technicians who handle refrigerants.

Most classes include extensive hands on exposure and training with industry tools and instruments working on equipment types such as air conditioning, furnaces, heat pumps, mini-splits, and advanced, computer controlled systems. Safety is integral to all coursework. Students are immersed in discussions around the mechanical and fuel gas codes, residential system sizing, advanced comfort systems, and indoor air quality among other discipline discussions.

Throughout the program students are exposed to the Critical Core; an articulated pathway for students to achieve proficiency in Critical Thinking, Communication (Written & Oral), Personal Growth & Cultural Literacy, and Information Technology & Quantitative Literacy. The Critical Core empowers all AHR students to achieve academic, professional and personal success.

For specific information about potential positions and wages in air conditioning, heating and refrigeration employment, visit the Central Piedmont Career Coach website.

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 the program office at 704.330.4446 or the Construction Technologies Division at 704.330.4408.

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>
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</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>
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<td></td>
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Select 3 credits of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
<td></td>
</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
<td></td>
</tr>
</tbody>
</table>

Other Major Requirements

- AHR 110 Introduction to Refrigeration 5.0
- AHR 112 Heating Technology 4.0
- AHR 113 Comfort Cooling 4.0
- AHR 114 Heat Pump Technology 4.0
- AHR 115 Refrigeration Systems 2.0
- AHR 211 Residential System Design 3.0
- AHR 212 Advanced Comfort Systems 4.0
- AHR 213 HVACR Building Code 2.0
- AHR 235 Refrigeration Design 3.0
- ELC 111 Introduction to Electricity 3.0
- WOL 110 Basic Construction Skills 3.0

Technical Electives

Select 2 credits of the following:

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>AHR 215</td>
<td>Commercial HVAC Controls</td>
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</tr>
<tr>
<td>AHR 255</td>
<td>Indoor Air Quality</td>
<td></td>
</tr>
<tr>
<td>AHR 263</td>
<td>Energy Management</td>
<td></td>
</tr>
<tr>
<td>WBL 111</td>
<td>Work-Based Learning I</td>
<td></td>
</tr>
<tr>
<td>WBL 112</td>
<td>Work-Based Learning I</td>
<td></td>
</tr>
<tr>
<td>WLD 112</td>
<td>Basic Welding Processes</td>
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</tbody>
</table>

Total Credits 67
Programs of Study

Air Conditioning, Heating and Refrigeration Technology - HVAC-R Controls Track (A35100C)

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 the program office at 704.330.4446 or the Construction Technologies Division at 704.330.4408.

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>
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</tr>
<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>
<td>3.0</td>
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<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
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</tr>
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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>HIS 111</td>
<td>World Civilizations I</td>
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<tr>
<td>HIS 112</td>
<td>World Civilizations II</td>
<td></td>
</tr>
<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 120</td>
<td>American Government</td>
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<tr>
<td>PSY 150</td>
<td>General Psychology</td>
<td></td>
</tr>
<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
<td></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>HUM 120</td>
<td>Cultural Studies</td>
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</tr>
<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</td>
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</tr>
<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
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</tr>
<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
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</tr>
<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
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<td>PHI 240</td>
<td>Introduction to Ethics</td>
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<td>REL 110</td>
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Select one course from the following:

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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ARC 225</td>
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<td>ELC 117</td>
<td>Motors and Controls</td>
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<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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<tr>
<td>WBL 110</td>
<td>World of Work</td>
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<td>WBL 111</td>
<td>Work-Based Learning I</td>
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</tr>
<tr>
<td>WBL 121</td>
<td>Work-Based Learning II</td>
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</tbody>
</table>

Total Credits 67

No diplomas are offered in Air Conditioning, Heating and Refrigeration Technology.

The specialization certificates listed below can be earned in the Air Conditioning, Heating and Refrigeration (A35100) program.

Air Conditioning, Heating and Refrigeration Technology Certificate (C35100)

- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Refrigeration Systems (C35100-C5) (p. 95)
- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Apartment/Rental Maintenance (C35100-C9) (p. 95)
- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in HVAC-R Industry Introduction (C35100-11) (p. 95)
- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Residential Service (C35100-13) (p. 95)
- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Indoor Air Quality and Comfort (C35100-14) (p. 95)
- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Energy Management & Building Automation (C35100-15) (p. 95)
- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Advanced HVAC-R Controls (C35100-16) (p. 95)
- Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in HVAC Installation (C35100-53) (p. 95)
## Requirements

- 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 the program office at 704.330.4479 or the Construction Technologies Division at 704.330.4408.

---

### Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Refrigeration Systems (C35100-C5)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<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>
<td>3.0</td>
</tr>
<tr>
<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>
<td>1.0</td>
</tr>
<tr>
<td>AHR 235</td>
<td>Refrigeration Design</td>
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</tr>
</tbody>
</table>

Total Credits: 17

### Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Apartment/Rental Maintenance (C35100-C9)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHR 110</td>
<td>Introduction to Refrigeration</td>
<td>5.0</td>
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<tr>
<td>AHR 160</td>
<td>Refrigerant Certification</td>
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</tr>
<tr>
<td>AHR 180</td>
<td>HVACR Customer Relations</td>
<td>1.0</td>
</tr>
<tr>
<td>ELC 113</td>
<td>Residential Wiring</td>
<td>4.0</td>
</tr>
<tr>
<td>WOL 110</td>
<td>Basic Construction Skills</td>
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Total Credits: 14

### Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in HVAC-R Industry Introduction (C35100-11)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>AHR 110</td>
<td>Introduction to Refrigeration</td>
<td>5.0</td>
</tr>
<tr>
<td>AHR 160</td>
<td>Refrigerant Certification</td>
<td>1.0</td>
</tr>
<tr>
<td>AHR 180</td>
<td>HVACR Customer Relations</td>
<td>1.0</td>
</tr>
<tr>
<td>AHR 151</td>
<td>HVAC Duct Systems I</td>
<td>2.0</td>
</tr>
<tr>
<td>ELC 111</td>
<td>Introduction to Electricity</td>
<td>3.0</td>
</tr>
<tr>
<td>WOL 110</td>
<td>Basic Construction Skills</td>
<td>3.0</td>
</tr>
<tr>
<td>BPR 130</td>
<td>Print Reading-Construction</td>
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</table>

Total Credits: 18

### Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Residential Service (C35100-13)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<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>
</tbody>
</table>

### Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Indoor Air Quality and Comfort (C35100-14)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<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>
</tr>
<tr>
<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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</tr>
<tr>
<td>AHR 255</td>
<td>Indoor Air Quality</td>
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<tr>
<td>AHR 263</td>
<td>Energy Management</td>
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Total Credits: 16

### Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Energy Management & Building Automation (C35100-15)

**Major Requirements**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<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>
</tr>
<tr>
<td>AHR 212</td>
<td>Advanced Comfort Systems</td>
<td>4.0</td>
</tr>
<tr>
<td>AHR 213</td>
<td>HVACR Building Code</td>
<td>2.0</td>
</tr>
<tr>
<td>AHR 215</td>
<td>Commercial HVAC Controls</td>
<td>2.0</td>
</tr>
<tr>
<td>AHR 263</td>
<td>Energy Management</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Total Credits: 16

### Air Conditioning, Heating & Refrigeration Technology Certificate Specialization in Advanced HVAC-R Controls (C35100-16)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHR 130</td>
<td>HVAC Controls</td>
<td>3.0</td>
</tr>
<tr>
<td>AHR 215</td>
<td>Commercial HVAC Controls</td>
<td>2.0</td>
</tr>
<tr>
<td>AHR 263</td>
<td>Energy Management</td>
<td>2.0</td>
</tr>
<tr>
<td>ELC 117</td>
<td>Motors and Controls</td>
<td>4.0</td>
</tr>
<tr>
<td>ELC 125</td>
<td>Diagrams and Schematics</td>
<td>2.0</td>
</tr>
<tr>
<td>ELC 128</td>
<td>Introduction to Programmable Logic Controller</td>
<td>3.0</td>
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</table>

Total Credits: 16

### Air Conditioning, Heating and Refrigeration Technology Certificate Specialization in HVAC Installation (C35100-53)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AHR 110</td>
<td>Introduction to Refrigeration</td>
<td>5.0</td>
</tr>
<tr>
<td>AHR 112</td>
<td>Heating Technology</td>
<td>4.0</td>
</tr>
<tr>
<td>AHR 151</td>
<td>HVAC Duct Systems I</td>
<td>2.0</td>
</tr>
<tr>
<td>AHR 160</td>
<td>Refrigerant Certification</td>
<td>1.0</td>
</tr>
<tr>
<td>AHR 213</td>
<td>HVACR Building Code</td>
<td>2.0</td>
</tr>
<tr>
<td>ELC 111</td>
<td>Introduction to Electricity</td>
<td>3.0</td>
</tr>
<tr>
<td>WBL 121M</td>
<td>Work-Based Learning II</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Total Credits: 18
Architectural Technology

The Architectural Technology curriculum prepares individuals to apply technical knowledge and skills to the fields of architecture, construction, construction management, facility management, Architectural Visualization, and other associated professions.

Course work includes instruction in sustainable building and design, building information modeling, building codes, construction materials and methods, architectural graphics, and other topics related to the design and construction occupations.

Graduates of this pathway should qualify for entry-level jobs in architectural, engineering, construction and trades professions as well as positions in industry and government. Students also can transfer into a number of undergraduate design and building sciences BA degree programs with advanced standing. The Associate of Applied Science Degree - Architectural Technology is awarded by the college upon completion of this program.

For specific information about potential positions and wages in architectural employment, visit the Central Piedmont Career Coach website.

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.
- Central Piedmont 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 includes an emphasis on computer-aided drafting (CAD), Building Information Modeling (BIM), and related computer courses. Students also gain experience in creating Virtual and Augmented Reality environments, and in laser-cutting and 3D printing fabrication techniques.

Contact Information

For more information, call the Program Chair at 704.330.2722 extension 7473, the Construction Management Technologies Division at 704.330.4408 or visit the Architectural Technology Program website.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<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>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>MAT 171</td>
<td>Precalculus Algebra (*Students planning to transfer should select MAT-171,.)</td>
<td>3.0</td>
</tr>
<tr>
<td>or MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td></td>
</tr>
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</table>

Select 3 credits of the following: 3.0

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</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>
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Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 111</td>
<td>Introduction to Architectural Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 112</td>
<td>Construction Materials &amp; Methods</td>
<td>4.0</td>
</tr>
<tr>
<td>ARC 113</td>
<td>Residential Architectural Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 114</td>
<td>Architectural CAD</td>
<td>2.0</td>
</tr>
<tr>
<td>ARC 131</td>
<td>Building Codes</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 132</td>
<td>Specifications &amp; Contracts</td>
<td>2.0</td>
</tr>
<tr>
<td>BPR 130</td>
<td>Print Reading-Construction</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 212</td>
<td>Commercial Constr Tech</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 213</td>
<td>Design Project</td>
<td>4.0</td>
</tr>
<tr>
<td>ARC 214</td>
<td>Architectural Statics</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 215</td>
<td>Architectural Strength of Materials</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 225</td>
<td>Architectural Building Information Modeling I</td>
<td>2.0</td>
</tr>
<tr>
<td>ARC 230</td>
<td>Environmental Systems</td>
<td>4.0</td>
</tr>
<tr>
<td>ARC 250</td>
<td>Survey of Architecture</td>
<td>3.0</td>
</tr>
<tr>
<td>SST 140</td>
<td>Green Building and Design Concepts</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 235</td>
<td>Architectural Portfolio</td>
<td>3.0</td>
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Technical Electives

Select 2 to 8 credits of the following: 2.0

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<tbody>
<tr>
<td>UNCG Interior Architecture Transfer Electives</td>
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<tr>
<td>PHY 151</td>
<td>College Physics I</td>
<td></td>
</tr>
<tr>
<td>ECU Industrial Technology (Architectural Technology Concentration) Transfer Electives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHY 151</td>
<td>College Physics I</td>
<td></td>
</tr>
<tr>
<td>MAT 172</td>
<td>Precalculus Trigonometry</td>
<td></td>
</tr>
<tr>
<td>WCU School of Engineering &amp; Tech- Technical Operations Transfer Electives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 172</td>
<td>Precalculus Trigonometry</td>
<td></td>
</tr>
<tr>
<td>PHY 151</td>
<td>College Physics I</td>
<td></td>
</tr>
<tr>
<td>UNC Charlotte Civil Engineering Technology Transfer Electives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHY 151</td>
<td>College Physics I</td>
<td></td>
</tr>
<tr>
<td>SRV 110</td>
<td>Surveying I</td>
<td></td>
</tr>
<tr>
<td>CEG 211</td>
<td>Hydrology &amp; Erosion Control</td>
<td></td>
</tr>
<tr>
<td>MAT 172</td>
<td>Precalculus Trigonometry</td>
<td></td>
</tr>
<tr>
<td>Queens University Interior Architecture Transfer Electives</td>
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<td></td>
</tr>
<tr>
<td>PHY 151</td>
<td>College Physics I</td>
<td></td>
</tr>
<tr>
<td>ASU Building Sciences (Arch Tech Concentration) Transfer Electives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACA 122</td>
<td>College Transfer Success</td>
<td></td>
</tr>
<tr>
<td>ARC 221</td>
<td>Architectural 3-D CAD</td>
<td></td>
</tr>
<tr>
<td>PHY 151</td>
<td>College Physics I</td>
<td></td>
</tr>
<tr>
<td>PHY 152</td>
<td>College Physics II</td>
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<td>Non-Transfer Elective Options</td>
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<tr>
<td>ACA 111</td>
<td>College Student Success</td>
<td></td>
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<tr>
<td>ARC 160</td>
<td>Residential Design</td>
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<tr>
<td>ARC 220</td>
<td>Advanced Architectural CAD</td>
<td></td>
</tr>
<tr>
<td>ARC 226</td>
<td>Architectural Building Information Modeling II</td>
<td></td>
</tr>
<tr>
<td>ARC 251</td>
<td>Advanced Survey of Architecture</td>
<td></td>
</tr>
<tr>
<td>ARC 262</td>
<td>Architectural Animation &amp; Video</td>
<td></td>
</tr>
<tr>
<td>ARC 221</td>
<td>Architectural 3-D CAD</td>
<td></td>
</tr>
</tbody>
</table>

Note: The curriculum at Central Piedmont includes an emphasis on computer-aided drafting (CAD), Building Information Modeling (BIM), and related computer courses. Students also gain experience in creating Virtual and Augmented Reality environments, and in laser-cutting and 3D printing fabrication techniques.
No diplomas are offered in Architectural Technology.

Architectural Technology Certificates

- Architectural Technology Certificate Specialization in Residential Architectural Technology (C40100-C2) (p. 97)
- Architectural Technology Certificate Specialization in Sustainability (C40100-C4) (p. 97)
- Architectural Technology Certificate Specialization in Accelerated CAD/BIM Designer Track (C40100-C5) (p. 97)
- Architectural Technology Certificate Specialization in Accelerated CAD/BIM Designer Track - Level II (C40100-C6) (p. 97)
- Architectural Technology Certificate Specialization in Fast Track Computer-Aided Drafting and Design (C40100-52) (p. 97)

Architectural Technology Certificate Specialization in Residential Architectural Technology (C40100-C2)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 111</td>
<td>Introduction to Architectural Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 112</td>
<td>Construction Materials &amp; Methods</td>
<td>4.0</td>
</tr>
<tr>
<td>ARC 113</td>
<td>Residential Architectural Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 114</td>
<td>Architectural CAD</td>
<td>2.0</td>
</tr>
<tr>
<td>ARC 225</td>
<td>Architectural Building Information Modeling I</td>
<td>2.0</td>
</tr>
<tr>
<td>BPR 130</td>
<td>Print Reading-Construction</td>
<td>3.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>17</td>
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</tbody>
</table>

Graduates from this certificate should be able to provide support to the Green Building and Facility Management Industries. This certificate also is available to high school students enrolled in Career & College Promise.

Architectural Technology Certificate Specialization in Sustainability (C40100-C4)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BPR 130</td>
<td>Print Reading-Construction</td>
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<tr>
<td>ARC 114</td>
<td>Architectural CAD</td>
<td>2.0</td>
</tr>
<tr>
<td>ARC 225</td>
<td>Architectural Building Information Modeling I</td>
<td>2.0</td>
</tr>
<tr>
<td>SST 120</td>
<td>Energy Use Analysis</td>
<td>3.0</td>
</tr>
<tr>
<td>SST 130</td>
<td>Modeling Renewable Energy</td>
<td>3.0</td>
</tr>
<tr>
<td>SST 140</td>
<td>Green Building and Design Concepts</td>
<td>3.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

Graduates with this certificate should be able to obtain entry-level positions in Computer Aided Drafting or Building Information Modeling. This certificate also is available to high school students enrolled in Career and College Promise.

Architectural Technology Certificate Specialization in Accelerated CAD/BIM Designer Track - Level I (C40100-C5)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 111</td>
<td>Introduction to Architectural Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
<td>4.0</td>
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<tr>
<td>CEG 151</td>
<td>Cad for Engineering Technology</td>
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</tr>
<tr>
<td>ARC 225</td>
<td>Architectural Building Information Modeling I</td>
<td>2.0</td>
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<tr>
<td>ARC 114</td>
<td>Architectural CAD</td>
<td>2.0</td>
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<tr>
<td>BPR 130</td>
<td>Print Reading-Construction</td>
<td>3.0</td>
</tr>
<tr>
<td>Total</td>
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</table>

This is the first half of a nested curriculum sequence designed to prepare students for careers in Computer Aided Drafting and/or Building Information Modeling.

Architectural Technology Certificate Specialization in Accelerated CAD/BIM Designer Track - Level II (C40100-C6)

Major Requirements

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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ARC 226</td>
<td>Architectural Building Information Modeling II</td>
<td>2.0</td>
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<tr>
<td>DFT 154</td>
<td>Intro to Solid Modeling</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 221</td>
<td>Architectural 3-D CAD</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 230</td>
<td>Environmental Systems</td>
<td>4.0</td>
</tr>
<tr>
<td>ARC 235</td>
<td>Architectural Portfolio</td>
<td>3.0</td>
</tr>
<tr>
<td>WBL 111</td>
<td>Work-Based Learning I</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
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</tbody>
</table>

This is the second half of a nested curriculum sequence designed to prepare students for careers in Computer Aided Drafting and/or Building Information Modeling.

Architectural Technology Certificate Specialization in Fast Track Computer-Aided Drafting and Design (C40100-52)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 111</td>
<td>Introduction to Architectural Technology</td>
<td>3.0</td>
</tr>
<tr>
<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>
<tr>
<td>ARC 132</td>
<td>Specifications &amp; Contracts</td>
<td>2.0</td>
</tr>
<tr>
<td>ARC 221</td>
<td>Architectural 3-D CAD</td>
<td>3.0</td>
</tr>
<tr>
<td>ARC 225</td>
<td>Architectural Building Information Modeling I</td>
<td>2.0</td>
</tr>
<tr>
<td>WBL 121</td>
<td>Work-Based Learning II</td>
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</tr>
<tr>
<td>Total</td>
<td></td>
<td>17</td>
</tr>
</tbody>
</table>

Graduates with this certificate should be able to obtain entry-level positions in Computer Aided Drafting or Building Information Modeling. This certificate also is available to high school students enrolled in Career and College Promise.

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.

For specific information about potential positions and wages in automotive systems employment, visit the Central Piedmont Career Coach website.

**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. Contact the Transport Systems Division Cooperative Education Coordinator at 704.330.4157 or the Transport Systems Technology Division at 704.330.4122 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 by contacting the Program Chair at 704.330.4183.

**Contact Information**
The Automotive Systems Technology program is in the Transport Systems Technologies Division, which can be reached at 704.330.4122.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
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<tr>
<td>EN112</td>
<td>Writing and Research in the Disciplines</td>
<td>3.0</td>
</tr>
<tr>
<td>EN113</td>
<td>Literature-Based Research</td>
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<tr>
<td>or EN114</td>
<td>Professional Research &amp; Reporting</td>
<td></td>
</tr>
<tr>
<td>COM110</td>
<td>Introduction to Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>or COM231</td>
<td>Public Speaking</td>
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</tr>
<tr>
<td>MAT110</td>
<td>Mathematical Measurement and Literacy</td>
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</tr>
</tbody>
</table>

**Select 3 credits of the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
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<td>Quantitative Literacy</td>
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</tr>
<tr>
<td>MAT152</td>
<td>Statistical Methods I</td>
<td></td>
</tr>
<tr>
<td>MAT171</td>
<td>Precalculus Algebra</td>
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</tr>
</tbody>
</table>

**Select 3 credits of the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART111</td>
<td>Art Appreciation</td>
<td></td>
</tr>
<tr>
<td>ART114</td>
<td>Art History Survey I</td>
<td></td>
</tr>
<tr>
<td>ART115</td>
<td>Art History Survey II</td>
<td></td>
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<tr>
<td>HUM120</td>
<td>Cultural Studies</td>
<td></td>
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<td>HUM130</td>
<td>Myth in Human Culture</td>
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<tr>
<td>MUS110</td>
<td>Music Appreciation</td>
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<tr>
<td>MUS112</td>
<td>Introduction to Jazz</td>
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<tr>
<td>PHI215</td>
<td>Philosophical Issues</td>
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<tr>
<td>PHI240</td>
<td>Introduction to Ethics</td>
<td></td>
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<tr>
<td>REL110</td>
<td>World Religions</td>
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**Select 3 credits of the following:**

<table>
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<th>Title</th>
<th>Credits</th>
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<td>ECO251</td>
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<tr>
<td>ECO252</td>
<td>Principles of Macroeconomics</td>
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</tr>
<tr>
<td>HIS111</td>
<td>World Civilizations I</td>
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<tr>
<td>HIS132</td>
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<td>POL120</td>
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<tr>
<td>SOC210</td>
<td>Introduction to Sociology</td>
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**Major Requirements**

<table>
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<tr>
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<td>TRN120</td>
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<td>TRN140</td>
<td>Transportation Climate Control</td>
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<tr>
<td>TRN145</td>
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<tr>
<td>AUT141</td>
<td>Suspension &amp; Steering Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT151</td>
<td>Brake Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT181</td>
<td>Engine Performance 1</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT183</td>
<td>Engine Performance 2</td>
<td>4.0</td>
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</tr>
<tr>
<td>TRN170</td>
<td>P.E Skills for Transportation</td>
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</tr>
<tr>
<td>AUT116</td>
<td>Engine Repair</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT163</td>
<td>Advanced Automotive Electricity</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT221</td>
<td>Automatic Transmissions/Transaxles</td>
<td>3.0</td>
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<tr>
<td>AUT231</td>
<td>Manual Transmissions/Transaxles/Drive Trains</td>
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**Technical Electives**

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<tr>
<td>TRN120A</td>
<td>Basic Transportation Electrical Lab</td>
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<td>AUT113</td>
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<td>AUT114</td>
<td>Safety and Emissions</td>
<td></td>
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<tr>
<td>AUT114A</td>
<td>Safety and Emissions Lab</td>
<td></td>
</tr>
<tr>
<td>AUT116A</td>
<td>Engine Repair Lab</td>
<td></td>
</tr>
<tr>
<td>AUT141A</td>
<td>Suspension &amp; Steering Lab</td>
<td></td>
</tr>
<tr>
<td>AUT151A</td>
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<td>AUT213</td>
<td>Automotive Servicing 2</td>
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<td>AUT221A</td>
<td>Automatic Transmissions/Transaxles Lab</td>
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<td>Manual Transmissions/Transaxles/Drive Trains Lab</td>
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<td>WBL112</td>
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Automotive Systems Technology Diploma (D60160)

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 contacting the program chair at 704.330.4183.

Contact Information

The Automotive Systems Technology program is in the Transport Systems Technologies Division. For more information, call the program office at 704.330.4122 or the program chair at 704.330.4183.

Choose 42 hours from Major and Related Course Requirements listed below:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<td>Writing and Inquiry</td>
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<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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<tr>
<td>TRN 110</td>
<td>Introduction to Transport Technology</td>
<td>2.0</td>
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<tr>
<td>TRN 120</td>
<td>Basic Transportation Electricity</td>
<td>5.0</td>
</tr>
<tr>
<td>TRN 140</td>
<td>Transportation Climate Control</td>
<td>2.0</td>
</tr>
<tr>
<td>AUT 141</td>
<td>Suspension &amp; Steering Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT 151</td>
<td>Brake Systems</td>
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Total Credits 68

Automotive Systems Technology Certificate Specialization in Vehicle Maintenance (C60160-C6)

Major Requirements

<table>
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<th>Title</th>
<th>Credits</th>
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<tr>
<td>TRN 110</td>
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<tr>
<td>AUT 141</td>
<td>Suspension &amp; Steering Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT 151</td>
<td>Brake Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT 116</td>
<td>Engine Repair</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT 114</td>
<td>Safety and Emissions</td>
<td>2.0</td>
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<td>AUT 116A</td>
<td>Engine Repair Lab</td>
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</tr>
<tr>
<td>AUT 151A</td>
<td>Brakes Systems Lab</td>
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<td>AUT 116A</td>
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Total Credits 16

Technical Electives

Select 1 credit of the following:

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<td>Work-Based Learning I</td>
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<td>WBL 122</td>
<td>Work-Based Learning II</td>
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</tr>
<tr>
<td>AUT 213</td>
<td>Automotive Servicing 2</td>
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</tr>
<tr>
<td>AUT 141A</td>
<td>Suspension &amp; Steering Lab</td>
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<tr>
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Total Credits 44

Automotive Systems Technology Certificate Specialization in Vehicle Maintenance (C60160-C6)
### Automotive Systems Technology Certificate Specialization in Basic Engine and Electrical (C60160-C7)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
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<td>TRN 110</td>
<td>Introduction to Transport Technology</td>
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</tr>
<tr>
<td>TRN 120</td>
<td>Basic Transportation Electricity</td>
<td>5.0</td>
</tr>
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<td>TRN 140</td>
<td>Transportation Climate Control</td>
<td>2.0</td>
</tr>
<tr>
<td>TRN 170</td>
<td>PC Skills for Transportation</td>
<td>2.0</td>
</tr>
<tr>
<td>AUT 116</td>
<td>Engine Repair</td>
<td>3.0</td>
</tr>
<tr>
<td>TRN 120A</td>
<td>Basic Transportation Electrical Lab</td>
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<td>AUT 116A</td>
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**Total Credits** 18

### Automotive Systems Technology Certificate Specialization in Advanced Fuel Systems and Electronic Systems (C60160-C8)

**Major Requirements**

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<tbody>
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<td>Introduction to Transport Technology</td>
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<tr>
<td>TRN 120</td>
<td>Basic Transportation Electricity</td>
<td>5.0</td>
</tr>
<tr>
<td>AUT 181</td>
<td>Engine Performance 1</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT 163</td>
<td>Advanced Automotive Electricity</td>
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<td>TRN 120A</td>
<td>Basic Transportation Electrical Lab</td>
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**Total Credits** 14

### Automotive Systems Technology Certificate Specialization in Advanced Engine Performance Including Chassis Electronics (C60160-C9)

**Major Requirements**

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<tr>
<th>Course</th>
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<tbody>
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<tr>
<td>AUT 181</td>
<td>Engine Performance 1</td>
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<tr>
<td>AUT 183</td>
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<tr>
<td>AUT 163</td>
<td>Advanced Automotive Electricity</td>
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</table>

**Total Credits** 15

### Automotive Systems Technology Certificate Specialization in Vehicle Driveline Systems (C60160-10)

**Major Requirements**

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<th>Course</th>
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<tr>
<td>AUT 116</td>
<td>Engine Repair</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT 221</td>
<td>Automatic Transmissions/Transaxles</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT 221A</td>
<td>Automatic Transmissions/Transaxles Lab</td>
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</tr>
<tr>
<td>AUT 231</td>
<td>Manual Transmissions/Transaxles/Drive Trains</td>
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**Total Credits** 12

### Automotive Systems Technology Certificate Specialization in Brake and Alignment (C60160-11)

**Major Requirements**

<table>
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<td>Suspension &amp; Steering Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT 151</td>
<td>Brakes Systems</td>
<td>3.0</td>
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<tr>
<td>AUT 114</td>
<td>Safety and Emissions</td>
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<td>Suspension &amp; Steering Lab</td>
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<tr>
<td>AUT 151A</td>
<td>Brakes Systems Lab</td>
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**Total Credits** 17

### Automotive Systems Technology Certificate Specialization in Electrical Vehicle Training (C60160-12)

**Major Requirements**

<table>
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<tr>
<th>Course</th>
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<tr>
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<td>Auto Shop Management</td>
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<td>AUT 281</td>
<td>Advanced Engine Performance</td>
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<td>ATT 115</td>
<td>Green Trans Safety and Service</td>
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<td>ATT 125</td>
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<tr>
<td>ATT 140</td>
<td>Emerging Transportation Technology</td>
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</table>

**Total Credits** 15

### Baking & Pastry Arts

The Baking & 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/pastries, chocolate and confections production, decorative work, high-volume production and food marketing.

Graduates should qualify for entry-level positions, such as baker, pastry cook, cake decorator, pastry or bakery assistant, and assistant pastry chef. An American Culinary Federation certification may be available to graduates.

For specific information about potential positions and wages in baking & pastry arts employment, visit the Central Piedmont Career Coach website.

### 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 an admissions application to Central Piedmont.
• Submit an official high school diploma as well as college transcripts to the Admission/Records Center.
• Take placement tests in English, reading and mathematics.
• All needed developmental studies courses must be completed prior to beginning CUL, HRM, and BPA prefix courses.
• Consult with an academic advisor regarding course placement.
• Register for required General Education courses.
• Contact the Baking and Pastry Arts Program Chair, Tanya Beauvais at tanya.beauvais@cpcc.edu or 704.330.4642 to register for the next information session.
• Attend a Baking and Pastry Arts program information session.
• Many courses have prerequisites or co-requisites; check the Courses section for details.
• Students must have a BPA program code A55130.

Notes

• Currently, there are more applications for admittance than space available in the Baking and Pastry Arts Program. Criteria for program admission include scores on standardized tests, interview and/or attendance to orientation, completion of general education requirements, past academic performance with a minimum GPA of 2.0, and experience in the field of interest.
• Students must meet admission requirements, attend an information session and complete an advising appointment with Baking and Pastry Arts faculty prior to registering for courses.
• All major requirements and other major requirements are taught via lockstep format at the Central Piedmont Harris Campus by BPA program instructors.
• 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 Baking and Pastry Arts Program is located exclusively at the Harris Campus.

The Baking and Pastry Arts Program is a department within the Hospitality Education Division. For more information, call 704.330.4642 or visit the Baking and Pastry Arts website.

General Education Requirements

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<td>Writing and Inquiry</td>
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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>
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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>ECO 252</td>
<td>Principles of Macroeconomics</td>
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<td>HIS 112</td>
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<td>HIS 131</td>
<td>American Civilizations I</td>
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<td>PSY 150</td>
<td>General Psychology</td>
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<td>SOC 210</td>
<td>Introduction to Sociology</td>
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Select 3 credits of the following: 3.0

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<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
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<td>MAT 143</td>
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<td>MAT 152</td>
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<td>MAT 171</td>
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Major Requirements

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<td>Nutrition for Foodservice</td>
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<td>CUL 150</td>
<td>Food Science</td>
<td>2.0</td>
</tr>
<tr>
<td>CUL 160</td>
<td>Baking I</td>
<td>3.0</td>
</tr>
<tr>
<td>CUL 160A</td>
<td>Baking I Lab</td>
<td>1.0</td>
</tr>
<tr>
<td>HRM 220</td>
<td>Cost Control-Food and Beverage</td>
<td>3.0</td>
</tr>
<tr>
<td>HRM 245</td>
<td>Human Resource Management-Hospitality</td>
<td>3.0</td>
</tr>
<tr>
<td>WBL 112</td>
<td>Work-Based Learning I</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Total Credits 74

No diplomas are offered in Baking and Pastry Arts.
Baking and Pastry Arts Certificates (C55130)

- Baking and Pastry Arts Certificate with a Specialization in Cake Artistry (C55130-C1) (p. 102)
- Baking and Pastry Arts Certificate Specialization in Chocolate and Confection Production (C55130-C4) (p. 102)
- Baking and Pastry Arts Certificate Specialization in Artisan Bread (C55130-C5) (p. 102)
- Baking and Pastry Arts Certificate Specialization in European Desserts and Cakes (C55130-C6) (p. 102)
- Baking and Pastry Arts Certificate Specialization in Plated Dessert Artistry (C55130-C7) (p. 102)

At this time, certificates earned in the Baking and Pastry Arts Program (A55130) are awarded by the college upon successful completion of the required courses to students currently enrolled in the degree program. Certificates are stackable and can be applied toward the Baking and Pastry Arts Degree Program.

Admissions

- Complete an admissions application to Central Piedmont.
- Submit an official high school diploma as well as college transcripts to the Admission/Records Center.
- Take placement tests in English, reading, and mathematics.
- All needed developmental studies courses must be completed prior to beginning CUL, HRM and BPA prefix courses.
- Consult with an academic advisor regarding course placement.
- Contact the Baking and Pastry Arts Program Chair, Tanya Beauvais at tanya.beauvais@cpcc.edu or 704.330.4642 to register for the next information session.
- Attend a Baking and Pastry Arts program information session.
- Many courses have prerequisites or co-requisites; check the Courses section for details.
- Students must have a BPA program certificate code as listed above.

Notes

- Currently, there are more applications for admittance than space available in the Baking and Pastry Arts Program. Criteria for program admission include scores on standardized tests, interview and/or attendance to orientation, completion of general education requirements, past academic performance with a minimum GPA of 2.0, and experience in the field of interest.
- Students must meet admission requirements, attend an information session and complete an advising appointment with Baking and Pastry Arts faculty prior to registering for courses.
- 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 Baking and Pastry Arts program is a department within the Hospitality Education Division. For more information, call 704.330.4642 or visit the Baking and Pastry Arts website.

Baking and 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 American and European cake construction and artistry.

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CUL 110</td>
<td>Sanitation and Safety 2.0</td>
</tr>
<tr>
<td>CUL 111</td>
<td>Success in Hospitality Studies 1.0</td>
</tr>
<tr>
<td>CUL 160</td>
<td>Baking I 3.0</td>
</tr>
<tr>
<td>BPA 130</td>
<td>European Cakes and Tortes 3.0</td>
</tr>
<tr>
<td>BPA 210</td>
<td>Cake Design and Decorating 3.0</td>
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<td><strong>Total Credits</strong></td>
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Baking and Pastry Arts Certificate Specialization in Chocolate and Confection Production (C55130-C4)

<table>
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<tr>
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</thead>
<tbody>
<tr>
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<td>Sanitation and Safety 2.0</td>
</tr>
<tr>
<td>CUL 111</td>
<td>Success in Hospitality Studies 1.0</td>
</tr>
<tr>
<td>BPA 165</td>
<td>Hot and Cold Desserts 3.0</td>
</tr>
<tr>
<td>BPA 230</td>
<td>Chocolate Artistry 3.0</td>
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<tr>
<td>BPA 220</td>
<td>Confection Artistry 4.0</td>
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Baking and Pastry Arts Certificate Specialization in Artisan Bread (C55130-C5)

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</thead>
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<tr>
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<td>Sanitation and Safety 2.0</td>
</tr>
<tr>
<td>CUL 111</td>
<td>Success in Hospitality Studies 1.0</td>
</tr>
<tr>
<td>CUL 160</td>
<td>Baking I 3.0</td>
</tr>
<tr>
<td>BPA 150</td>
<td>Artisan &amp; Specialty Bread 4.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
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</table>

Baking and Pastry Arts Certificate Specialization in European Desserts and Cakes (C55130-C6)

<table>
<thead>
<tr>
<th>Major Requirements</th>
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</thead>
<tbody>
<tr>
<td>CUL 110</td>
<td>Sanitation and Safety 2.0</td>
</tr>
<tr>
<td>CUL 111</td>
<td>Success in Hospitality Studies 1.0</td>
</tr>
<tr>
<td>CUL 160</td>
<td>Baking I 3.0</td>
</tr>
<tr>
<td>BPA 165</td>
<td>Hot and Cold Desserts 3.0</td>
</tr>
<tr>
<td>BPA 130</td>
<td>European Cakes and Tortes 3.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
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</table>

Baking and Pastry Arts Certificate Specialization in Plated Dessert Artistry (C55130-C7)

<table>
<thead>
<tr>
<th>Major Requirements</th>
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</thead>
<tbody>
<tr>
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<td>Sanitation and Safety 2.0</td>
</tr>
<tr>
<td>CUL 111</td>
<td>Success in Hospitality Studies 1.0</td>
</tr>
<tr>
<td>CUL 160</td>
<td>Baking I 3.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
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</tbody>
</table>
No degrees are offered in Basic Law Enforcement.

No diplomas are offered in Basic Law Enforcement.

**Basic Law Enforcement Training (C55120)**

**Basic Law Enforcement Certificate (C55120)**

**Program Location**

This program is located on the Merancas Campus of Central Piedmont in Huntersville, N.C. in the Claudia Watkins Belk Center for Justice.

**Admission Requirements**

1. Be a citizen of the United States
2. Be at least 20 1/2 years of age
3. Hold a valid North Carolina Drivers license
4. Be a high school graduate or have passed GED test. Note: High School diplomas earned through correspondence enrollment do not meet this requirement.12 NCAC 09B .0106
5. Score 10th grade level or higher on the Accuplacer Reading test prior to enrollment
6. Be of good moral character pursuant to G.S. 17C-10.
7. Have no felony commission or conviction in a court, Class B misdemeanor, or 4 or more Class A misdemeanors in accordance with the rules established by the North Carolina Administrative Code, including all out of state and military charges
8. Be examined and certified by a NC licensed physician as being capable of performing the duties of a Law Enforcement Officer.
9. Have a certified criminal record check from the "Clerk of the Courts" office in each County/State of residence since the age of 16 years old, including any time in which the candidate was a member of the US military (Military records).

Prior to enrollment, each candidate must call to set up a preliminary interview with the Director of the BLET program. The purpose of the 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. Enrollment packets are issued only after the BLET Director determines the eligibility of candidates.

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CJC 100</td>
<td>Basic Law Enforcement Training</td>
<td>20.0</td>
</tr>
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</table>

Total Credits 20

**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.

**Markitta Garner**, BLET Qualified Assistant
Biomedical Equipment Technology

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 installation procedures, and report preparation. With an Associate in Applied Science (A.A.S.) degree and two years of experience, students should be able to become a certified Biomedical Equipment Technician.

Information on the Biomedical Equipment Technology program may be found on the Biomedical Equipment Technology website.

For specific information about potential positions and wages in biomedical equipment employment, visit the Central Piedmont Career Coach website.

Biomedical Equipment Technology (A50100)

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.
- Central Piedmont 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, please contact the Program Chair at 704-330-2722 ext 3143.

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>
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<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>Select 1 of the following:</td>
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</tr>
<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
<td>3.0</td>
</tr>
<tr>
<td>or ENG 113</td>
<td>Literature-Based Research</td>
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</tr>
<tr>
<td>or ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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</tr>
<tr>
<td>Select 1 of 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>or MAT 171</td>
<td>Precalculus Algebra</td>
<td></td>
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<tr>
<td>PSY 150</td>
<td>General Psychology</td>
<td>3.0</td>
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<tr>
<td>or SOC 210</td>
<td>Introduction to Sociology</td>
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<td>Select 1 of the following:</td>
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<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
<td>3.0</td>
</tr>
<tr>
<td>or ART 114</td>
<td>Art History Survey I</td>
<td></td>
</tr>
<tr>
<td>or ART 115</td>
<td>Art History Survey II</td>
<td></td>
</tr>
<tr>
<td>or DRA 111</td>
<td>Theatre Appreciation</td>
<td></td>
</tr>
<tr>
<td>or HUM 120</td>
<td>Cultural Studies</td>
<td></td>
</tr>
<tr>
<td>or HUM 130</td>
<td>Myth in Human Culture</td>
<td></td>
</tr>
<tr>
<td>or MUS 110</td>
<td>Music Appreciation</td>
<td></td>
</tr>
<tr>
<td>or MUS 112</td>
<td>Introduction to Jazz</td>
<td></td>
</tr>
<tr>
<td>or PHI 215</td>
<td>Philosophical Issues</td>
<td></td>
</tr>
<tr>
<td>or PHI 240</td>
<td>Introduction to Ethics</td>
<td></td>
</tr>
<tr>
<td>or REL 110</td>
<td>World Religions</td>
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Select 6 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACA 122</td>
<td>College Transfer Success</td>
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<tr>
<td>ATR 112</td>
<td>Introduction to Automation</td>
<td></td>
</tr>
<tr>
<td>CTI 130</td>
<td>Operating Systems and Device Foundation</td>
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</tr>
<tr>
<td>ELC 213</td>
<td>Instrumentation</td>
<td></td>
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<tr>
<td>ELC 232</td>
<td>Introduction to Microprocessors</td>
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<tr>
<td>ELN 233</td>
<td>Microprocessor Systems</td>
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<tr>
<td>ELN 260</td>
<td>Prog Logic Controllers</td>
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<tr>
<td>NET 175</td>
<td>Wireless Technology</td>
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<tr>
<td>NET 225</td>
<td>Routing &amp; Switching I</td>
<td></td>
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<tr>
<td>NET 226</td>
<td>Routing and Switching II</td>
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</tr>
<tr>
<td>PCI 170</td>
<td>DAQ and Control</td>
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<tr>
<td>PCI 173</td>
<td>Programmable Systems</td>
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</tr>
<tr>
<td>SEC 150</td>
<td>Secure Communications</td>
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<tr>
<td>SEC 160</td>
<td>Security Administration I</td>
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<tr>
<td><strong>WBL 111 and WBL 115 count as 1 course</strong></td>
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<tr>
<td>WBL 111</td>
<td>Work-Based Learning I</td>
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<tr>
<td>&amp; WBL 115</td>
<td>Work-Based Learning Seminar I</td>
<td></td>
</tr>
<tr>
<td><strong>WBL 112 and WBL 115 count as 1 course</strong></td>
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</table>
No diplomas are offered in Biomedical Equipment Technology.

Biomedical Equipment Technology Certificate (C50100)

Biomedical Equipment Technology Certificate Specialization in Biomedical Equipment Technology Pathway (C50100-C1)

Major Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ELC 131</td>
<td>Circuit Analysis I</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td>3.0</td>
</tr>
<tr>
<td>BMT 111</td>
<td>Introduction to Biomedical Field</td>
<td>2.0</td>
</tr>
<tr>
<td>BMT 120</td>
<td>Biomedical Anatomy &amp; Physiology</td>
<td>3.0</td>
</tr>
<tr>
<td>Total Credits</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

Broadcasting and Production Technology

An Associate in Applied Science degree in Broadcasting & Production Technology at Central Piedmont 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, broadcasting and digital media content creation. 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. To graduate with the Broadcasting & Production Technology degree, students must complete all BPT program courses with a grade of “C” or higher. Students in the Broadcasting & Production Technology program also follow professional standards that include a positive collaborative approach when working with classmates, faculty and staff, and community members on tasks and projects, including punctuality, meeting deadlines and courteous interactions as well as academic integrity (see Central Piedmont’s Student Code of Conduct policy).

For specific information about potential positions and wages in broadcast and production employment, visit the Central Piedmont Career Coach website.

Broadcasting and Production Technology (30120)

Degree Awarded

An Associate in Applied Science Degree in Broadcasting & Production Technology (BPT) is awarded 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 Broadcasting 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 Code</th>
<th>Course Title</th>
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<td>ENG 111</td>
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<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>
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<td>General Psychology</td>
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<td>Mathematical Measurement and Literacy</td>
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<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td></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>ART 111</td>
<td>Art Appreciation</td>
<td>3.0</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>HUM 120</td>
<td>Cultural Studies</td>
<td></td>
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<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</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>PHI 215</td>
<td>Philosophical Issues</td>
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<td>PHI 240</td>
<td>Introduction to Ethics</td>
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<td>REL 110</td>
<td>World Religions</td>
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Major Requirements

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<th>Course Title</th>
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<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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<td>BPT 112</td>
<td>Broadcast Writing</td>
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<td>BPT 113</td>
<td>Broadcast Sales</td>
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</tr>
<tr>
<td>BPT 121</td>
<td>Broadcast Speech I</td>
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</tr>
<tr>
<td>CIS 110</td>
<td>Introduction to Computers</td>
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</tr>
<tr>
<td>COM 150</td>
<td>Introduction to Mass Communication</td>
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</tr>
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<td>DME 110</td>
<td>Introduction to Digital Media</td>
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</tr>
<tr>
<td>FVP 220</td>
<td>Editing I</td>
<td>3.0</td>
</tr>
<tr>
<td>FVP 250</td>
<td>Production Specialties I</td>
<td>3.0</td>
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<tr>
<td>FVP 251</td>
<td>Production Specialties II</td>
<td>3.0</td>
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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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<tr>
<td>ART 171</td>
<td>Computer Art I</td>
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<tr>
<td>ART 261</td>
<td>Photography I</td>
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<td>ART 260</td>
<td>Photography Appreciation</td>
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<tr>
<td>or ART 266</td>
<td>Videography I</td>
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<tr>
<td>or ART 267</td>
<td>Videography II</td>
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</table>
The Business Administration program is in the Business and Accounting Division. For information, call the Business and Accounting Division office at 704.330.4228.

Business Administration (A25120)

Degree Awarded

The Associate in Applied Science Degree – Business Administration is awarded by the college upon completion of this program.

Admissions

- A high school diploma or equivalent is required.
- Submit a completed admissions application to Central Piedmont.
- Submit high school transcripts and any former college transcripts to Admissions, Records & Registration.
- Request all former college transcripts be evaluated for transfer credit to Central Piedmont. Business and Accounting courses taken at Central Piedmont or transferred in from another institution over 10 years old will not be counted towards a degree or certificate unless approved by the Business and Accounting program chairs.
- Central Piedmont 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 necessary developmental courses must be completed prior to beginning courses with the following prefixes: ACC, BUS, ECM, INT, LOG, and MKT.
- Consult with an advisement counselor and attend an orientation session following placement testing.
- Consult with the Program Chair regarding program sequence of courses and course registration. Call the Business and Accounting Division at 704.330.4228 for an appointment.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Method of Study

Business Administration Degree courses are either web-enhanced or offered fully online. Testing is available at one of the Central Piedmont campuses or online. Check with the instructor or the Business and Accounting Division Office at 704.330.6595 for details.

Transferring to Senior Institutions

In order to transfer courses more effectively, students intending to transfer from Central Piedmont to a senior institution should check with the four-year school(s) of their choice for general education, program and GPA requirements for transfer. 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 704.330.4228.

Business Administration (A25120)

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></td>
<td>Select 3 credits from the following courses:</td>
<td></td>
</tr>
<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></td>
</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
<td></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>

For specific information about potential positions and wages in business administration employment, visit the Central Piedmont Career Coach website.
Select 3 credits from the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 110</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>BUS 115</td>
<td>Business Law I</td>
</tr>
<tr>
<td>BUS 137</td>
<td>Principles of Management</td>
</tr>
<tr>
<td>MKT 120</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>ACC 120</td>
<td>Principles of Financial Accounting</td>
</tr>
<tr>
<td>ECO 251</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>CIS 110</td>
<td>Introduction to Computers</td>
</tr>
<tr>
<td>BUS 135</td>
<td>Principles of Supervision</td>
</tr>
<tr>
<td>BUS 139</td>
<td>Entrepreneurship I</td>
</tr>
<tr>
<td>BUS 153</td>
<td>Human Resource Management</td>
</tr>
<tr>
<td>BUS 255</td>
<td>Organizational Behavior in Business</td>
</tr>
<tr>
<td>INT 110</td>
<td>International Business</td>
</tr>
<tr>
<td>or PMT 215</td>
<td>Project Management Leadership</td>
</tr>
<tr>
<td>BUS 230</td>
<td>Small Business Management</td>
</tr>
<tr>
<td>or ECM 210</td>
<td>Introduction to E-Commerce</td>
</tr>
<tr>
<td>or BUS 234</td>
<td>Training and Development</td>
</tr>
<tr>
<td>or BUS 253</td>
<td>Leadership and Management Skills</td>
</tr>
</tbody>
</table>

Select 3 credits from the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 116</td>
<td>Business Law II</td>
</tr>
<tr>
<td>BUS 125</td>
<td>Personal Finance</td>
</tr>
<tr>
<td>BUS 152</td>
<td>Human Relations</td>
</tr>
<tr>
<td>BUS 217</td>
<td>Employment Law and Regulations</td>
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<tr>
<td>BUS 234</td>
<td>Training and Development</td>
</tr>
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<td>BUS 228</td>
<td>Business Statistics</td>
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<td>BUS 240</td>
<td>Business Ethics</td>
</tr>
<tr>
<td>BUS 253</td>
<td>Leadership and Management Skills</td>
</tr>
<tr>
<td>BUS 260</td>
<td>Business Communication</td>
</tr>
<tr>
<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>INT 115</td>
<td>Global Communication</td>
</tr>
<tr>
<td>INT 180</td>
<td>Travel Study Abroad</td>
</tr>
<tr>
<td>LOG 110</td>
<td>Introduction to Logistics</td>
</tr>
<tr>
<td>LOG 125</td>
<td>Transportation Logistics</td>
</tr>
<tr>
<td>MKT 223</td>
<td>Customer Service</td>
</tr>
<tr>
<td>MKT 224</td>
<td>International Marketing</td>
</tr>
<tr>
<td>MKT 232</td>
<td>Social Media Marketing</td>
</tr>
<tr>
<td>OMT 110</td>
<td>Intro to Operations Mgmt</td>
</tr>
<tr>
<td>SST 110</td>
<td>Introduction to Sustainability</td>
</tr>
<tr>
<td>SST 210</td>
<td>Issues in Sustainability</td>
</tr>
<tr>
<td>PMT 111</td>
<td>Project Management Assessing Risk</td>
</tr>
<tr>
<td>PMT 210</td>
<td>Project Management Issues</td>
</tr>
<tr>
<td>PMT 215</td>
<td>Project Management Leadership</td>
</tr>
<tr>
<td>WBL 112</td>
<td>Work-Based Learning I</td>
</tr>
<tr>
<td>WBL 122</td>
<td>Work-Based Learning II</td>
</tr>
</tbody>
</table>

**Total Credits**: 67

**No diplomas are offered in Business Administration.**

**Business Administration Certificates (C25120)**

- Business Administration Certificate with a Specialization in Entrepreneurship (C25120-C4) (p. 108)
- Business Administration Certificate with a Specialization in Business Operations (C25120-C5) (p. 108)
- Business Administration Certificate with a Specialization in Business Analytics (C25120-C7) (p. 108)
- Business Administration Certificate with a Specialization in Project Management (C25120-C8) (p. 108)
- Business Administration Certificate with a Specialization in Advanced Project Management (C25120-C9) (p. 108)
- Business Administration Certificate with a Specialization in Human Resources Management (C25120-12) (p. 108)
- Business Administration Certificate with a Specialization in International Business (C25120-20) (p. 108)
- Business Administration Certificate with a Specialization in Logistics (C25120-22) (p. 109)
- Business Administration Certificate with a Specialization in Brand Promotion (C25120-29) (p. 109)
- Business Administration Certificate with a Specialization in Event Marketing and Promotion (C25120-30) (p. 109)
Business Administration Certificate with a 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 is awarded by the college. Courses for this certificate may be applied toward the Associate in Applied Science Degree in Business Administration. For more information, call the Business and Accounting Division at 704.330.4228.

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 120</td>
<td>Principles of Marketing</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 110</td>
<td>Introduction to Business</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 139</td>
<td>Entrepreneurship I</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 125</td>
<td>Personal Finance</td>
<td>3.0</td>
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</tbody>
</table>

Accounting Elective

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<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>
<td></td>
</tr>
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</table>

Business Elective

Select one of the following: 3.0

<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>
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</tr>
<tr>
<td>BUS 115</td>
<td>Business Law I</td>
<td></td>
</tr>
<tr>
<td>BUS 255</td>
<td>Organizational Behavior in Business</td>
<td></td>
</tr>
<tr>
<td>INT 110</td>
<td>International Business</td>
<td></td>
</tr>
<tr>
<td>BUS 135</td>
<td>Principles of Supervision</td>
<td></td>
</tr>
<tr>
<td>MKT 232</td>
<td>Social Media Marketing</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits 17

Business Administration Certificate with a Specialization in Business Operations (C25120-C5)

This certificate is designed to provide students with a foundation in business vocabulary in addition to various topics that prepares them for pre-management positions. This certificate may be applied toward the Associate Degree in Business Administration. This certificate also is available to students enrolled in Career & College Promise. For more information, call the Business and Accounting Division at 704.330.4228.

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 115</td>
<td>Business Law I</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 137</td>
<td>Principles of Management</td>
<td>3.0</td>
</tr>
<tr>
<td>CIS 110</td>
<td>Introduction to Computers</td>
<td>3.0</td>
</tr>
<tr>
<td>MKT 120</td>
<td>Principles of Marketing</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 110</td>
<td>Introduction to Business</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits 15

Business Administration Certificate with a Specialization in Business Analytics (C25120-C7)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAS 120</td>
<td>Introduction to Analytics</td>
<td>3.0</td>
</tr>
<tr>
<td>BAS 121</td>
<td>Data Visualization</td>
<td>3.0</td>
</tr>
<tr>
<td>BAS 150</td>
<td>Introduction to Analytical Programming</td>
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</tr>
</tbody>
</table>

Total Credits 15

Business Administration Certificate Specialization in Project Management (C25120-C8)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 110</td>
<td>Introduction to Computers</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 110</td>
<td>Introduction to Business</td>
<td>3.0</td>
</tr>
<tr>
<td>PMT 110</td>
<td>Introduction to Project Management</td>
<td>3.0</td>
</tr>
<tr>
<td>PMT 111</td>
<td>Project Management Assessing Risk</td>
<td>3.0</td>
</tr>
<tr>
<td>WBL 112</td>
<td>Work-Based Learning I (General Education Requirements)</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Total Credits 14

Business Administration Certificate Specialization in Advanced Project Management (C25120-C9)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 137</td>
<td>Principles of Management</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 234</td>
<td>Training and Development</td>
<td>3.0</td>
</tr>
<tr>
<td>or BUS 253</td>
<td>Leadership and Management Skills</td>
<td></td>
</tr>
<tr>
<td>PMT 210</td>
<td>Project Management Issues</td>
<td>3.0</td>
</tr>
<tr>
<td>PMT 215</td>
<td>Project Management Leadership</td>
<td>3.0</td>
</tr>
<tr>
<td>WBL 122</td>
<td>Work-Based Learning II</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Total Credits 14

Human Resources Management Certificates

Business Administration Certificate with a Specialization in Human Resources Management (C25120-12)

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 217</td>
<td>Employment Law and Regulations</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 234</td>
<td>Training and Development</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 253</td>
<td>Leadership and Management Skills</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 256</td>
<td>Recruiting,Selection&amp;Personnel Planning</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits 15

Global Studies Certificates

Business Administration Certificate with a Specialization in International Business (C25120-20)

This certificate in International Business provides students with a broad understanding of global business management and fosters the development of a global mindset. Students will develop critical thinking and operational strategies to successfully navigate a global business environment. Intercultural awareness, international marketing, foreign investment, overseas manufacturing, global value chain, and strategic planning are main skills and knowledge that will be acquired with the completion of this certificate. For more information, please call the Business and Accounting division at 704.330.4228.
Major Requirements

INT 110 International Business 3.0
INT 115 Global Communication 3.0
INT 210 International Trade 3.0
BUS 253 Leadership and Management Skills 3.0
ACC 120 Principles of Financial Accounting 4.0
or MKT 220 Advertising and Sales Promotion 4.0

Total Credits 16

Business Administration Certificate with a Specialization in Logistics (C25120-22)

Major Requirements

LOG 110 Introduction to Logistics 3.0
LOG 125 Transportation Logistics 3.0
LOG 215 Supply Chain Management 3.0
INT 110 International Business 3.0
CIS 110 Introduction to Computers 3.0

Total Credits 15

Marketing Certificates

Business Administration Certificate with a Specialization in Brand Promotion (C25120-29)

The Business Administration Certificate with a Specialization in Brand Promotion will provide an understanding of the basics of advertising and brand promotion. Students will apply these branding concepts in the area of digital marketing. Specific focus will include website design and social medial marketing. For more information, call the Business and Accounting Division at 704.330.4228.

Major Requirements

MKT 120 Principles of Marketing 3.0
MKT 220 Advertising and Sales Promotion 3.0
MKT 232 Social Media Marketing 4.0
ECM 210 Introduction to E-Commerce 3.0

Total Credits 13

Business Administration Certificate with a Specialization in Event Marketing and Promotion (C25120-30)

This certificate is designed to provide students with a concentrated course of study in the field of event marketing. Upon completion of the five courses, a certificate is awarded by the college. Courses for this certificate may be applied toward the Associate Degree in Applied Science in Business Administration Marketing and Retailing.

For more information, call the Business and Accounting Division 704.330.4228.

Major Requirements

MKT 120 Principles of Marketing 3.0
MKT 123 Fundamentals of Selling 3.0
MKT 220 Advertising and Sales Promotion 3.0
MKT 221 Consumer Behavior 3.0

Technical Electives

MKT 229 Special Events Production 2.0
or ENT 211 Entertainment Promotion 2.0

Total Credits 14

Cardiovascular Technology

The Agnes Binder Weisiger Cardiovascular Technology curriculum prepares individuals to develop attributes necessary to perform procedures leading to the diagnosis and treatment of cardiovascular disease.

Course work emphasizes technical and cognitive skills development with application by applying the concepts of echocardiography, exercise stress testing, electrocardiography, cardiac catheterization, blood gases, electrophysiology, cardiovascular anatomy and physiology.

Graduates selecting the non-invasive track (Cardiac Sonography) are eligible to become a Registered Diagnostic Cardiac Sonographer (RDCS) for the Noninvasive Registry through American Registry of Medical Sonography (ARDMS) or a Registered Cardiac Sonography (RCS) through Cardiovascular Credentialing International, Inc. (CCI). Graduates selecting the invasive track (Cardiovascular Invasive Specialist) may be eligible for the Invasive Registry to become a Registered Cardiovascular Invasive Specialist (RCIS) through Cardiovascular Credentialing International, Inc. (CCI).

For specific information about potential positions and wages in cardiovascular employment, visit the Central Piedmont Career Coach website.

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 Central Piedmont admissions application.
• Admission to the Cardiovascular Technology program is competitive. Please note that, in addition to the college application, students also must complete a separate application to apply specifically for the program.
• The program application is available on the Cardiovascular Technology website.
• 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

Upon the recommendation of the Joint Review Committee on Education in Cardiovascular Technology (JRC-CVT), the Cardiovascular Technology Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) at the associate degree level for two concentrations:

1. Non-Invasive Cardiology (Adult Echocardiography) concentration, and
2. Invasive Cardiology (Invasive Cardiovascular Technology) concentration.

The Commission on Accreditation of Allied Health Education Programs (CAAHEP)
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 take the same Core courses for the first year. Upon admission, applicants select either the Invasive or Noninvasive specialty track. Students 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. Division offices are located on 3rd floor in the Belk Wing (BL) of the Health Careers Building on Central Campus.

For an admission packet, frequently asked questions and other information, visit the Cardiovascular Technology website, or call the Program Chair at 704.330.6285 or the Admissions Specialist at 704.330.6284.

Invasive Track

Select 3 credits of the following: 3.0
ART 111 Art Appreciation
ART 114 Art History Survey I
ART 115 Art History Survey II
DRA 111 Theatre Appreciation
HUM 120 Cultural Studies
HUM 130 Myth in Human Culture
MUS 110 Music Appreciation
MUS 112 Introduction to Jazz
PHI 215 Philosophical Issues
PHI 240 Introduction to Ethics
REL 110 World Religions

Major Requirements
NCT 134 Cardiovascular Anatomy and Physiology 4.0
ICT 113 Electrocardiography 4.0
ICT 110 Invasive Fundamentals 3.0
ICT 136 Cardiac and Peripheral Vascular Invasive I 6.0
ICT 140 Cardiovascular (CV) Hemodynamics I 2.0
ICT 214 Cardiac and Peripheral Vascular Invasive II 9.0
ICT 218 Invasive Pharmacology 2.0
ICT 234 Cardiac and Peripheral Vascular Invasive III 13.0
ICT 236 Cardiovascular (CV) Hemodynamics II 2.0

Other Major Requirements:
Select one of the following: 5.0
BIO 163 Basic Anatomy & Physiology
BIO 168 Anatomy and Physiology I & BIO 169 and Anatomy and Physiology II
PHY 110 Conceptual Physics 3.0
PHY 110A Conceptual Physics Lab 1.0
MED 120 Survey of Medical Terminology 2.0
or MED 121 Medical Terminology I

Total Credits 74

Non-Invasive Track

General Education Requirements
ENG 111 Writing and Inquiry 3.0
PSY 150 General Psychology 3.0
Select 3 credits from the following: 3.0
MAT 143 Quantitative Literacy
MAT 152 Statistical Methods I
MAT 171 Precalculus Algebra

Take 3 credits from the following: 3.0
COM 110 Introduction to Communication
COM 231 Public Speaking

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 from the following: 3.0
ART 111 Art Appreciation
ART 114 Art History Survey I
ART 115 Art History Survey II
Civil Engineering Technology (A40140)

Degree Awarded
The Associate in Applied Science Degree - Civil Engineering Technology is awarded by the college upon completion of this program. This degree is accepted at some colleges and universities towards the first two years of a 2 + 2 bachelor’s-level engineering technology program.

Admissions
- A high school diploma or equivalent is required.
- Central Piedmont 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.

Program Accreditation
The Civil Engineering Technology Program at Central Piedmont is accredited by the Engineering Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET).

Contact Information
Civil Engineering Technology is in the Engineering Technologies Division. For more information, call the Program Chair at 704.330.6892 or visit the Civil Engineering Technologies website.

Note: Students who do not take program-related courses for a one-year period must reenter the program under Catalog requirements in effect at the time of reentry.

General Education Requirements
<table>
<thead>
<tr>
<th>Course</th>
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</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>or ENG 112</td>
<td>Writing and Research in the Disciplines</td>
<td></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>
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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>MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td></td>
</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
<td></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>ART 111</td>
<td>Art Appreciation</td>
<td></td>
</tr>
<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
<td></td>
</tr>
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<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
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<tr>
<td>HUM 120</td>
<td>Cultural Studies</td>
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<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</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>PHI 215</td>
<td>Philosophical Issues</td>
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<td>PHI 240</td>
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<td>REL 110</td>
<td>World Religions</td>
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<td>Select 3 credits of the following:</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>
<tr>
<td>HIS 111</td>
<td>World Civilizations I</td>
<td></td>
</tr>
</tbody>
</table>

Civil Engineering Technology

Civil Engineering Technology is a two-year program designed to prepare students for entry-level positions in the field of civil engineering. The curriculum includes courses in mathematics, physics, engineering, and communication skills.

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.

Information on the Civil Engineering Technology program may be found on the Civil Engineering Technology website.

For specific information about potential positions and wages in civil engineering technology employment, visit the Central Piedmont Career Coach website.

No diplomas are offered in Cardiovascular Technology.

No certificates are offered in Cardiovascular Technology.

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.

Information on the Civil Engineering Technology program may be found on the Civil Engineering Technology website.

For specific information about potential positions and wages in civil engineering technology employment, visit the Central Piedmont Career Coach website.
No diplomas are offered in Civil Engineering Technology.

There are no certificates offered within this program.

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 refining.

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.

For specific information about potential positions and wages in collision repair and refinishing employment, visit the Central Piedmont Career Coach website.

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 co-requisites; 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 the program chair at 704.330.4153 for a list.

Contact Information

The Collision Repair and Refinishing Technology program is in the Transport Systems Technologies Division. For more information, call the program chair at 704.330.4153 or the Transport Systems Technology Division at 704.330.4122.

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>Select 3.0 credits from the following:</td>
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<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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</table>

Total Credits 67

Technical Electives

Select 10 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CEG 230</td>
<td>Subdivision Planning &amp; Design</td>
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<tr>
<td>CIV 250</td>
<td>Civil Engineering Technology Project</td>
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<tr>
<td>ENV 110</td>
<td>Environmental Science</td>
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<td>ENV 226</td>
<td>Environmental Law</td>
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</tr>
<tr>
<td>GIS 125</td>
<td>CAD for GIS</td>
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<tr>
<td>GIS 240</td>
<td>Air Photo Interpretation</td>
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<td>GIS 246</td>
<td>Principles of Property Mapping</td>
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<tr>
<td>LID 111</td>
<td>Low Impact Development Design Principles</td>
<td></td>
</tr>
<tr>
<td>PHY 131</td>
<td>Physics-Mechanics</td>
<td></td>
</tr>
<tr>
<td>PHY 132</td>
<td>and Physics-Electricity &amp; Magnetism</td>
<td></td>
</tr>
<tr>
<td>PHY 151</td>
<td>College Physics I</td>
<td></td>
</tr>
<tr>
<td>PHY 152</td>
<td>and College Physics II</td>
<td></td>
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<tr>
<td>SRV 210</td>
<td>Surveying III</td>
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<td>SRV 220</td>
<td>Surveying Law</td>
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<td>SRV 240</td>
<td>Topo/Site Surveying</td>
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<tr>
<td>SRV 250</td>
<td>Advanced Surveying</td>
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<td>MAT 172</td>
<td>Precalculus Trigonometry</td>
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<tr>
<td>SRV 260</td>
<td>Field &amp; Office Practices</td>
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<td>MAT 271</td>
<td>Calculus I</td>
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<td>MAT 272</td>
<td>Calculus II</td>
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<td>WBL 112</td>
<td>Work-Based Learning I</td>
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</tr>
<tr>
<td>CHM 121</td>
<td>Foundations of Chemistry</td>
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<td>CHM 131</td>
<td>Introduction to Chemistry</td>
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<tr>
<td>CHM 151</td>
<td>General Chemistry I</td>
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<td>&amp; CHM 152</td>
<td>Introduction to Chemistry Lab</td>
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<tr>
<td>&amp; CHM 152</td>
<td>and General Chemistry II</td>
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</tbody>
</table>

Total Credits 67

Collision Repair and Refinishing Technology (A60130)
**Central Piedmont Community College**

**COM 231**  
Public Speaking

Select 3.0 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
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<td>Mathematical Measurement and Literacy</td>
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<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>
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Select 3.0 credits from the following:

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<th>Course</th>
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<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>DRA 111</td>
<td>Theatre Appreciation</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>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>
</tr>
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<td>REL 110</td>
<td>World Religions</td>
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Select 3.0 credits from the following:

<table>
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<tr>
<th>Course</th>
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<tbody>
<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>
<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>
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<td>PSY 150</td>
<td>General Psychology</td>
</tr>
<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
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**Major Requirements**

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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>TRN 110</td>
<td>Introduction to Transport Technology</td>
</tr>
<tr>
<td>TRN 120</td>
<td>Basic Transportation Electricity</td>
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<tr>
<td>TRN 140</td>
<td>Transportation Climate Control</td>
</tr>
<tr>
<td>TRN 170</td>
<td>Pc Skills for Transportation</td>
</tr>
<tr>
<td>AUB 111</td>
<td>Painting &amp; Refinishing I</td>
</tr>
<tr>
<td>AUB 112</td>
<td>Painting &amp; Refinishing II</td>
</tr>
<tr>
<td>AUB 121</td>
<td>Non-Structural Damage I</td>
</tr>
<tr>
<td>AUB 131</td>
<td>Structural Damage I</td>
</tr>
<tr>
<td>AUB 14</td>
<td>Special Finishes</td>
</tr>
<tr>
<td>AUB 122</td>
<td>Non-Structural Damage II</td>
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<tr>
<td>AUB 132</td>
<td>Structural Damage II</td>
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<tr>
<td>AUB 136</td>
<td>Plastics &amp; Adhesives</td>
</tr>
<tr>
<td>AUB 162</td>
<td>Autobody Estimating</td>
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<tr>
<td>TRN 180</td>
<td>Basic Welding for Transportation</td>
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**Technical Electives**

Select 5.0 Credits from the Following:

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<tbody>
<tr>
<td>ACA 122</td>
<td>College Transfer Success</td>
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<tr>
<td>AUB 141</td>
<td>Mechanical &amp; Electrical Components I</td>
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<tr>
<td>TRN 180A</td>
<td>Basic Welding for Transportation Lab</td>
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<tr>
<td>TRN 140A</td>
<td>Transportation Climate Control Lab</td>
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<tr>
<td>WBL 111</td>
<td>Work-Based Learning I</td>
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</table>

**WBL 122**  
Work-Based Learning II

Total Credits 67

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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 co-requisites; 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 the program chair at 704.330.4153 for a list.

### Contact Information

The Collision Repair and Refinishing Technology program is in the Transport Systems Technologies Division. For more information, call the program chair at 704.330.4153 or the Transport Systems Technology Division at 704.330.4122.

### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
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<td>3.0</td>
</tr>
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<td>or ENG 101</td>
<td>Applied Communications I</td>
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</tr>
<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
<td>3.0</td>
</tr>
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### Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUB 111</td>
<td>Painting &amp; Refinishing I</td>
<td>4.0</td>
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<tr>
<td>AUB 112</td>
<td>Painting &amp; Refinishing II</td>
<td>4.0</td>
</tr>
<tr>
<td>AUB 114</td>
<td>Special Finishes</td>
<td>2.0</td>
</tr>
<tr>
<td>AUB 121</td>
<td>Non-Structural Damage I</td>
<td>3.0</td>
</tr>
<tr>
<td>AUB 122</td>
<td>Non-Structural Damage II</td>
<td>4.0</td>
</tr>
<tr>
<td>AUB 131</td>
<td>Structural Damage I</td>
<td>4.0</td>
</tr>
<tr>
<td>AUB 132</td>
<td>Structural Damage II</td>
<td>4.0</td>
</tr>
<tr>
<td>AUB 136</td>
<td>Plastics &amp; Adhesives</td>
<td>3.0</td>
</tr>
<tr>
<td>AUB 162</td>
<td>Autobody Estimating</td>
<td>2.0</td>
</tr>
<tr>
<td>TRN 110</td>
<td>Introduction to Transport Technology</td>
<td>2.0</td>
</tr>
<tr>
<td>TRN 180</td>
<td>Basic Welding for Transportation</td>
<td>3.0</td>
</tr>
<tr>
<td>TRN 180A</td>
<td>Basic Welding for Transportation Lab</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Total Credits 47

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### Collision Repair and Refinishing Technology Certificates (C60130)

- Collision Repair and Refinishing Technology Certificate with a Specialization in Painting and Refinishing (C60130-C1) (p. 114)
- Collision Repair and Refinishing Technology Certificate with a Specialization in Collision Repair (C60130-C2) (p. 114)
• Collision Repair and Refinishing Technology Certificate with a Specialization in Autobody Estimating (C60130-C3) (p. 114)

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 co-requisites; check the Courses section for details.

Contact Information
For more information, contact the Commercial Driver’s License Instructor at 704.330.4158 or the Transport Systems Technologies Division at 704.330.4122.

Collision Repair and Refinishing Technology Certificate with a Specialization in Painting and Refinishing (C60130-C1)

This certificate is also available to high school students enrolled in Career and College Promise.

Major Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUB 111</td>
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</tr>
<tr>
<td>AUB 112</td>
<td>Painting &amp; Refinishing II</td>
<td>4.0</td>
</tr>
<tr>
<td>AUB 114</td>
<td>Special Finishes</td>
<td>2.0</td>
</tr>
<tr>
<td>AUB 136</td>
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Collision Repair and Refinishing Technology Certificate with a Specialization in Collision Repair (C60130-C2)

Major Requirements

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<th>Course Title</th>
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<td>Non-Structural Damage I</td>
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<td>AUB 122</td>
<td>Non-Structural Damage II</td>
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<tr>
<td>AUB 131</td>
<td>Structural Damage I</td>
<td>4.0</td>
</tr>
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<td>AUB 132</td>
<td>Structural Damage II</td>
<td>4.0</td>
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<td>TRN 180</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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<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
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<td>AUB 131</td>
<td>Structural Damage I</td>
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<td>AUB 132</td>
<td>Structural Damage II</td>
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</tr>
<tr>
<td>AUB 162</td>
<td>Autobody Estimating</td>
<td>2.0</td>
</tr>
<tr>
<td>WBL 112</td>
<td>Work-Based Learning I</td>
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</tr>
<tr>
<td></td>
<td>Total Credits</td>
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</table>

Computer Engineering Technology

The AAS degree in Computer Engineering Technology is accepted at some colleges and universities as the first two years of a bachelor's-level engineering technology program. This program has been designed to include training in both hardware and software, emphasizing operating system concepts to provide a unified view of computer systems.

Computer Engineering Technology focuses on the circuitry of computers and some programming. Beginning with electrical fundamentals, course work progressively introduces electronics, circuit simulation, solid-state fundamentals, digital concepts, instrumentation, C++ programming, microprocessors, microcomputer applications, networking, operating systems, I/O hardware interfacing, industrial applications and data acquisition using LabView. Other course work includes the study of various fields associated with the electrical/electronic industry. Several opportunities for industry certifications are built into the program which allow students to add skills to their resume. Graduates should qualify for employment opportunities in electronics technology, computer service, computer networks, server maintenance, programming, and other areas requiring a knowledge of electronic and computer systems.

The Computer Engineering Technology curriculum provides the skills required to design and implement microprocessor and computer controlled equipment. Graduates should qualify for employment as engineering assistants or either computer, electrical, 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, electromechanical equipment assemblers, electronics and instrumentation technician, computer network support specialists, computer user support specialists, electronic home entertainment equipment installers and repairers.

The AAS degree in Computer Engineering Technology is accepted at some colleges and universities as the first two years of a bachelor's-level engineering technology program and graduates can transfer to a university program to finish a bachelor's degree, however there will be deficiencies.

Information on the Computer Engineering Technology program may be found on the Computer Engineering Technology website.

For specific information about potential positions and wages in computer engineering technology employment, visit the Central Piedmont Career Coach website.

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.

The AAS degree in Computer Engineering Technology is accepted at some colleges and universities as the first two years of a 4-year bachelor's-level engineering technology program.

Program Accreditation

The Computer Engineering Technology program at Central Piedmont is accredited by the Engineering Technology Accreditation Commission of
the Accreditation Board of Engineering and Technology (TAC of ABET), abet.org.

**How to Apply**
Complete a Central Piedmont admissions application through Get Started on the Central Piedmont website.

**Contact Information**
The Computer Engineering Technology program is in the Engineering Technology Division. For additional information, visit the Computer Engineering Technology website or the Program Chair at 704.330.6773.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<td>ENG 111</td>
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<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
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</tr>
<tr>
<td>or ENG 113</td>
<td>Literature-Based Research</td>
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</tr>
<tr>
<td>or ENG 114</td>
<td>Professional Research &amp; Reporting</td>
<td></td>
</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
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<td>ECO 251</td>
<td>Principles of Microeconomics</td>
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<td>or ECO 252</td>
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<td>or HIS 111</td>
<td>World Civilizations I</td>
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<tr>
<td>or HIS 112</td>
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<td>or HIS 131</td>
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<tr>
<td>or HIS 132</td>
<td>American History II</td>
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<tr>
<td>or POL 120</td>
<td>American Government</td>
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<tr>
<td>or PSY 150</td>
<td>General Psychology</td>
<td></td>
</tr>
<tr>
<td>or SOC 210</td>
<td>Introduction to Sociology</td>
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<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
<td>3.0</td>
</tr>
<tr>
<td>or ART 114</td>
<td>Art History Survey I</td>
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<td>or ART 115</td>
<td>Art History Survey II</td>
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<td>or HUM 120</td>
<td>Cultural Studies</td>
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<td>or HUM 130</td>
<td>Myth in Human Culture</td>
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<td>or MUS 110</td>
<td>Music Appreciation</td>
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<td>or MUS 112</td>
<td>Introduction to Jazz</td>
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<td>or PHI 215</td>
<td>Philosophical Issues</td>
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<td>or REL 110</td>
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**Major Requirements**

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</tr>
<tr>
<td>ELN 131</td>
<td>Analog Electronics I</td>
<td>4.0</td>
</tr>
<tr>
<td>ELN 133</td>
<td>Digital Electronics</td>
<td>4.0</td>
</tr>
<tr>
<td>ELN 232</td>
<td>Introduction to Microprocessors</td>
<td>4.0</td>
</tr>
<tr>
<td>ELN 260</td>
<td>Prog Logic Controllers</td>
<td>4.0</td>
</tr>
<tr>
<td>ELC 131</td>
<td>Circuit Analysis I</td>
<td></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>EGR 110</td>
<td>Introduction to Engineering Technology</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Other Major Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 172</td>
<td>Precalculus Trigonometry</td>
<td>4.0</td>
</tr>
<tr>
<td>NET 125</td>
<td>Introduction to Networks</td>
<td>3.0</td>
</tr>
<tr>
<td>NET 126</td>
<td>Routing Basics</td>
<td>3.0</td>
</tr>
<tr>
<td>CSC 134</td>
<td>C++ Programming</td>
<td>3.0</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>PHY 151</td>
<td>College Physics I</td>
<td></td>
</tr>
<tr>
<td>or PHY 251</td>
<td>General Physics I</td>
<td></td>
</tr>
</tbody>
</table>

**No diplomas are offered in Computer Engineering Technology.**

**No certificates are offered in Computer Engineering Technology.**

**CSC 134. C++ Programming. 3.0 Credits.**
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:** Complete one of the following options:
- Take DRE 097 and DRE 098
- Take ENG 111 with a minimum grade of C
- Take ENG 002

**CTI 130. Operating Systems and Device Foundation. 6.0 Credits.**
This course covers the basic hardware and software of a personal computer, including installation, operations and interaction with popular microcomputer operating systems. Topics include components 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.

**EGR 110. Introduction to Engineering Technology. 2.0 Credits.**
This course introduces general topics relevant to engineering technology. Topics include career assessment, professional ethics, critical thinking and problem solving, usage of college resources for study and research, and using tools for engineering computations. Upon completion, students should be able to choose a career option in engineering technology and utilize college resources to meet their educational goals.
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. Prerequisites: Take MAT 121 or MAT 171

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. Prerequisites: Take ELC 131 Minimum grade C

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. Prerequisites: Take ELC 138

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 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 Minimum grade C

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 133 Minimum grade C

NET 125. Introduction to Networks. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the architecture, structure, functions, components, and models of the Internet and computer networks. Topics include introduction to the principles of IP addressing and fundamentals of Ethernet concepts, media, and operations. Upon completion, students should be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

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 Minimum grade C

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 ensure 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 Central Piedmont 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.

Information on the Computer-Integrated Machining Technology program may be found on the Computer-Integrated Machining Technology website.

For specific information about potential positions and wages in computer-integrated machining employment, visit the Central Piedmont Career Coach website.

Computer-Integrated Machining Technology (A50210)

Degree Awarded

The Associate in Applied Science degree - Computer-Integrated Machining Technology is 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.
• Consult with an advisement counselor regarding course placement and attend an orientation session after 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 the Program Chair at 704.330.3206.

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>
</tbody>
</table>

Select 1 of the following:

<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>or COM 231</td>
<td>Public Speaking</td>
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</table>

Select 1 of the following:

<table>
<thead>
<tr>
<th>Course</th>
<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>or MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td></td>
</tr>
</tbody>
</table>

Select 1 of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
</tr>
<tr>
<td>or ART 114</td>
<td>Art History Survey I</td>
</tr>
<tr>
<td>or ART 115</td>
<td>Art History Survey II</td>
</tr>
<tr>
<td>or HUM 120</td>
<td>Cultural Studies</td>
</tr>
<tr>
<td>or HUM 130</td>
<td>Myth in Human Culture</td>
</tr>
<tr>
<td>or MUS 110</td>
<td>Music Appreciation</td>
</tr>
<tr>
<td>or MUS 112</td>
<td>Introduction to Jazz</td>
</tr>
<tr>
<td>or PHI 215</td>
<td>Philosophical Issues</td>
</tr>
</tbody>
</table>

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.

Technical Electives

Select 2 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISC 112</td>
<td>Industrial Safety</td>
</tr>
<tr>
<td>MEC 180</td>
<td>Engineering Materials</td>
</tr>
<tr>
<td>WLD 112</td>
<td>Basic Welding Processes</td>
</tr>
<tr>
<td>WBL 112</td>
<td>Work-Based Learning I</td>
</tr>
<tr>
<td>WBL 122</td>
<td>Work-Based Learning II</td>
</tr>
</tbody>
</table>

Total Credits 67

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. Basic knowledge of conventional machine tools, CNC programming, and CNC operations is provided by hands-on activities on equipment commonly used in the industry. Coursework will apply toward a 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 Catalog program requirements in effect at the time of reentry.

Contact Information
Computer-Integrated Machining Technology program is in the Engineering Technologies Division. For more information, call the Program Chair at 704.330.6608.

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>SOC 210</td>
<td>Introduction to Sociology</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Major Requirements
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAC 111</td>
<td>Machining Technology I</td>
<td>6.0</td>
</tr>
<tr>
<td>MAC 131</td>
<td>Blueprint Reading-Machining I</td>
<td>2.0</td>
</tr>
<tr>
<td>MAC 142</td>
<td>Machining Applications II</td>
<td>4.0</td>
</tr>
<tr>
<td>MAC 114</td>
<td>Introduction to Metrology</td>
<td>2.0</td>
</tr>
<tr>
<td>MAC 121</td>
<td>Introduction to CNC</td>
<td>2.0</td>
</tr>
<tr>
<td>MAC 124</td>
<td>CNC Milling</td>
<td>2.0</td>
</tr>
<tr>
<td>MAC 122</td>
<td>CNC Turning</td>
<td>2.0</td>
</tr>
<tr>
<td>MAC 143</td>
<td>Machining Applications III</td>
<td>4.0</td>
</tr>
<tr>
<td>MAC 152</td>
<td>Advanced Machining Calculations</td>
<td>2.0</td>
</tr>
<tr>
<td>MAC 222</td>
<td>Advanced CNC Turning</td>
<td>2.0</td>
</tr>
<tr>
<td>MAC 224</td>
<td>Advanced CNC Milling</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Total Credits 36

Computer-Integrated Machining Technology Certificates (C50210)
- Computer-Integrated Machining Technology Certificate with a Specialization in CNC Programming and Operations (C50210-C1) (p. 118)
- Computer-Integrated Machining Technology Certificate Specialization in Basic Machining Skills (C50210-C3) (p. 118)
- Computer-Integrated Machining Technology Certificate with a Specialization in Motorsports Machining Certificate I (C50210-C4) (p. 118)
- Computer-Integrated Machining Technology Certificate with a Specialization in Computer-Integrated Machining Pathway (C50210-C6) (p. 119)
- Computer-Integrated Machining Technology Certificate with a Specialization in Advanced CNC Technology (C50210-C7) (p. 119)
- Computer-Integrated Machining Technology Certificate with a Specialization in Additive Manufacturing (C50210-C8) (p. 119)

Computer-Integrated Machining Technology Certificate with a Specialization in Basic Machining Skills (C50210-C3)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAC 111</td>
<td>Machining Technology I</td>
<td>6.0</td>
</tr>
<tr>
<td>MAC 131</td>
<td>Blueprint Reading-Machining I</td>
<td>2.0</td>
</tr>
<tr>
<td>MAC 114</td>
<td>Introduction to Metrology</td>
<td>2.0</td>
</tr>
<tr>
<td>MAC 121</td>
<td>Introduction to CNC</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Total Credits 12

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 the Program Chair at 704.330.6608.

Major Requirements
MAC 111 Machining Technology I 6.0
MAC 121 Introduction to CNC 2.0
MAC 122 CNC Turning 2.0
MAC 114 Introduction to Metrology 2.0
MAC 124 CNC Milling 2.0
MAC 131 Blueprint Reading-Machining I 2.0
Total Credits 16

Computer-Integrated Machining Technology Certificate with a Specialization in Computer-Integrated Machining Pathway (C50210-C6)
This certificate also is available to students enrolled in Career and College Promise.

Major Requirements
MAC 111 Machining Technology I 6.0
MAC 131 Blueprint Reading-Machining I 2.0
MAC 121 Introduction to CNC 2.0
MAC 124 CNC Milling 2.0
Total Credits 12

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 provides 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.
- This certificate requires the completion of the Computer-Integrated Machining Technology Certificate Specialization in CNC Programming and Operations (C50210-C1) for admission.

Contact information
Computer Integrated Machining Technology Program is in the Engineering Technologies Division. For more information, call the Program Chair at 704.330.6608.

Major Requirements
DFT 154 Intro to Solid Modeling 3.0
MAC 114 Introduction to Metrology 2.0
MAC 228 Advanced CNC Processes 3.0
MAC 232 CAM: Computer Numerical Control Milling 3.0
MAC 234 Advanced Multi-Axis Machining 3.0
Total Credits 14

Computer-Integrated Machining Technology Certificate Specialization in Additive Manufacturing (C50210-C8)

Major Requirements
MEC 111 Machine Processes I 3.0
MEC 180 Engineering Materials 3.0
TDP 110 Course TDP 110 Not Found
TDP 140 Course TDP 140 Not Found
Total Credits 6

Construction Management Technology
This curriculum is designed to prepare individuals to apply technical knowledge and skills to the fields of architecture, construction, construction management and other associated professions.

Course work includes instruction in sustainable building and design, print reading, building codes, estimating, construction materials and methods, and other topics related to design and construction occupations.

Graduates of this pathway should qualify for entry-level jobs in architectural, engineering, construction and trades professions, as well as positions in industry and government.

This is a program that prepares individuals to supervise, manage and inspect construction sites, buildings and associated facilities. It includes instruction in site safety, personnel supervision, labor relations, diversity training, construction documentation, scheduling, resource and cost control, bid strategies, rework prevention, construction insurance and bonding, accident management and investigation, applicable law and regulations, and communication skills.

For specific information about potential positions and wages in construction management employment, visit the Central Piedmont Career Coach website.

Construction Management Technology (A35190)

Degree Awarded
The Construction Management Technology Program offers two degrees:
1. An A.A.S. degree in Construction Management Technology, and
2. an A.A.S. degree Construction Management Technology - University Transfer Track

Students planning to transfer to a four year baccalaureate program should refer to the transfer degree in Construction Management
Programs of Study

The Construction Management curriculum is designed to prepare individuals to apply technical knowledge and skills to the fields of architecture, construction, construction management and other associated professions.

This program prepares individuals to supervise, manage and inspect construction sites, buildings and associated facilities. It includes instruction in site safety, personnel supervision, labor relations, diversity training, construction documentation, scheduling, resource and cost control, bid strategies, rework prevention, construction insurance and bonding, accident management and investigation, and applicable law and regulations.

Other course work includes instruction in sustainable building and design, print reading, building codes, estimating, construction materials and methods, and other topics related to design and construction occupations.

Graduates of this pathway should qualify for entry-level jobs in architectural, engineering, construction and trades professions, as well as positions in industry and government.

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 704.330.4483 or the Construction Management Program office at 704.330.4408, weekdays from 8 a.m.–5 p.m.

General Education Requirements

ENG 111 Writing and Inquiry 3.0
ENG 112 Writing and Research in the Disciplines 3.0
COM 231 Public Speaking 3.0
Select 3 credits of the following: 3.0

MAT 110 Mathematical Measurement and Literacy
MAT 143 Quantitative Literacy
MAT 171 Precalculus Algebra

Select 3 credits of the following: 3.0

ART 111 Art Appreciation
ART 114 Art History Survey I
ART 115 Art History Survey II
DRA 111 Theatre Appreciation
HUM 120 Cultural Studies
HUM 130 Myth in Human Culture
MUS 110 Music Appreciation
MUS 112 Introduction to Jazz
PHI 215 Philosophical Issues
PHI 240 Introduction to Ethics
REL 110 World Religions

Select 3 credits of the following: 3.0

ECO 251 Principles of Microeconomics
ECO 252 Principles of Macroeconomics
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

Major Requirements

ARC 225 Architectural Building Information Modeling I 2.0
BPR 130 Print Reading-Construction 3.0
CMT 120 Codes and Inspections 3.0
CMT 210 Construction Management Fundamentals 3.0
CMT 218 Human Relations Issues 3.0
CMT 212 Total Safety Performance 3.0
CMT 214 Planning and Scheduling 3.0
CMT 216 Costs and Productivity 3.0
CMT 226 Applications Project 3.0
CST 111 Construction I 4.0
CST 241 Planning/Estimating I 3.0
SST 140 Green Building and Design Concepts 3.0
WOL 110 Basic Construction Skills 3.0
WBL 111 Work-Based Learning I 1.0

Select one of the following: 3.0

BUS 139 Entrepreneurship I
BUS 230 Small Business Management

Select 6 credits of the following: 6.0

ARC 112 Construction Materials & Methods
AHR 113 Comfort Cooling
ARC 114 Architectural CAD
ARC 132 Specifications & Contracts
ARC 221 Architectural 3-D CAD
AHR 114 Heat Pump Technology
PLU 111 Intro to Basic Plumbing
PLU 115 Basic Plumbing
PLU 140 Intro to Plumbing Codes
MAS 140 Introduction to Masonry
MAS 130 Masonry III
CAR 110 Introduction to Carpentry
WBL 110 World of Work
AHR 130 HVAC Controls
CAR 140 Basic Carpentry
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
CIV 111 Soils and Foundations
CIV 222 Reinforced Concrete
CIV 230 Construction Estimating
ELC 111 Introduction to Electricity
ELC 112 DC/AC Electricity
ELC 113 Residential Wiring
Central Piedmont Community College

ELC 115 Industrial Wiring
SRV 110 Surveying I
SPA 111 Elementary Spanish I
& SPA 181 and Spanish Lab 1
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
WBL 121 Work-Based Learning II
WBL 131 Work-Based Learning III
WBL 211 Work-Based Learning IV
CST 110 Intro to Construction

Total Credits 67

Construction Management Technology -
University Transfer Track (A35190T)

General Education Requirements
ENG 111 Writing and Inquiry 3.0
ENG 112 Writing and Research in the Disciplines 3.0
COM 231 Public Speaking 3.0
MAT 171 Precalculus Algebra 4.0

Select one course from the following:
ART 111 Art Appreciation 3.0
ART 114 Art History Survey I
ART 115 Art History Survey II
HUM 120 Cultural Studies
HUM 130 Myth in Human Culture
MUS 110 Music Appreciation
MUS 112 Introduction to Jazz
PHI 215 Philosophical Issues
PHI 240 Introduction to Ethics
REL 110 World Religions

Select one course from the following:
ECO 251 Principles of Microeconomics
ECO 252 Principles of Macroeconomics
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

Major Requirements:
ARC 225 Architectural Building Information Modeling I 2.0
BPR 130 Print Reading-Construction 3.0
CMT 120 Codes and Inspections 3.0
CMT 210 Construction Management Fundamentals 3.0
CMT 218 Human Relations Issues 3.0
CMT 212 Total Safety Performance 3.0
CMT 214 Planning and Scheduling 3.0
CMT 216 Costs and Productivity 3.0
CMT 226 Applications Project 3.0
WOL 110 Basic Construction Skills 3.0
CST 111 Construction I 4.0
CST 241 Planning/Estimating I 3.0
SST 140 Green Building and Design Concepts 3.0
WBL 111 Work-Based Learning I 1.0
ACC 120 Principles of Financial Accounting 4.0
BUS 115 Business Law I 3.0
PHY 151 College Physics I 4.0
SPA 111 Elementary Spanish I 4.0
& SPA 181 and Spanish Lab 1

Total Credits 74

No diplomas are offered in Construction Management Technology.

Construction Management Technology
Certificates (C35190)

The certificates listed below can be earned in the Construction Management (A35190) program.

- Construction Management Technology Certificate-Specialization in Fast Track Carpentry (C35190-C1) (p. 121)
- Construction Management Technology Certificate-Specialization in Entry Level Construction Supervision (C35190-C2) (p. 122)
- Construction Management Technology Certificate-Specialization in Entry Level Estimating I (C35190-C3) (p. 122)
- Construction Management Technology Certificate-Specialization in Entry Level Project Supervision (C35190-C5) (p. 122)
- Construction Management Technology Certificate-Specialization in Green Building (C35190-C7) (p. 122)
- Construction Management Technology Certificate-Specialization in Introduction to Building Code Inspector (C35190-C8) (p. 122)
- Construction Management Technology Certificate-Specialization in Entry Level Construction Skills (C35190-C9) (p. 122)

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 the Construction Technologies Division at 704.330.4421 or the Construction Management program office at 704.330.4408.

Construction Management Technology
Certificate with a Specialization – Fast Track
Carpentry (C35190-C1)

This certificate also is available to high school students enrolled in Career and College Promise.
Construction Management Technology Certificate with a Specialization – Entry Level Construction Supervision (C35190-C2)

This certificate also is available to high school students enrolled in Career and College Promise.

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPR 130</td>
<td>Print Reading-Construction</td>
<td>3.0</td>
</tr>
<tr>
<td>CAR 140</td>
<td>Basic Carpentry</td>
<td>4.0</td>
</tr>
<tr>
<td>CMT 120</td>
<td>Codes and Inspections</td>
<td>3.0</td>
</tr>
<tr>
<td>WOL 110</td>
<td>Basic Construction Skills</td>
<td>3.0</td>
</tr>
<tr>
<td>WBL 111</td>
<td>Work-Based Learning I</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Total Credits 14

Construction Management Technology Certificate with a Specialization – Entry Level Estimating I (C35190-C3)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPR 130</td>
<td>Print Reading-Construction</td>
<td>3.0</td>
</tr>
<tr>
<td>CMT 212</td>
<td>Total Safety Performance</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 139</td>
<td>Entrepreneurship I</td>
<td>3.0</td>
</tr>
<tr>
<td>CMT 210</td>
<td>Construction Management Fundamentals</td>
<td>3.0</td>
</tr>
<tr>
<td>CMT 218</td>
<td>Human Relations Issues</td>
<td>3.0</td>
</tr>
<tr>
<td>SST 140</td>
<td>Green Building and Design Concepts</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits 18

Construction Management Technology Certificate with a Specialization in Green Building (C35190-C7)

This certificate also is available to high school students enrolled in Career and College Promise.

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPR 130</td>
<td>Print Reading-Construction</td>
<td>3.0</td>
</tr>
<tr>
<td>CMT 120</td>
<td>Codes and Inspections</td>
<td>3.0</td>
</tr>
<tr>
<td>CST 111</td>
<td>Construction I</td>
<td>4.0</td>
</tr>
<tr>
<td>SST 140</td>
<td>Green Building and Design Concepts</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits 13

Construction Management Technology Certificate Specialization in Introduction to Building Code Inspector (C35190-C8)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 112</td>
<td>Construction Materials &amp; Methods</td>
<td>4.0</td>
</tr>
<tr>
<td>BPR 130</td>
<td>Print Reading-Construction</td>
<td>3.0</td>
</tr>
<tr>
<td>CMT 120</td>
<td>Codes and Inspections</td>
<td>3.0</td>
</tr>
<tr>
<td>CST 111</td>
<td>Construction I</td>
<td>4.0</td>
</tr>
<tr>
<td>WBL 111</td>
<td>Work-Based Learning I</td>
<td>1.0</td>
</tr>
<tr>
<td>WBL 121</td>
<td>Work-Based Learning II</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Total Credits 16

Construction Management Technology Certificate Specialization in Entry Level Construction Skills (C35190-C9)

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>
</thead>
<tbody>
<tr>
<td>AHR 180</td>
<td>HVACR Customer Relations</td>
<td>1.0</td>
</tr>
<tr>
<td>BPR 130</td>
<td>Print Reading-Construction</td>
<td>3.0</td>
</tr>
<tr>
<td>CST 111</td>
<td>Construction I</td>
<td>4.0</td>
</tr>
<tr>
<td>ELC 111</td>
<td>Introduction to Electricity</td>
<td>3.0</td>
</tr>
<tr>
<td>WOL 110</td>
<td>Basic Construction Skills</td>
<td>3.0</td>
</tr>
<tr>
<td>WLD 112</td>
<td>Basic Welding Processes</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Total Credits 16

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 that enables students to develop manipulative skills.

Course work includes instruction in all phases of professional imaging, hair design, chemical processes, skincare, 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...
are issued a license. Employment is available in beauty salons and related businesses.

For more information, visit the Cosmetology Program of Study website.

For specific information about potential positions and wages in cosmetology employment, visit the Central Piedmont Career Coach website.

**Cosmetology, Associate Degree (A55140)**

**Degree Awarded**
The Associate in Applied Science Degree – Cosmetology is awarded by the college upon completion of this program.

**Admissions**
- Complete an admissions application to Central Piedmont.
- A high school diploma or equivalent is required.
- Submit high school transcripts and any former college transcripts to Admissions, Records & Registration.
- Request all former college transcripts be evaluated for transfer credit to Central Piedmont.
- Central Piedmont placement tests are required. Developmental courses in English and mathematics are available for students to build basic skills and knowledge.
- Consult with an advisement counselor and attend an orientation session following placement testing.
- Complete a 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 applying to the Central Piedmont Cosmetology Program are required to submit a copy of their Social Security Card, Tax ID card or student visa information, government-issued identification and proof of date of birth. They also must submit an acknowledgement of the NC State Board of Cosmetic Arts felony policy, found on the program application.

**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>PSY 150</td>
<td>General Psychology</td>
<td>3.0</td>
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<tr>
<td>Select 3 credits of the following:</td>
<td></td>
<td>3.0</td>
</tr>
<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 3 credits of the following:</td>
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<td>3.0</td>
</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 3 credits of the following:</td>
<td></td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
<td></td>
</tr>
<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</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>
<td></td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
</tr>
<tr>
<td>HUM 120</td>
<td>Cultural Studies</td>
<td></td>
</tr>
<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</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>PHI 215</td>
<td>Philosophical Issues</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>
<td></td>
</tr>
</tbody>
</table>

**Total Credits** 69

**Cosmetology Diploma (D55140)**

**Diploma Awarded**
The Cosmetology Diploma is awarded by the college upon completion of this program.

**Admissions**
- Complete an admissions application to Central Piedmont.
- A high school diploma or equivalent is required.
- Submit high school transcripts and any former college transcripts to Admissions, Records & Registration.
- Request all former college transcripts be evaluated for transfer credit to Central Piedmont.
- Central Piedmont placement tests are required. Developmental courses in English and mathematics are available for students to build basic skills and knowledge.
- Consult with an advisement counselor and attend an orientation session following placement testing.
- Complete a 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 applying to the Central Piedmont Cosmetology Program are required to submit a copy of their Social Security Card, Tax ID card or student visa information, government-issued identification and proof of date of birth. They also must submit an acknowledgement of the NC State Board of Cosmetic Arts felony policy, found on the program application.

**Cosmetology Diploma (D55140)**

**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>PSY 150</td>
<td>General Psychology</td>
<td>3.0</td>
</tr>
</tbody>
</table>

123
The Criminal Justice program is in the Public Safety Division. For more information, email criminal.justice@cpcc.edu or call the Criminal Justice Program Chair, Jeri Guido, at 704.330.4107.

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:
  1. 2.5 grade point average
  2. 12 semesters hours of credit within the program of study (A55180)
  3. 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 the initial registration and for information on program certificates.

Contact Information
The Criminal Justice program is in the Public Safety Division. For more information, email criminal.justice@cpcc.edu or call the Criminal Justice Program Chair, Jeri Guido, at 704.330.4107.

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>Select one of the following:</td>
<td></td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and literacy</td>
<td></td>
</tr>
<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry</td>
<td></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>MAT 172</td>
<td>Precalculus Trigonometry</td>
<td></td>
</tr>
<tr>
<td>MAT 271</td>
<td>Calculus I</td>
<td></td>
</tr>
<tr>
<td>Select 3 credits from the following:</td>
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<td>3.0</td>
</tr>
<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</td>
<td></td>
</tr>
<tr>
<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>HIS 111</td>
<td>World Civilizations I</td>
<td></td>
</tr>
<tr>
<td>HIS 112</td>
<td>World Civilizations II</td>
<td></td>
</tr>
</tbody>
</table>
HIS 131 American History I  
HIS 132 American History II  
POL 120 American Government  
PSY 150 General Psychology  
SOC 210 Introduction to Sociology  

Select 3 credits from the following:  
3.0  
ART 111 Art Appreciation  
ART 114 Art History Survey I  
ART 115 Art History Survey II  
HUM 120 Cultural Studies  
HUM 130 Myth in Human Culture  
MUS 110 Music Appreciation  
MUS 112 Introduction to Jazz  
PHI 215 Philosophical Issues  
PHI 240 Introduction to Ethics  
REL 110 World Religions  

**Major Requirements**  
CJC 111 Introduction to Criminal Justice  
CJC 112 Criminology  
CJC 113 Juvenile Justice  
CJC 131 Criminal Law  
CJC 212 Ethics & Community Relations  
CJC 221 Investigative Principles  
CJC 231 Constitutional Law  

Other Major Requirements:  
WBL 112 Work-Based Learning I  
CIS 110 Introduction to Computers  

Take 1 of the following courses:  
3.0  
COM 110 Introduction to Communication  
COM 231 Public Speaking  

**Technical Electives**  
Take 21 credits of the following:  
21.0  
ACA 111 College Student Success  
ACA 118 College Study Skills  
ASL 111 Elementary ASL I  
ASL 181 ASL Lab 1  
CCT 110 Introduction to Cyber Crime  
CCT 121 Computer Crime Investigation  
CJC 114 Investigative Photography  
CJC 120 Interviews/Interrogations  
CJC 121 Law Enforcement Operations  
CJC 122 Community Policing  
CJC 132 Court Procedure & Evidence  
CJC 141 Corrections  
CJC 151 Introduction to Loss Prevention  
CJC 160 Terrorism: Underlying Issues  
CJC 161 Introduction to Homeland Security  
CJC 162 Intelligence Analysis and Security Management  
CJC 163 Transportation and Border Security  
CJC 170 Critical Incident Mgmt for Public Safety  
CJC 193J Selected Topics in 21st Century Policing  
CJC 211 Counseling  
CJC 213 Substance Abuse  
CJC 214 Victimology  
CJC 215 Organization & Administration  
CJC 222 Criminalistics  
CJC 223 Organized Crime  
CJC 225 Crisis Intervention  
CJC 232 Civil Liability  
CJC 233 Correctional Law  
CJC 241 Community-Based Corrections  
CJC 255 Issues in Criminal Justice Application  
CJC 293J  
PED 110 Fit and Well for Life  
PED 117 Weight Training I  
PSY 150 General Psychology  
PSY 231 Forensic Psychology  
PSY 237 Social Psychology  
PSY 281 Abnormal Psychology  
SPA 111 Elementary Spanish I  
SPA 181 Spanish Lab 1  

**Total Credits** 66  

**No diplomas are offered in Criminal Justice Technology.**  

**Criminal Justice Certificates (C55180)**  

In addition to the Criminal Justice Technology degree (A55180), students can earn the following certificates. For more information, email criminal.justice@cpcc.edu.  

- Criminal Justice Technology Certificate with a Specialization in Criminal Justice Management and Administration (C55180-C2)  
- Criminal Justice Technology Certificate with a Specialization in Essentials of the Criminal Justice System (C55180-C3)  
- Criminal Justice Technology Certificate with a Specialization in Essential Police Operations (C55180-C4)  
- Criminal Justice Technology Certificate with a Specialization in Courts and the Law (C55180-C5)  
- Criminal Justice Technology Certificate with a Specialization in Corrections (C55180-C6)  
- Criminal Justice Technology Certificate with a Specialization in Criminal Justice and Special Populations (C55180-C7)  
- Criminal Justice Technology Certificate with a Specialization in Crime Scene and Criminal Investigations (C55180-C8)  
- Criminal Justice Technology Certificate with a Specialization in Basics of Criminal Justice (C55180-C9)  
- Criminal Justice Technology Certificate with a Specialization in Homeland Security (C55180-10)  
- Criminal Justice Technology Certificate with a Specialization in Crime Causation (C55180-11)  
- Criminal Justice Technology Certificate with a Specialization in UNC Charlotte Criminal Justice Transfer (C55180-12)  
- Criminal Justice Technology Certificate with a Specialization in Basic Law Enforcement Preparation (C55180-13)
### Criminal Justice Technology Certificate with a Specialization in Criminal Justice Management and Administration (C55180-C2)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJC 212</td>
<td>Ethics &amp; Community Relations</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 170</td>
<td>Critical Incident Mgmt for Public Safety</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 211</td>
<td>Counseling</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 215</td>
<td>Organization &amp; Administration</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits: 12

---

### Criminal Justice Technology Certificate with a Specialization in Essentials of the Criminal Justice System (C55180-C3)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course 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 141</td>
<td>Corrections</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 151</td>
<td>Introduction to Loss Prevention</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits: 15

---

### Criminal Justice Technology Certificate with a Specialization in Essential Police Operations (C55180-C4)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJC 121</td>
<td>Law Enforcement Operations</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 122</td>
<td>Community Policing</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 221</td>
<td>Investigative Principles</td>
<td>4.0</td>
</tr>
<tr>
<td>CJC 212</td>
<td>Ethics &amp; Community Relations</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits: 13

---

### Criminal Justice Technology Certificate with a Specialization in Courts and the Law (C55180-C5)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJC 131</td>
<td>Criminal Law</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 132</td>
<td>Court Procedure &amp; Evidence</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 231</td>
<td>Constitutional Law</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 232</td>
<td>Civil Liability</td>
<td>3.0</td>
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</tbody>
</table>

Total Credits: 12

---

### Criminal Justice Technology Certificate with a Specialization in Corrections (C55180-C6)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJC 141</td>
<td>Corrections</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 233</td>
<td>Correctional Law</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 241</td>
<td>Community-Based Corrections</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 213</td>
<td>Substance Abuse</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits: 12

---

### Criminal Justice Technology Certificate with a Specialization in Crime Scene and Criminal Investigations (C55180-C8)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course 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>
</tr>
</tbody>
</table>

Total Credits: 15

---

### Criminal Justice Technology Certificate with a Specialization in Basic of Criminal Justice (C55180-C9)

**This certificate is also available to high school students dually enrolled in Career and College Promise.**

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course 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>
</tr>
</tbody>
</table>

Total Credits: 12

---

### Criminal Justice Technology Certificate with a Specialization in Homeland Security (C55180-10)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<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>
</tr>
</tbody>
</table>

Total Credits: 12

---

### Criminal Justice Technology Certificate with a Specialization in Crime Causation (C55180-11)

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<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>
</tr>
<tr>
<td>CJC 214</td>
<td>Victimology</td>
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</table>

Total Credits: 12
Criminal Justice Technology Certificate with a Specialization in UNCC Criminal Justice Transfer (C55180-12)

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 113</td>
<td>Juvenile Justice</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 212</td>
<td>Ethics &amp; Community Relations</td>
<td>3.0</td>
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<tr>
<td>MAT 152</td>
<td>Statistical Methods I</td>
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<td>SPA 111</td>
<td>Elementary Spanish I</td>
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<tr>
<td>SPA 181</td>
<td>Spanish Lab 1</td>
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Total Credits 17

Criminal Justice Technology Certificate Specialization in Basic Law Enforcement Preparation (C55180-13)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>PED 110</td>
<td>Fit and Well for Life</td>
<td>2.0</td>
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<tr>
<td>ACA 118</td>
<td>College Study Skills</td>
<td>2.0</td>
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<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
</tr>
<tr>
<td>CJC 122</td>
<td>Community Policing</td>
<td>3.0</td>
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<tr>
<td>PED 117</td>
<td>Weight Training I</td>
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<td>COM 231</td>
<td>Public Speaking</td>
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<tr>
<td>SEL 293</td>
<td>Selected Topics in ___________</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits 17

Admissions

- Complete an admissions application to Central Piedmont.
- Submit an official high school diploma as well as college transcripts to the Admissions, Records & Registration.
- Consult with an academic advisor regarding course placement before placement testing.
- Consult with Culinary Arts Program Chair, Robert Marilla, by calling 704.330.6341 before course registration.
- 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, contact the Program Chair at 704.330.6341 or the Hospitality Education Division at 704.330.6721, extension 6341.

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 food service, and healthcare facilities.

Students are provided theoretical knowledge/practical applications to acquire critical competencies for 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 food service manager.

For specific information about potential positions and wages in culinary arts employment, visit the Central Piedmont Career Coach website.

Culinary Arts (A55150)

Degree Awarded

The Associate in Applied Science degree – Culinary Arts is awarded by the college upon completion of this program.

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>
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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>
<td></td>
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<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>COM 231</td>
<td>Public Speaking</td>
<td></td>
</tr>
<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></td>
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<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
</tr>
<tr>
<td>HUM 120</td>
<td>Cultural Studies</td>
<td></td>
</tr>
<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</td>
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<td>Music Appreciation</td>
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<tr>
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<td>Introduction to Jazz</td>
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<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
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<tr>
<td>PHI 240</td>
<td>Introduction to Ethics</td>
<td></td>
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<td>REL 110</td>
<td>World Religions</td>
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<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</td>
<td>3.0</td>
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<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
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<tr>
<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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<td>HIS 132</td>
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<tr>
<td>POL 120</td>
<td>American Government</td>
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</tbody>
</table>
Programs of Study

PSY 150  General Psychology
SOC 210  Introduction to Sociology

Select 3 credits from the following:

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 271  Calculus I

Major Requirements

CUL 110  Sanitation and Safety  2.0
CUL 111  Success in Hospitality Studies  1.0
CUL 112  Nutrition for Foodservice  3.0
CUL 130  Menu Design  2.0
CUL 135  Food and Beverage Service  2.0
CUL 135A  Food and Beverage Service Lab  1.0
CUL 140  Culinary Skills I  5.0
CUL 140A  Culinary Skills I Lab  1.0
CUL 170  Garde Manger I  3.0
CUL 170A  Garde Manger I Lab  1.0
CUL 160  Baking I  3.0
CUL 160A  Baking I Lab  1.0
CUL 240  Culinary Skills II  5.0
CUL 240A  Culinary Skills II Lab  1.0

Select 3.0 credits from the following:

CUL 270  Garde Manger II
CUL 270A  Garde Manger II Lab
CUL 283  Farm-To-Table
CUL 285  Competition Fundamentals
CUL 260A  Baking II Lab  1.0
CUL 260  Baking II  3.0
CUL 245  Contemporary Cuisines  5.0
CUL 245A  Contemporary Cuisines Lab  1.0
HRM 245  Human Resource Management-Hospitality  3.0
HRM 220  Cost Control-Food and Beverage  3.0
HRM 225  Beverage Management  3.0
CUL 273  Career Development  1.0
WBL 112  Work-Based Learning I  2.0

Total Credits 74

No diplomas are offered in Culinary Arts.

Culinary Arts Certificate (C55150)

The following certificates are available:

• Culinary Arts Certificate Specialization in Culinary Skills (C55150-C1) (p. 128)
• Culinary Arts Certificate Specialization in Certified Fundamentals Cook (C55150-C2) (p. 128)
• Culinary Arts Certificate Specialization in Baking (C55150-C3) (p. 129)
• Culinary Arts Certificate Specialization in Cold Foods (C55150-C4) (p. 129)

• Culinary Arts Certificate Specialization in Sustainable Food Systems and AgriTourism (C55150-C6) (p. )
• Culinary Arts Certificate Specialization in Culinary Arts (C55150-C7) (p. )

Culinary Arts Certificate Specialization in Culinary Skills (C55150-C1)

These certificates are designed for those students wanting basic training in Culinary Arts. Certificates are “stackable” credentials and can be counted toward completion of an associate degree in Culinary Arts.

Admissions

• Complete a Central Piedmont Admissions Form.
• Submit an official high school diploma, as well as college transcripts, to Central Piedmont Student Records.
• Complete all necessary developmental studies courses prior to beginning CUL, HRM and BPA prefix courses.
• Make an appointment and meet with an academic advisor.
• Make an appointment and meet with the Culinary Arts Program Chair, Robert Marilla, by calling 704.330.6341.
• 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, contact the program chair at 704.330.6341 or the Hospitality Education Division at 704.330.6721.

Major Requirements

CUL 110  Sanitation and Safety  2.0
CUL 140  Culinary Skills I  5.0
CUL 170  Garde Manger I  3.0
CUL 170A  Garde Manger I Lab  1.0
CUL 160  Baking I  3.0
CUL 160A  Baking I Lab  1.0
CUL 240  Culinary Skills II  5.0
CUL 240A  Culinary Skills II Lab  1.0

Total Credits 16

Culinary Arts Certificate Specialization in Certified Fundamentals Cook (C55150-C2)

This certificate qualifies students for CFC designation from the American Culinary Federation.

Major Requirements

CUL 110  Sanitation and Safety  2.0
CUL 140  Culinary Skills I  5.0
CUL 140A  Culinary Skills I Lab  1.0
CUL 170  Garde Manger I  3.0
CUL 170A  Garde Manger I Lab  1.0
CUL 160  Baking I  3.0
CUL 160A  Baking I Lab  1.0

Total Credits 16
Culinary Arts Certificate Specialization in Baking (C55150-C3)
This certificate will appeal to students seeking entry level positions in a bakery.

Major Requirements
- CUL 110 Sanitation and Safety 2.0
- CUL 140 Culinary Skills I 5.0
- CUL 140A Culinary Skills I Lab 1.0
- CUL 160 Baking I 3.0
- CUL 160A Baking I Lab 1.0
- CUL 260 Baking II 3.0
- CUL 260A Baking II Lab 1.0

Total Credits 16

Culinary Arts Certificate Specialization in Cold Foods (C55150-C4)
This certificate will appeal to students seeking entry-level Garde Manger positions in a restaurant, hotel, or club.

Major Requirements
- CUL 110 Sanitation and Safety 2.0
- CUL 140 Culinary Skills I 5.0
- CUL 140A Culinary Skills I Lab 1.0
- CUL 170 Garde Manger I 3.0
- CUL 170A Garde Manger I Lab 1.0
- CUL 270 Garde Manger II 3.0
- CUL 270A Garde Manger II Lab 1.0

Total Credits 16

Culinary Arts Certificate Specialization in Sustainable Food Systems and AgriTourism (C55150-C6)
This certificate is for students interested in the farm-to-table movement and those who want to grow foods to sell to foodservice establishments. **C55150C2 is a prerequisite for this certificate.

Major Requirements
- HRM 110 Introduction to Hospitality and Tourism 3.0
- HOR 142 Fruit & Vegetable Production 2.0
- SST 110 Introduction to Sustainability 3.0
- BUS 230 Small Business Management 3.0
- CUL 283 Farm-To-Table 5.0

Total Credits 16

Culinary Arts Certificate Specialization in Culinary Arts (C55150-C7)

Major Requirements
- CUL 110 Sanitation and Safety 2.0
- CUL 130 Menu Design 2.0
- CUL 140 Culinary Skills I 5.0
- CUL 140A Culinary Skills I Lab 1.0

Total Credits 13

Cytotechnology
Cytotechnology is an advanced allied health career which prepares students 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.

For specific information about potential positions and wages in cytotechnology employment, visit the Central Piedmont Career Coach website.

No degrees are offered in Cytotechnology.
No diplomas are offered in Cytotechnology.

Cytotechnology (C45220)
Certificate Awarded
A Certificate in Cytotechnology is awarded by the college upon successful completion of the program.

Admissions
All students wishing to apply to the Cytotechnology Program must have completed prior to admission:

- A 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)

- A Grade Point Average of 2.5 in sciences courses, as well as an overall 2.0 GPA is recommended.
- An admissions application to Central Piedmont
- All prior college transcripts to Central Piedmont Admissions, Records & Registration with request for review for transfer
- Two letters of recommendation to the Cytotechnology Program Chair from previous science professors
- An interview with the Cytotechnology Program Chair.

International Students also must submit:
The Cytotechnology program is in the Medical Careers and Cosmetology Division. For more information, visit the Cytotechnology program's website. A list of these agencies may be obtained by calling the ASCP at 800.267.2727.

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 Central Piedmont 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
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, visit the Cytotechnology website. For further assistance, contact the Program Chair at 704.330.6283.

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 of infection/hazard control, radiography, dental materials, preventive dentistry, head and neck anatomy, dental and medical emergencies, 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.

For specific information about potential positions and wages in dental assisting employment, visit the Central Piedmont Career Coach website.

No degrees are offered for Dental Assisting.

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 Central Piedmont 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 general application for admission to Central Piedmont
- Submit high school, as well as college transcripts to Admissions, Registration & Records.
- Schedule a meeting with an academic advisor to determine if placement tests are required. If so, take tests and review placement test scores and program information to select courses for registration.
- Complete and submit a Dental Assisting Program Application by deadline date.
- 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 are encouraged to attend available Program Information Sessions.

Notes

Costs of this program, in addition to tuition and textbooks, 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 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.

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 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, visit the Dental Assisting website. If further assistance is needed, contact the Dental Assisting department at 704-330-4604.

General Education Requirements
ENG 111 Writing and Inquiry 3.0
COM 231 Public Speaking 3.0
or COM 110 Introduction to Communication

Major Requirements
DEN 110 Orofacial Anatomy 3.0
DEN 101 Preclinical Procedures 7.0
DEN 102 Dental Materials 4.0
DEN 103 Dental Sciences 2.0
DEN 104 Dental Health Education 3.0
DEN 105 Practice Management 2.0
DEN 106 Clinical Practice I 6.0
DEN 107 Clinical Practice II 5.0
DEN 111 Infection/Hazard Control 2.0
DEN 112 Dental Radiography 3.0

Other Major Requirements:
BIO 163 Basic Anatomy & Physiology 5.0

Total Credits 48

No certificates are offered for Dental Assisting.

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, prepare patient-centered care plans, teach oral hygiene techniques, provide periodontal therapy, acquire radiographic images, apply preventive agents, record patient data utilizing an electronic patient management software system and perform other procedures within the dental hygiene scope of practice.

Graduates of this program are prepared 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.

For specific information about potential positions and wages in dental hygiene employment, visit the Central Piedmont Career Coach website.

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
• Complete an admissions application to Central Piedmont.
• Submit high school transcripts, as well as any college transcripts, to Admissions, Records & Registration on the second floor of the Central High Building.
• Take the 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.
• Take applicable Developmental Education courses.
• Complete and submit a Dental Hygiene Application by the deadline date.
• Take the Test of Essential Academic Skills (TEAS), ATI TEAS
• Check the Courses section for details, as many courses have prerequisite or co-requisite requirements.

Please refer to enrollment instruction for a degree or transfer student under the Admissions Enroll Now tab.

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 include 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 complete a minimum of CHM 121 and 121A or college equivalent with a grade of “C” or higher to apply to the dental hygiene program. The chemistry requirement must be completed not more than five years prior to acceptance.
• 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.
Programs of Study

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, visit the Dental Hygiene website. For further assistance, contact the Program Chair at 704.330.6365.

General Education Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
<td>3.0</td>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
<td>3.0</td>
</tr>
<tr>
<td>Select 3 credits of the following:</td>
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<td>Writing and Research in the Disciplines</td>
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<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
</tr>
<tr>
<td>DRA 111</td>
<td>Theatre Appreciation</td>
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<tr>
<td>HUM 120</td>
<td>Cultural Studies</td>
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<tr>
<td>REL 110</td>
<td>World Religions</td>
<td></td>
</tr>
</tbody>
</table>

No diplomas are offered in Dental Hygiene.
No certificates are offered in Dental Hygiene.

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.

For specific information about potential positions and wages in diesel and heavy equipment employment, visit the Central Piedmont Career Coach website.

Diesel and Heavy Equipment Technology (A60460)

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>
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<tr>
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<th>Credits</th>
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<tbody>
<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>
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<td>Take 1 course:</td>
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<th>Course Code</th>
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<tr>
<td>COM 110</td>
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<td>3.0</td>
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<td>or COM 231</td>
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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</tr>
<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
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</tr>
<tr>
<td>MAT 152</td>
<td>Statistical Methods I</td>
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<td>MAT 171</td>
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<tbody>
<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>
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<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
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<tr>
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<td>DRA 111</td>
<td>Theatre Appreciation</td>
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<tr>
<td>HUM 120</td>
<td>Cultural Studies</td>
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<td>HUM 130</td>
<td>Myth in Human Culture</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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<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
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<td>PHI 240</td>
<td>Introduction to Ethics</td>
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<td>World Religions</td>
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<td>ECO 252</td>
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<td>World Civilizations I</td>
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<td>HIS 132</td>
<td>American History II</td>
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<td>POL 120</td>
<td>American Government</td>
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<td>PSY 150</td>
<td>General Psychology</td>
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<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
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**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<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>
</tr>
<tr>
<td>TRN 140</td>
<td>Transportation Climate Control</td>
</tr>
<tr>
<td>HET 110</td>
<td>Diesel Engines</td>
</tr>
<tr>
<td>HET 114</td>
<td>Power Trains</td>
</tr>
<tr>
<td>HET 125</td>
<td>Preventive Maintenance</td>
</tr>
<tr>
<td>TRN 170</td>
<td>Pc Skills for Transportation</td>
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<td>TRN 180</td>
<td>Basic Welding for Transportation</td>
</tr>
<tr>
<td>HET 115</td>
<td>Electronic Engines</td>
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<tr>
<td>HET 128</td>
<td>Medium/Heavy Duty Tune Up</td>
</tr>
<tr>
<td>HET 230</td>
<td>Air Brakes</td>
</tr>
<tr>
<td>HET 231</td>
<td>Medium/Heavy Duty Brake Systems</td>
</tr>
<tr>
<td>HET 233</td>
<td>Suspension and Steering</td>
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<td>HYD 110</td>
<td>Hydraulics/Pneumatics I</td>
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<td>Select 8 credits from the following:</td>
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<td>ACA 122</td>
<td>College Transfer Success</td>
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<td>Work-Based Learning I</td>
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<td>WBL 122</td>
<td>Work-Based Learning II</td>
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<td>WBL 132</td>
<td>Work-Based Learning III</td>
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<td>WBL 212</td>
<td>Work-Based Learning IV</td>
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<td>Preventive Maintenance Lab</td>
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<td>HET 232</td>
<td>Medium/Heavy Duty Brake Systems Lab</td>
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<tr>
<td>HYD 134</td>
<td>Hydraulic/Hydrostatic Construction</td>
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<td>HYD 210</td>
<td>Advanced Hydraulics</td>
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<td>TRN 145</td>
<td>Advanced Transportation Electronics</td>
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<td>TRN 180A</td>
<td>Basic Welding for Transportation Lab</td>
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<td>TRN 140A</td>
<td>Transportation Climate Control Lab</td>
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<td>TRN 120A</td>
<td>Basic Transportation Electrical Lab</td>
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<td>ATT 130</td>
<td>Biofuels for Transportation</td>
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<td>ATT 135</td>
<td>Gaseous Fuels for Transportation</td>
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<td>ATT 150</td>
<td>Sustainable Transportation Technology</td>
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**Diesel and Heavy Equipment Technology Diplomas (D60460)**

**Diesel and Heavy Equipment Technology Diploma (D60460-D3)**

**General Education Requirements**

<table>
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<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</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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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
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<td>Introduction to Transport Technology</td>
</tr>
<tr>
<td>TRN 120</td>
<td>Basic Transportation Electricity</td>
</tr>
<tr>
<td>TRN 140</td>
<td>Transportation Climate Control</td>
</tr>
<tr>
<td>or TRN 145</td>
<td>Advanced Transportation Electronics</td>
</tr>
<tr>
<td>TRN 170</td>
<td>Pc Skills for Transportation</td>
</tr>
<tr>
<td>HET 110</td>
<td>Diesel Engines</td>
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<tr>
<td>HET 114</td>
<td>Power Trains</td>
</tr>
<tr>
<td>HET 125</td>
<td>Preventive Maintenance</td>
</tr>
<tr>
<td>TRN 120A</td>
<td>Basic Transportation Electrical Lab</td>
</tr>
<tr>
<td>TRN 140A</td>
<td>Transportation Climate Control Lab</td>
</tr>
<tr>
<td>TRN 180</td>
<td>Basic Welding for Transportation</td>
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<tr>
<td>TRN 180A</td>
<td>Basic Welding for Transportation Lab</td>
</tr>
<tr>
<td>HET 126</td>
<td>Preventive Maintenance Lab</td>
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<tr>
<td>HET 230</td>
<td>Air Brakes</td>
</tr>
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<td>HET 233</td>
<td>Suspension and Steering</td>
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<tr>
<td>HYD 112</td>
<td>Hydraulics-Medium and Heavy Duty</td>
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**Total Credits**: 46

**Diesel and Heavy Equipment Technology Certificates (C60460)**

- Diesel and Heavy Equipment Technology Certificate Specialization in Forklift Repair (C60460-C1) (p. 133)
- Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair I (C60460-C3) (p. 133)
- Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair II (C60460-C4) (p. 134)
- Diesel and Heavy Equipment Technology Certificate Specialization in Diesel Service Repair III (C60460-C5) (p. 134)

**Diesel and Heavy Equipment Technology Certificate Specialization in Forklift Repair (C60460-C1)**

**Major Requirements**

<table>
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<tr>
<td>TRN 120</td>
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<td>HET 110</td>
<td>Diesel Engines</td>
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<tr>
<td>HET 125</td>
<td>Preventive Maintenance</td>
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<tr>
<td>TRN 120A</td>
<td>Basic Transportation Electrical Lab</td>
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<td>HET 126</td>
<td>Preventive Maintenance Lab</td>
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<tr>
<td>HYD 112</td>
<td>Hydraulics-Medium and Heavy Duty</td>
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**Total Credits**: 17
Diesel and Heavy Equipment Technology  
Certificate Specialization in Diesel Service Repair I (C60460-C3)

**Major Requirements**

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<td>TRN 140</td>
<td>Transportation Climate Control</td>
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<td>HET 110</td>
<td>Diesel Engines</td>
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<td>TRN 140A</td>
<td>Transportation Climate Control Lab</td>
<td>2.0</td>
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<tr>
<td>TRN 170</td>
<td>Pc Skills for Transportation</td>
<td>2.0</td>
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<tr>
<td>HET 231</td>
<td>Medium/Heavy Duty Brake Systems</td>
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**Total Credits**  17

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Diesel and Heavy Equipment Technology  
Certificate Specialization in Diesel Service Repair II (C60460-C4)

**Major Requirements**

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<td>Transportation Climate Control</td>
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<td>TRN 140A</td>
<td>Transportation Climate Control Lab</td>
<td>2.0</td>
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<tr>
<td>TRN 180</td>
<td>Basic Welding for Transportation</td>
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<td>TRN 180A</td>
<td>Basic Welding for Transportation Lab</td>
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**Total Credits**  14

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Diesel and Heavy Equipment Technology  
Certificate Specialization in Diesel Service Repair III (C60460-C5)

**Major Requirements**

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<td>HET 114</td>
<td>Power Trains</td>
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<td>HET 126</td>
<td>Preventive Maintenance Lab</td>
<td>1.0</td>
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<td>HET 128</td>
<td>Medium/Heavy Duty Tune Up</td>
<td>2.0</td>
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<td>HET 230</td>
<td>Air Brakes</td>
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<td>HYD 110</td>
<td>Hydraulics/Pneumatics I</td>
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<tr>
<td>WBL 112</td>
<td>Work-Based Learning I</td>
<td>2.0</td>
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</table>

**Total Credits**  17

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**Early Childhood Education**

The Early Childhood Education program curriculum prepares individuals to work with children from infancy through middle childhood in diverse learning environments. Students combine learning 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 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, public and private schools preschools, recreational centers, Head Start Programs, after school-age programs, and teacher assistants in K-3 classrooms.

For specific information about potential positions and wages in early childhood education employment, visit the Central Piedmont Career Coach website.

**Early Childhood Education (A55220AS)**

**Degree Awarded**

The Associate in Applied Science degree in Early Childhood Education is awarded by the college upon completion of this program.

**Admissions**

1. Submit proof of high school graduation or equivalency.
2. Complete an admissions application to Central Piedmont.
3. Complete or waive placement tests. Students with appropriate transcripts or official score reports can waive placement testing by meeting with a Central Piedmont academic advisor.
4. Consult with an academic advisor to declare program goals/major and be assigned to an Early Childhood faculty advisor.
5. Consult with an assigned Early Childhood faculty advisor.

**Program Accreditation**

The Early Childhood Education Associate Degree program at Central Piedmont is accredited by the National Association for the Education of Young Children (NAEYC).

**State Credentials**

All Early Childhood courses may be applied for training/education hours required by the North Carolina Division of Child Development and Early Education (NCDCDEEE). Courses are offered for North Carolina Early Childhood, School-Age and Administrative Credentials.

**Four-Year Articulation Agreements**

The Central Piedmont Early Childhood Education Program has articulation agreements other North Carolina institutions allowing students transferring to those schools to be eligible to enroll in the following programs:

- Catawba College
  Bachelor of Arts in Education (B.A.E.) degree through the Department of Teacher Education. Catawba College offers two concentrations in the B-K Education major: the Licensure concentration and the Non-Licensure concentration.

Students may transfer to any of the universities below to pursue the Bachelor Degree in Birth-Kindergarten Teaching with licensure option:

1. Appalachian State University
2. East Carolina University
3. Elizabeth City State University
4. Fayetteville State University
5. North Carolina Agricultural and Technical University
6. North Carolina Central University
7. University of North Carolina Charlotte
8. University of North Carolina Greensboro
9. University of North Carolina Pembroke
10. University of North Carolina Wilmington
11. Western Carolina University
12. Winston-Salem State University

Students may transfer to any of the universities below to pursue a Bachelor Degree in Early Childhood Non-teaching without the option of licensure. Universities are listed below with corresponding Bachelor Degree title:

1. East Carolina University: Family and Community Services, Child Development Concentration
2. Elizabeth City State University: Child, Family and Community
3. Fayetteville State University: Birth-Kindergarten Non-Teaching
4. North Carolina Agricultural and Technical University: Child Development and Family Studies
5. North Carolina Central University: Family Consumer Sciences, Child Development and Family Relations Concentration
6. University of North Carolina Greensboro: Early Care and Education

Students interested in transferring to 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 co-requisite of DRE 097.
3. 200-level EDU courses have a co-requisite of DRE 098.
4. For courses with a lab, students must register for the lab section 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 284.

Contact Information

The Early Childhood Education program is in the Early Childhood Education Division. For more information, visit the Early Childhood webpage or call the Early Childhood Division at 704.330.4762. Email inquiries can be sent to EarlyChildhoodEducation@cpcc.edu.

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>SOC 210</td>
<td>Introduction to Sociology</td>
<td>3.0</td>
</tr>
<tr>
<td>COM 231</td>
<td>Public Speaking</td>
<td>3.0</td>
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Take 3 credits from the following:

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<tr>
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<th>Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
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<td>Writing and Research in the Disciplines</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
<td>3.0</td>
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<td>or MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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Select 3 credits from the following:

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<tr>
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<th>Credits</th>
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</thead>
<tbody>
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<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>
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<td>DRA 111</td>
<td>Theatre Appreciation</td>
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<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
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Early Childhood Education - Transfer Teacher Licensure Track (A55220BK)

General Education Requirements

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<th>Title</th>
<th>Credits</th>
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<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
</tr>
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<td>COM 231</td>
<td>Public Speaking</td>
<td>3.0</td>
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<tr>
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<td>3.0</td>
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Select 3.0 credits from the following courses:

<table>
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<tr>
<th>Course</th>
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<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
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<tr>
<td>DRA 111</td>
<td>Theatre Appreciation</td>
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</tr>
<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
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</table>
### Programs of Study

**MUS 112**  
Introduction to Jazz

**PHI 215**  
Philosophical Issues

**PHI 240**  
Introduction to Ethics

#### Transfer Speciality Areas

Select one of the following courses:  
**3.0**

- **ENG 112**  
  Writing and Research in the Disciplines
- **ENG 114**  
  Professional Research & Reporting

Select one of the following courses:  
**3.0**

- **ECO 251**  
  Principles of Microeconomics
- **ECO 252**  
  Principles of Macroeconomics
- **HIS 111**  
  World Civilizations I
- **HIS 112**  
  World Civilizations II
- **HIS 131**  
  American History I
- **HIS 132**  
  American History II
- **POL 120**  
  American Government
- **SOC 210**  
  Introduction to Sociology

Select one of the following courses:  
**4.0**

- **BIO 110**  
  Principles of Biology
- **BIO 111**  
  General Biology I

Select 4.0 credits from the following courses:  
**4.0**

- **AST 111**  
  Descriptive Astronomy  
  and Descriptive Astronomy Lab
- **AST 151**  
  General Astronomy I  
  and General Astronomy I Lab
- **CHM 151**  
  General Chemistry I
- **GEL 111**  
  Geology
- **PHY 110**  
  Conceptual Physics  
  and Conceptual Physics Lab

#### Major Requirements

**EDU 119**  
Introduction to Early Childhood Education  
**4.0**

**EDU 131**  
Child, Family, and Community  
**3.0**

**EDU 144**  
Child Development I  
**3.0**

**EDU 145**  
Child Development II  
**3.0**

**EDU 146**  
Child Guidance  
**3.0**

**EDU 151**  
Creative Activities  
**3.0**

**EDU 151A**  
Creative Activities Lab  
**1.0**

**EDU 153**  
Health, Safety and Nutrition  
**3.0**

**EDU 221**  
Children With Exceptionalities  
**3.0**

**EDU 234**  
Infants, Toddlers, and Twos  
**3.0**

**EDU 280**  
Language and Literacy Experiences  
**3.0**

**EDU 280A**  
Literacy Experiences Lab  
**1.0**

**EDU 284**  
Early Childhood Capstone Practicum  
**4.0**

**EDU 261**  
Early Childhood Administration I  
**3.0**

**EDU 262**  
Early Childhood Administration II  
**3.0**

**Total Credits**  
**72**

### Early Childhood Education - Transfer Non-Licensure Track (A55220NL)

#### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td><strong>ENG 111</strong></td>
<td>Writing and Inquiry</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>COM 231</strong></td>
<td>Public Speaking</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>MAT 143</strong></td>
<td>Quantitative Literacy</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>PSY 150</strong></td>
<td>General Psychology</td>
<td>3.0</td>
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Select 3.0 credits from the following courses:  
**3.0**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td><strong>ART 111</strong></td>
<td>Art Appreciation</td>
</tr>
<tr>
<td><strong>ART 114</strong></td>
<td>Art History Survey I</td>
</tr>
<tr>
<td><strong>ART 115</strong></td>
<td>Art History Survey II</td>
</tr>
<tr>
<td><strong>DRA 111</strong></td>
<td>Theatre Appreciation</td>
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<tr>
<td><strong>MUS 110</strong></td>
<td>Music Appreciation</td>
</tr>
<tr>
<td><strong>MUS 112</strong></td>
<td>Introduction to Jazz</td>
</tr>
<tr>
<td><strong>PHI 215</strong></td>
<td>Philosophical Issues</td>
</tr>
<tr>
<td><strong>PHI 240</strong></td>
<td>Introduction to Ethics</td>
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#### Transfer Speciality Areas

Select one of the following courses:  
**3.0**

- **ENG 112**  
  Writing and Research in the Disciplines
- **ENG 114**  
  Professional Research & Reporting

Select one of the following courses:  
**3.0**

- **ECO 251**  
  Principles of Microeconomics
- **ECO 252**  
  Principles of Macroeconomics
- **HIS 111**  
  World Civilizations I
- **HIS 112**  
  World Civilizations II
- **HIS 131**  
  American History I
- **HIS 132**  
  American History II
- **POL 120**  
  American Government
- **SOC 210**  
  Introduction to Sociology

Select one of the following courses:  
**4.0**

- **BIO 110**  
  Principles of Biology
- **BIO 111**  
  General Biology I

Take 4.0 credits from the following courses:  
**4.0**

- **AST 111**  
  Descriptive Astronomy  
  and Descriptive Astronomy Lab
- **AST 151**  
  General Astronomy I  
  and General Astronomy I Lab
- **CHM 151**  
  General Chemistry I
- **GEL 111**  
  Geology
- **PHY 110**  
  Conceptual Physics  
  and Conceptual Physics Lab

#### Major Requirements

**EDU 119**  
Introduction to Early Childhood Education  
**4.0**

**EDU 131**  
Child, Family, and Community  
**3.0**

**EDU 144**  
Child Development I  
**3.0**

**EDU 145**  
Child Development II  
**3.0**

**EDU 146**  
Child Guidance  
**3.0**

**EDU 151**  
Creative Activities  
**3.0**

**EDU 151A**  
Creative Activities Lab  
**1.0**

**EDU 153**  
Health, Safety and Nutrition  
**3.0**

**EDU 221**  
Children With Exceptionalities  
**3.0**

**EDU 234**  
Infants, Toddlers, and Twos  
**3.0**

**EDU 280**  
Language and Literacy Experiences  
**3.0**

**EDU 280A**  
Literacy Experiences Lab  
**1.0**

**EDU 284**  
Early Childhood Capstone Practicum  
**4.0**

**EDU 261**  
Early Childhood Administration I  
**3.0**

**EDU 262**  
Early Childhood Administration II  
**3.0**

**Total Credits**  
**72**
No diplomas are offered in Early Childhood.

Early Childhood Education Certificates (C55220)

- Early Childhood Education Certificate (p. 137) (C55220-C4) (p. 137) Specialization in Beginnings in Early Childhood Education - For High School Juniors and Seniors Only
- School-Age Care Certificate (C55450) (p. 137)
- Infant/Toddler Care Certificate (C55290) (p. 137)
- Early Childhood Administration (C55850) (p. 137)
- Early Childhood Preschool (C55860) (p. 137)

Early Childhood Education Certificate Specialization in Beginnings in Early Childhood Education (For High School Juniors and Seniors Only) (C55220-C4)

<table>
<thead>
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<tr>
<td>EDU 153 Health, Safety and Nutrition</td>
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School-Age Care Certificate (C55450)

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<td>EDU 158 Healthy Lifestyles-Youth</td>
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<td>EDU 235 School-Age Development and Programs</td>
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<td>EDU 263 School-Age Program Administration</td>
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Infant/Toddler Care Certificate (C55290)

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<td>EDU 144 Child Development I</td>
<td>3.0</td>
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<tr>
<td>EDU 131 Child, Family, and Community</td>
<td>3.0</td>
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<tr>
<td>EDU 153 Health, Safety and Nutrition</td>
<td>3.0</td>
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<tr>
<td>EDU 234 Infants, Toddlers, and Twos</td>
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Early Childhood Administration (C55850)

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<tr>
<td>EDU 131 Child, Family, and Community</td>
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<tr>
<td>EDU 153 Health, Safety and Nutrition</td>
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<td>EDU 261 Early Childhood Administration I</td>
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<td>EDU 262 Early Childhood Administration II</td>
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Early Childhood Preschool (C55860)

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<td>3.0</td>
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<tr>
<td>EDU 153 Health, Safety and Nutrition</td>
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<tr>
<td><strong>Total Credits</strong></td>
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</table>

Electrical Engineering Technology

The Associate in Applied Science degree in Electrical Engineering Technology has been specifically designed to prepare individuals to become advanced technicians in the workforce.

Electrical Engineering Technicians (Associates degree holders) typically build, install, test, troubleshoot, repair, and modify developmental and production electronic components, equipment, and systems such as industrial/computer controls, manufacturing systems, instrumentation systems, communication systems, and power electronic systems.

A broad-based core of courses ensures that students develop the skills necessary to perform entry-level tasks. Emphasis is placed on developing the ability to think critically, analyze, and troubleshoot electronic systems. Beginning with electrical fundamentals, course work progressively introduces electronics, 2D Computer Aided Design (CAD), circuit simulation, solid-state fundamentals, digital concepts, instrumentation, C++ programming, microprocessors, programmable Logic Controllers (PLCs). Other course work includes the study of various fields associated with the electrical/electronic industry.

This degree program focuses on the knowledge and skills associated with the installation, maintenance, integration and troubleshooting of instrumentation and control systems. It is intended for workforce development to permit students to go directly into industry with this degree.

Graduates should qualify for employment as engineering assistants or as computer, electrical, or electronic technicians with job titles such as, electronics engineering technician, field service technician, maintenance technician, communications technician, electronic tester, electronic systems integrator, electrical and electronics repairers, electromechanical equipment assemblers, electrical drafter, electronics and instrumentation technician, control technician, bench technician, electric motor, power tool, and related repairers, or production control technician.

The AAS degree in Electrical Engineering Technology is accepted at some colleges and universities as the first two years of a bachelor’s-level engineering technology program and graduates can transfer to a university program to finish a bachelor’s degree; however there will be deficiencies.

Information on the Electrical Engineering Technology program may be found on the Electrical Engineering Technology website.

For specific information about potential positions and wages in electrical engineering technology employment, visit the Central Piedmont Career Coach website.
Electrical Engineering Technology (A40180)

Degree Awarded
The Associate in Applied Science Degree - Electrical Engineering Technology is awarded by the College upon completion of the program.

Program Accreditation
The Electrical Engineering Technology program at Central Piedmont is accredited by the Engineering Technology Accreditation Commission (TAC) of the Accreditation Board of Engineering and Technology (ABET).

How to Apply:
Complete a Central Piedmont admissions application through Get Started on the Central Piedmont website.

Contact Information
For questions about the program or for assistance as a student in the program, contact faculty advising. The Electrical Engineering Technology program is in the Engineering Technology Division. For additional information, visit the Electrical Engineering Technology website or call the Program Chair at 704.330.6773.

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>Select one of the following:</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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<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>Select one of the following courses:</td>
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<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
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</tr>
<tr>
<td>COM 231</td>
<td>Public Speaking</td>
<td></td>
</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
<td>4.0</td>
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<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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<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>HUM 120</td>
<td>Cultural Studies</td>
<td></td>
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<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</td>
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<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
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<tr>
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<td>Introduction to Jazz</td>
<td></td>
</tr>
<tr>
<td>PHI 215</td>
<td>Philosophical Issues</td>
<td></td>
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<td>PHI 240</td>
<td>Introduction to Ethics</td>
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<tr>
<td>REL 110</td>
<td>World Religions</td>
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<td>Select 3 credits of the following:</td>
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<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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<tr>
<td>HIS 111</td>
<td>World Civilizations I</td>
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<tr>
<td>HIS 112</td>
<td>World Civilizations II</td>
<td></td>
</tr>
<tr>
<td>HIS 131</td>
<td>American History I</td>
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<tr>
<td>HIS 132</td>
<td>American History II</td>
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<td>POL 120</td>
<td>American Government</td>
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<tr>
<td>PSY 150</td>
<td>General Psychology</td>
<td></td>
</tr>
<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following:

| ELC 133 | Circuit Analysis II            | 4.0 |
| PCI 170 | DAQ and Control                | 4.0 |
| CSC 134 | C++ Programming                | 3.0 |
| ELC 131 | Circuit Analysis I             | 4.0 |

Select 4 credits from the following:

| PHY 151 | College Physics I              |         |
| PHY 251 | General Physics I              |         |
| MAT 172 | Precalculus Trigonometry       | 4.0 |
| WBL 112 | Work-Based Learning I          | 2.0 |

Total Credits: 69

No diplomas are offered in Electrical Engineering Technology.

Electrical Engineering Technology Certificates (C40180)

Electrical Engineering Technology with a Specialization in Electrical Engineering Technology Pathway(C40180-C5)
This certificate also is available to high school students dually enrolled in Career and College Promise.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</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>ELC 131</td>
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<td>ELC 133</td>
<td>Analog Electronics I</td>
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<td>ELC 135</td>
<td>Digital Electronics</td>
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</tr>
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<td>PCI 173</td>
<td>Programmable Systems</td>
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Total Credits: 16

Electrical Engineering Technology Certificate Specialization in Automation Control (C40180-C6)

Major Requirements

<table>
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<th>Title</th>
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<tr>
<td>ELN 260</td>
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<td>ELC 135</td>
<td>Electrical Machines</td>
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<td>ELC 136</td>
<td>Electrical Machines II</td>
<td>4.0</td>
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<tr>
<td>PCI 173</td>
<td>Programmable Systems</td>
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</table>

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. The Electrical Systems Technology (EST) curriculum is separated into three categories: Solar, Design and Manufacturing Automation Troubleshooting/Maintenance. The solar degree prepares graduates for a career in installation, electrical code (NEC), maintenance and design of solar equipment on a residential, commercial or larger industry level. The design degree prepares graduates for a career in the installation, design, estimating or testing of residential, commercial and industrial fields. The electrical manufacturing maintenance degree prepares graduates for a career in industries that require machine electrical repair skills on industrial and manufacturing machinery.

Coursework, most of which is hands-on, includes topics such 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.

The program offers various certificates that focus on courses to obtain a specialization in solar, residential, industrial and manufacturing maintenance. Students also may complete certificate programs in HVAC controls and HVAC facilities maintenance, which are integrated within the Air Conditioning, Heating, and Refrigeration program.

For specific information about potential positions and wages in electrical systems technology, visit the Central Piedmont Career Coach website.

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.

- Electrical Systems Technology - Electrical Design Track (A35130D) (p. 139)
- Electrical Systems Technology - Manufacturing Maintenance Technician Track (A35130M) (p. 140)
- Electrical Systems Technology - Solar Photovoltaic Track (A35130S) (p. 140)

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 the program office at 704.330.4458 or the Construction Technologies Division at 704.330.4408.

Electrical Systems Technology - Electrical Design Track (A35130D)

General Education Requirements

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<tr>
<td>MAT 110</td>
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<td>MAT 143</td>
<td>Quantitative Literacy</td>
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<td>ELC 115</td>
<td>Industrial Wiring</td>
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</tr>
<tr>
<td>ELC 117</td>
<td>Motors and Controls</td>
<td>4.0</td>
</tr>
<tr>
<td>ELC 118</td>
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<tr>
<td>ELC 119</td>
<td>NEC Calculations</td>
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<tr>
<td>ELC 121</td>
<td>Electrical Estimating</td>
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<tr>
<td>ELC 125</td>
<td>Diagrams and Schematics</td>
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<td>ELC 128</td>
<td>Introduction to Programmable Logic Controller</td>
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<tr>
<td>ELC 234</td>
<td>Electrical System Design</td>
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<tr>
<td>BPR 130</td>
<td>Print Reading-Construction</td>
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<tr>
<td>WOL 110</td>
<td>Basic Construction Skills</td>
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Select 3.0 credit from the following: 3.0

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<td>ARC 220</td>
<td>Advanced Architectural CAD</td>
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<td>WBL 111</td>
<td>Work-Based Learning I</td>
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<td>ELC 130</td>
<td>Advanced Motors and Controls</td>
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</tr>
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<td>ELC 215</td>
<td>Electrical Maintenance</td>
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<td>ELC 220</td>
<td>Photovoltaic System Technology</td>
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<tr>
<td>ELC 228</td>
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### Electrical Systems Technology - Manufacturing Maintenance Technician Track (A35130M)

#### General Education Requirements

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<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
<td>3.0</td>
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Select one of the following:

- MAT 110: Mathematical Measurement and Literacy (3.0)
- MAT 143: Quantitative Literacy (3.0)
- MAT 171: Precalculus Algebra (3.0)

Select one of the following:

- ART 111: Art Appreciation (3.0)
- ART 114: Art History Survey I
- ART 115: Art History Survey II
- HUM 120: Cultural Studies
- HUM 130: Myth in Human Culture
- MUS 110: Music Appreciation
- MUS 112: Introduction to Jazz
- PHI 215: Philosophical Issues
- PHI 240: Introduction to Ethics
- REL 110: World Religions

Select one of the following:

- ECO 251: Principles of Microeconomics (3.0)
- ECO 252: Principles of Macroeconomics
- 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

#### Major Requirements

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<tr>
<th>Course</th>
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<tr>
<td>ARC 114</td>
<td>Architectural CAD</td>
<td>2.0</td>
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<tr>
<td>ARC 225</td>
<td>Architectural Building Information Modeling I</td>
<td>2.0</td>
</tr>
<tr>
<td>ELC 112</td>
<td>DC/AC Electricity</td>
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<td>ELC 113</td>
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<td>ELC 114</td>
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<td>ELC 117</td>
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<td>ELC 118</td>
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<tr>
<td>ELC 119</td>
<td>NEC Calculations</td>
<td>2.0</td>
</tr>
<tr>
<td>ELC 121</td>
<td>Electrical Estimating</td>
<td>2.0</td>
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<td>ELC 125</td>
<td>Diagrams and Schematics</td>
<td>2.0</td>
</tr>
<tr>
<td>ELC 128</td>
<td>Introduction to Programmable Logic Controller</td>
<td>3.0</td>
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<tr>
<td>ELC 130</td>
<td>Advanced Motors and Controls</td>
<td>3.0</td>
</tr>
<tr>
<td>ELC 215</td>
<td>Electrical Maintenance</td>
<td>3.0</td>
</tr>
<tr>
<td>ELC 228</td>
<td>Programmable Logic Controllers Applications</td>
<td>4.0</td>
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<tr>
<td>WOL 110</td>
<td>Basic Construction Skills</td>
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<tr>
<td>WLD 112</td>
<td>Basic Welding Processes</td>
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Select 3.0 credits from the following:

- WBL 110: World of Work (3.0)
- WBL 111: Work-Based Learning I
- WBL 121: Work-Based Learning II
- ELC 111: Introduction to Electricity
- ELC 115: Industrial Wiring
- ELC 220: Photovoltaic System Technology
- ELC 234: Electrical System Design
- BPR 130: Print Reading-Construction
- AHR 110: Introduction to Refrigeration

**Total Credits: 70**

### Electrical Systems Technology - Solar Photovoltaic Track (A35130S)

#### General Education Requirements

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<thead>
<tr>
<th>Course</th>
<th>Title</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>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
<td>3.0</td>
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</table>

Select one of the following:

- MAT 110: Mathematical Measurement and Literacy (3.0)
- MAT 143: Quantitative Literacy (3.0)
- MAT 171: Precalculus Algebra (3.0)

Select one of the following:

- ART 111: Art Appreciation (3.0)
- ART 114: Art History Survey I
- ART 115: Art History Survey II
- HUM 120: Cultural Studies
- HUM 130: Myth in Human Culture
- MUS 110: Music Appreciation
- MUS 112: Introduction to Jazz
- PHI 215: Philosophical Issues
- PHI 240: Introduction to Ethics
- REL 110: World Religions

Select one of the following:

- ECO 251: Principles of Microeconomics (3.0)
- ECO 252: Principles of Macroeconomics
- 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

Select one of the following:

- ECO 251: Principles of Microeconomics (3.0)
- ECO 252: Principles of Macroeconomics
- 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

**Major Requirements**

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<tr>
<th>Course</th>
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<tr>
<td>ACA 118</td>
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<td>ARC 114</td>
<td>Architectural CAD</td>
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<td>ARC 225</td>
<td>Architectural Building Information Modeling I</td>
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<tr>
<td>ELC 112</td>
<td>DC/AC Electricity</td>
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<td>ELC 113</td>
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<td>ELC 114</td>
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<td>ELC 121</td>
<td>Electrical Estimating</td>
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<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>
<td>3.0</td>
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<td>ELC 130</td>
<td>Advanced Motors and Controls</td>
<td>3.0</td>
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<tr>
<td>ELC 215</td>
<td>Electrical Maintenance</td>
<td>3.0</td>
</tr>
<tr>
<td>ELC 228</td>
<td>Programmable Logic Controllers Applications</td>
<td>4.0</td>
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<tr>
<td>WOL 110</td>
<td>Basic Construction Skills</td>
<td>3.0</td>
</tr>
<tr>
<td>WLD 112</td>
<td>Basic Welding Processes</td>
<td>2.0</td>
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Select one of the following:

- ECO 251: Principles of Microeconomics (3.0)
- ECO 252: Principles of Macroeconomics
- 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

**Total Credits: 70**
No diplomas are offered in Electrical Systems Technology.

Electrical Systems Technology Certificates (C35130)

The certificates listed below can be earned in the Electrical Systems Technology (A35130) program:

- Electrical Systems Technology Certificate Specialization in Fast Track Residential Wiring (C35130-30) (p. 141)
- Electrical Systems Technology Certificate Specialization in Fast Track Commercial and Industrial Wiring (C35130-31) (p. 141)
- Electrical Systems Technology Certificate Specialization in Electrician Assistant Level I (C35130-32) (p. 141)
- Electrical Systems Technology Certificate Specialization in Electrician Assistant Level II (C35130-33) (p. 141)
- Electrical Systems Technology Certificate Specialization in Electrical AHR Controls and Facilities Maintenance Level I (C35130-34) (p. 142)
- Electrical Systems Technology Certificate Specialization in Electrical AHR Controls and Facilities Maintenance Level II (C35130-35) (p. 142)
- Electrical Systems Technology Certificate Specialization in Solar Photovoltaic (C35130-36) (p. 140)
- Electrical Systems Technology Certificate Specialization in Electrical Manufacturing Maintenance Technician Level I (C35130-37) (p. 142)
- Electrical Systems Technology Certificate Specialization in Electrical Manufacturing Maintenance Technician Level II (C35130-38) (p. 142)
- Electrical Systems Technology Certificate Specialization in Fast Track Electrical Construction (C35130-54) (p. 142)

Admissions

- Completion of a high school diploma or equivalent is required as the foundation of a career in this area.

Contact Information

The Electrical Systems Technology program is in the Construction Technologies Division. For more information, call the program office at 704.330.4458 or the Construction Technologies Division at 704.330.4408.

Electrical Systems Technology Certificate Specialization in Fast Track Residential Wiring (C35130-30)

Major Requirements

ELC 112  DC/AC Electricity  5.0
ELC 113  Residential Wiring  4.0
ELC 118  National Electrical Code  2.0
ELC 119  NEC Calculations  2.0
BPR 130  Print Reading-Construction  3.0

Total Credits  16

Electrical Systems Technology Certificate Specialization in Fast Track Commercial and Industrial Wiring (C35130-31)

Major Requirements

ELC 112  DC/AC Electricity  5.0
ELC 114  Commercial Wiring  4.0
ELC 118  National Electrical Code  2.0
ELC 119  NEC Calculations  2.0
ELC 115  Industrial Wiring  4.0

Total Credits  17

Electrical Systems Technology Certificate Specialization in Electrician Assistant Level I (C35130-32)

Major Requirements

ELC 118  National Electrical Code  2.0
ELC 119  NEC Calculations  2.0
ELC 113  Residential Wiring  4.0
ELC 112  DC/AC Electricity  5.0
ARC 114  Architectural Building Information Modeling I  2.0
WOL 110  Basic Construction Skills  3.0

Total Credits  18

Electrical Systems Technology Certificate Specialization in Electrician Assistant Level II (C35130-33)

Major Requirements

ELC 234  Electrical System Design  3.0
ELC 114  Commercial Wiring  4.0
ELC 115  Industrial Wiring  4.0
ARC 114  Architectural CAD  2.0
BPR 130  Print Reading-Construction  3.0
Programs of Study

Electrical Systems Technology Certificate
Specialization in Electrical AHR Controls and Facilities Maintenance Level I (C35130-34)

<table>
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<tr>
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<th>Course Title</th>
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<tr>
<td>AHR 110</td>
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<td>BPR 130</td>
<td>Print Reading-Construction</td>
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<td>ELC 111</td>
<td>Introduction to Electricity</td>
<td>3.0</td>
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<td>ELC 115</td>
<td>Industrial Wiring</td>
<td>4.0</td>
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Electrical Systems Technology Certificate
Specialization in Electrical AHR Controls and Facilities Maintenance Level II (C35130-35)

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<td>AHR 263</td>
<td>Energy Management</td>
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<td>Introduction to Programmable Logic Controller</td>
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Electrical Systems Technology Certificate
Specialization in Solar Photovoltaic (C35130-36)

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Electrical Systems Technology Certificate
Specialization in Electrical Manufacturing Maintenance Technician Level I (C35130-37)

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Electrical Systems Technology Certificate
Specialization in Electrical Manufacturing Maintenance Technician Level II (C35130-38)

<table>
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</table>

Electronics Engineering Technology

The Associate in Applied Science degree in Electronics Engineering Technology is accepted at some colleges and universities as the first two years of a bachelor’s-level engineering technology program. This program is specifically designed to ease the transition for students planning to join the Bachelor of Science in Engineering Technology (BSET) program at UNC Charlotte, but it also can be applied to many other universities. A BSET graduate is known as a technologist.

Electronics Engineering Technicians (associate degree holders) typically build, install, test, troubleshoot, repair, and modify developmental and production electronic components, equipment, and systems such as industrial/computer controls, manufacturing systems, instrumentation systems, communication systems, and power electronic systems.

Emphasis is placed on developing the ability to think critically, analyze, and troubleshoot electronic systems. Beginning with electrical fundamentals, course work progressively introduces electronics, circuit simulation, solid-state fundamentals, digital concepts, instrumentation, C++ programming, microprocessors, programmable Logic Controllers (PLCs). Course work includes setup and maintenance of instrumentation devices, PID, Programmable Logic Controllers (PLCs), LabVIEW programming, C++, and microprocessors. Other course work includes the study of various fields associated with the electrical/electronic industry.

This program is intended for university transfer but also can be used to gain employment after graduation. Graduates also may seek employment as technicians, engineering assistants, field service engineers, electrical and electronics repairers, electromechanical equipment assemblers, electronics and instrumentation technician, or salespersons in electrical generation/distribution, industrial maintenance, automation, electronic repair or other fields requiring a broad-based knowledge of electrical and electronic concepts.

Information on the Electronics Engineering Technology program may be found on the Electronics Engineering Technology website.

For specific information about potential positions and wages in electronics engineering technology employment, visit the Central Piedmont Career Coach website.
Electronics Engineering Technology (A40200)

Degree Awarded
The Associate in Applied Science degree - Electronics Engineering Technology is awarded by the college upon completion of the program.

Program Accreditation
The Electronics Engineering Technology program at Central Piedmont is accredited by the Engineering Technology Accreditation Commission of the Accreditation Board of Engineering and Technology (TAC of ABET), abet.org.

How to Apply
Visit Get Started on the home page of the Central Piedmont website to apply.

Contact Information
If you are in this program or have questions about this program please contact our faculty for advising.

The Electronics Engineering Technology program is in the Engineering Technologies Division. For additional information, visit the Electronics Engineering Technology website or call the Engineering Technology Division at 704.330.6773.

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>
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<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
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<td>or ENG 113</td>
<td>Literature-Based Research</td>
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<td>or ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>COM 110</td>
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<td>or COM 231</td>
<td>Public Speaking</td>
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<td>ART 111</td>
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<tr>
<td>or ART 114</td>
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<td>or ART 115</td>
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<td>or DRA 111</td>
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<tr>
<td>or HUM 120</td>
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<td>or HUM 130</td>
<td>Myth in Human Culture</td>
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<tr>
<td>or MUS 110</td>
<td>Music Appreciation</td>
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<td>or MUS 112</td>
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<td>Philosophical Issues</td>
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<tr>
<td>or PHI 240</td>
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<td>or HIS 112</td>
<td>World Civilizations II</td>
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<tr>
<td>or HIS 132</td>
<td>American History II</td>
<td></td>
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<tr>
<td>or POL 120</td>
<td>American Government</td>
<td></td>
</tr>
<tr>
<td>or PSY 150</td>
<td>General Psychology</td>
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<tr>
<td>or SOC 210</td>
<td>Introduction to Sociology</td>
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<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
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Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ELC 133</td>
<td>Circuit Analysis II</td>
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<tr>
<td>ELN 131</td>
<td>Analog Electronics I</td>
<td>4.0</td>
</tr>
<tr>
<td>ELN 133</td>
<td>Digital Electronics</td>
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<tr>
<td>ELN 232</td>
<td>Introduction to Microprocessors</td>
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<td>ELN 260</td>
<td>Prog Logic Controllers</td>
<td>4.0</td>
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<tr>
<td>Select 1 of following two groups:</td>
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<td>4.0</td>
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<td>Group 1:</td>
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<td>ELC 131</td>
<td>Circuit Analysis I</td>
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<td>Group 2:</td>
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<td>ELC 138</td>
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<tr>
<td>ELC 139</td>
<td>AC Circuit Analysis</td>
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Other Major Requirements:

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<tr>
<td>CSC 134</td>
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<td>PCI 170</td>
<td>DAQ and Control</td>
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<tr>
<td>PHY 151</td>
<td>College Physics I</td>
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<tr>
<td>or PHY 251</td>
<td>General Physics I</td>
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<tr>
<td>PHY 152</td>
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<td>4.0</td>
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<tr>
<td>or PHY 252</td>
<td>General Physics II</td>
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</tr>
<tr>
<td>MAT 172</td>
<td>Precalculus Trigonometry</td>
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</tr>
<tr>
<td>MAT 271</td>
<td>Calculus I</td>
<td>4.0</td>
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<tr>
<td>EGR 110</td>
<td>Introduction to Engineering Technology</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Total Credits: 68

No diplomas are offered in Electronics Engineering Technology.

No certificates are offered in Electronics Engineering Technology.

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 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 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 focuses on EMS management, rescue operations management and methods of EMS education, giving graduates experience in all facets of EMS leadership.

Students who successfully complete the program are eligible for 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.

For specific information about potential positions and wages in emergency medical science employment, visit the Central Piedmont Career Coach website.

**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.
- Central Piedmont 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.
- Consult with advisement counselor and attend an orientation session following placement testing.
- 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. For more information, contact the Program Chair by phone at 704.330.2722, ext. 3274 or by email at emergency.medicalservices@cpcc.edu.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 111</td>
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<tr>
<td>ENG 112</td>
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<tr>
<td>ENG 113</td>
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<td>ENG 114</td>
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<td>COM 110</td>
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<td>COM 231</td>
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<td>ART 111</td>
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<td>ART 114</td>
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<td>ART 115</td>
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<td>DRA 111</td>
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<td>HUM 120</td>
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<td>HUM 130</td>
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<td>MUS 110</td>
<td>3.0</td>
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<tr>
<td>MUS 112</td>
<td>3.0</td>
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<tr>
<td>PHI 215</td>
<td>3.0</td>
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<td>PHI 240</td>
<td>3.0</td>
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<td>REL 110</td>
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<td>MAT 143</td>
<td>3.0</td>
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<td>MAT 152</td>
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<tr>
<td>MAT 171</td>
<td>3.0</td>
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<td>PSY 150</td>
<td>3.0</td>
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<tr>
<td>SOC 210</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits: 74

No diplomas are offered in Emergency Medical Science.

No certificates are offered in Emergency Medical Science.

**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 learn technical and administrative skills such as hydraulics, hazardous materials, arson...
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.
- Students should 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 or email fire.protection@cpcc.edu.

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>PSY 150</td>
<td>General Psychology</td>
<td>3.0</td>
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<td>ENG 112</td>
<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>or ENG 114 Professional Research &amp; Reporting</td>
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<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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<tr>
<td>MAT 271</td>
<td>Calculus I</td>
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<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
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<tr>
<td></td>
<td>or COM 231 Public Speaking</td>
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Take 3 credits from the following:

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<tr>
<th>Course</th>
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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>
<td></td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
</tr>
<tr>
<td>HUM 120</td>
<td>Cultural Studies</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>MUS 110</td>
<td>Music Appreciation</td>
<td></td>
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</table>

Total Credits: 3.0

MUS 112  Introduction to Jazz  3.0
PHI 215  Philosophical Issues  3.0
PHI 240  Introduction to Ethics  3.0
REL 110  World Religions

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<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>
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<td>FIP 220</td>
<td>Fire Fighting Strategies</td>
<td>3.0</td>
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<td>FIP 228</td>
<td>Local Government Finance</td>
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Select 4 credits of the following: 4.0

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<td></td>
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<tr>
<td>CHM 151</td>
<td>General Chemistry I</td>
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<td>PHY 151</td>
<td>College Physics I</td>
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Take 1 course from the following: 4.0

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>FIP 231</td>
<td>Chemistry of Hazardous Materials II</td>
<td></td>
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<td>CHM 152</td>
<td>General Chemistry II</td>
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Major Electives

Select 18 credits of the following: 18.0

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<td>Detection and Investigation</td>
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<tr>
<td>FIP 136</td>
<td>Inspections and Codes</td>
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<tr>
<td>FIP 140</td>
<td>Industrial Fire Protection</td>
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<tr>
<td>FIP 146</td>
<td>Fire Protection Systems</td>
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<tr>
<td>FIP 221</td>
<td>Advanced Fire Fighting Strategies</td>
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<tr>
<td>FIP 224</td>
<td>Fire Instructor I &amp; II</td>
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<tr>
<td>FIP 226</td>
<td>Fire Officer I &amp; II</td>
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<tr>
<td>FIP 229</td>
<td>Fire Dynamics and Combustion</td>
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<td>FIP 240</td>
<td>Fire Service Supervision</td>
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<tr>
<td>FIP 248</td>
<td>Fire Service Personnel Administration</td>
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<tr>
<td>FIP 256</td>
<td>Municipal Public Relations</td>
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<tr>
<td>FIP 276</td>
<td>Managing Fire Services</td>
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<tr>
<td>FIP 277</td>
<td>Fire and Social Behavior</td>
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<td>EPT 140</td>
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<td>WBL 112</td>
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<td>ACA 122</td>
<td>College Transfer Success</td>
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<td>COM 140</td>
<td>Introduction to Intercultural Communication</td>
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Take 1 course:

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<td>or CIS 110</td>
<td>Introduction to Computers</td>
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Total Credits: 64

No diplomas are offered in Fire Protection Technology.

Fire Protection Technology Certificates (C55240)

- Fire Protection Technology Certificate Specialization in Fire Management (C55240-C1) (p. 146)
• Fire Protection Technology Certificate Specialization in Basics in Fire Protection (C55240-C2) (p. 146)
• Fire Protection Technology Certificate Specialization in Firefighting Strategy and Tactics (C55240-C3) (p. 146)
• Fire Protection Technology Certificate Specialization in Global Studies in Fire Protection (C55240-C4) (p. 146)

Fire Protection Technology Certificate Specialization in Fire Management (C55240-C1)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
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<td>FIP 248</td>
<td>Fire Service Personnel Administration</td>
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<td>FIP 256</td>
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Total Credits 12

Fire Protection Technology Certificate Specialization in Basics in Fire Protection (C55240-C2)

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</thead>
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<td>Introduction to Fire Protection</td>
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<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>
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Total Credits 15

Fire Protection Technology Certificate Specialization in Firefighting Strategy and Tactics (C55240-C3)

<table>
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<tr>
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<tr>
<td>FIP 220</td>
<td>Fire Fighting Strategies</td>
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<tr>
<td>FIP 221</td>
<td>Advanced Fire Fighting Strategies</td>
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<tr>
<td>FIP 224</td>
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Total Credits 13

Fire Protection Technology Certificate Specialization in Global Studies in Fire Protection (C55240-C4)

<table>
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<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
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<td>Introduction to Fire Protection</td>
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<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>REL 110</td>
<td>World Religions</td>
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</tbody>
</table>

Total Credits 12

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 (GPS), Geographic Information Systems (GIS) and other areas of property description and measurements. GIS Technicians make and interpret maps for a variety of purposes; they also digitize, collect and maintain GIS data. Analysts maintain GIS databases and manipulate spatial data to illustrate relationships that might otherwise be difficult to visualize.

Course work includes the communication and computational skills required for boundary, construction, route and control surveying, photogrammetry, topography, drainage, surveying law, subdivision design, cartography and spatial analysis, with emphasis upon applications of electronic data collection and related software including CAD and ArcGIS.

Graduates should qualify for jobs as survey party chief, instrument person, surveying technician, highway surveyor, mapper, GPS technician, CAD operator, GIS Technician or Analyst. Graduates are prepared to pursue the requirements necessary to become a Professional Land Surveyor in North Carolina.

For specific information about potential positions and wages in geomatics employment, visit the Central Piedmont Career Coach website.

Geomatics Technology (A40420)

Degree Awarded

The Associate in Applied Science Degree - Geomatics Technology is awarded by the college upon completion of this program.

Admissions

- A high school diploma or equivalent is required.
- Central Piedmont 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.
- Attend an orientation session and consult with an advising counselor regarding course placement after placement testing.
- Consult with a Geomatics Technology Faculty Advisor before course 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 the Program Chair, Adam Spillman, at 704.330.6652, or visit the Geomatics Technology website.

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>
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<tr>
<td>or COM 231</td>
<td>Public Speaking</td>
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<tr>
<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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<tr>
<td>MAT 271</td>
<td>Calculus I</td>
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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>
<td>Art History Survey II</td>
<td></td>
</tr>
</tbody>
</table>
Central Piedmont Community College

DRA 111  Theatre Appreciation
HUM 120  Cultural Studies
HUM 130  Myth in Human Culture
MUS 110  Music Appreciation
MUS 112  Introduction to Jazz
PHI 215  Philosophical Issues
PHI 240  Introduction to Ethics
REL 110  World Religions

Select 3 credits of the following:  
ECO 251  Principles of Microeconomics
ECO 252  Principles of Macroeconomics
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

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>SRV 110</td>
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</tr>
<tr>
<td>CEG 115</td>
<td>Intro to Tech &amp; Sustainability</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td>3.0</td>
</tr>
<tr>
<td>GIS 111</td>
<td>Introduction to GIS</td>
<td>3.0</td>
</tr>
<tr>
<td>CEG 151</td>
<td>Cad for Engineering Technology</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits 16

Geomatics Technology Certificate Specialization in Geospatial Fundamentals (C40420-C7)

Certificate Awarded

A certificate is awarded in Mapping upon completion of this program.

Admissions

- Completion of a high school diploma or equivalent is required.
- Central Piedmont 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.

Contact Information

The Geomatics Technology program is in the Engineering Technologies Division. For more information, call the Program Chair at 704.330.6895.

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>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 112</td>
<td>Introduction to GPS</td>
<td>3.0</td>
</tr>
<tr>
<td>GIS 121</td>
<td>Georeferencing &amp; Mapping</td>
<td>3.0</td>
</tr>
<tr>
<td>GIS 240</td>
<td>Air Photo Interpretation</td>
<td>3.0</td>
</tr>
<tr>
<td>GIS 225</td>
<td>Advanced Methods in GIS</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits 15

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 receive hands-on training in computer publishing, imaging technology, offset lithography, screen printing, flexography and emerging printing technologies.

No diplomas are offered in Geomatics Technology.

Geomatics Technology Certificates (C40420)

- Geomatics Technology Certificate Specialization in Geomatics Technology Pathway (C40420-C6) (p. 147)
- Geomatics Technology Certificate Specialization in Geospatial Fundamentals (C40420-C7) (p. 147)
Programs of Study

Graduates should qualify for career opportunities within the printing, publishing and packaging industries.

For specific information about potential positions and wages in graphic arts and imaging employment, visit the Central Piedmont Career Coach website.

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 the program chair, take no more than two pre-admission 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 the 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 the program office at 704.330.4425 or contact the program chair at 704.330.4427. For suggested course sequence, contact Graphic Arts and Imaging Technology instructors or program counselors through the program office.

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>COM 110</td>
<td>Introduction to Communication</td>
<td>3.0</td>
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<tr>
<td></td>
<td>or COM 231 Public Speaking</td>
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Take 3 credits from the following: 3.0
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<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>
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</tbody>
</table>

Take 1 course from the following: 3.0
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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</tr>
<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
<td></td>
</tr>
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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>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>DRA 111</td>
<td>Theatre Appreciation</td>
<td></td>
</tr>
<tr>
<td>HUM 120</td>
<td>Cultural Studies</td>
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<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</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>PHI 215</td>
<td>Philosophical Issues</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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Select 3 credits of the following: 3.0
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</td>
<td></td>
</tr>
<tr>
<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>HIS 111</td>
<td>World Civilizations I</td>
<td></td>
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<tr>
<td>HIS 112</td>
<td>World Civilizations II</td>
<td></td>
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<tr>
<td>HIS 131</td>
<td>American History I</td>
<td></td>
</tr>
<tr>
<td>HIS 132</td>
<td>American History II</td>
<td></td>
</tr>
<tr>
<td>POL 120</td>
<td>American Government</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>
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</tbody>
</table>

Major Requirements
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRA 121</td>
<td>Graphic Arts I</td>
<td>4.0</td>
</tr>
<tr>
<td>GRA 221</td>
<td>Graphic Arts II</td>
<td>4.0</td>
</tr>
<tr>
<td>GRA 151</td>
<td>Computer Graphics I</td>
<td>2.0</td>
</tr>
<tr>
<td>GRA 152</td>
<td>Computer Graphics II</td>
<td>2.0</td>
</tr>
<tr>
<td>GRA 153</td>
<td>Computer Graphics III</td>
<td>2.0</td>
</tr>
<tr>
<td>GRA 255</td>
<td>Image Manipulation I</td>
<td>2.0</td>
</tr>
<tr>
<td>GRA 256</td>
<td>Image Manipulation II</td>
<td>2.0</td>
</tr>
<tr>
<td>GRD 141</td>
<td>Graphic Design I</td>
<td>4.0</td>
</tr>
<tr>
<td>PRN 155</td>
<td>Screen Printing I</td>
<td>2.0</td>
</tr>
<tr>
<td>PRN 131</td>
<td>Flexography I</td>
<td>4.0</td>
</tr>
<tr>
<td>WBL 111</td>
<td>Work-Based Learning I</td>
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Technical Electives

Select 20 credits from the following: 20.0
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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ACA 111</td>
<td>College Student Success</td>
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<tr>
<td>ACA 122</td>
<td>College Transfer Success</td>
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</tr>
<tr>
<td>GRA 222</td>
<td>Graphic Arts III</td>
<td></td>
</tr>
<tr>
<td>GRA 154</td>
<td>Computer Graphics IV</td>
<td></td>
</tr>
<tr>
<td>GRA 140</td>
<td>Graphic Arts Imaging</td>
<td></td>
</tr>
<tr>
<td>GRA 110</td>
<td>Graphic Arts Orientation</td>
<td></td>
</tr>
<tr>
<td>PRN 156</td>
<td>Screen Printing II</td>
<td></td>
</tr>
<tr>
<td>WBL 112</td>
<td>Work-Based Learning I</td>
<td></td>
</tr>
<tr>
<td>PRN 171</td>
<td>Introduction to Brand Protection and Anti-Counterfeiting Technology</td>
<td></td>
</tr>
<tr>
<td>PRN 271</td>
<td>Graphic Imaging for Brand Protection and Anti-Counterfeiting Technology</td>
<td></td>
</tr>
<tr>
<td>PRN 272</td>
<td>Brand Protection and Anti-Counterfeiting Technology Implementation</td>
<td></td>
</tr>
<tr>
<td>WBL 122</td>
<td>Work-Based Learning II</td>
<td></td>
</tr>
<tr>
<td>BUS 110</td>
<td>Introduction to Business</td>
<td></td>
</tr>
<tr>
<td>BUS 139</td>
<td>Entrepreneurship I</td>
<td></td>
</tr>
<tr>
<td>MKT 120</td>
<td>Principles of Marketing</td>
<td></td>
</tr>
<tr>
<td>CIS 110</td>
<td>Introduction to Computers</td>
<td></td>
</tr>
</tbody>
</table>

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 produce jobs for labels, tags, boards, packaging and corrugated jobs found in segments of the flexographic industry. Students 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-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 pre-admission 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

<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>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>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
<td></td>
</tr>
<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
<td>3.0</td>
<td></td>
</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 3 credits of the following:</td>
<td>3.0</td>
<td></td>
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</table>

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>GRA 121</td>
<td>Graphic Arts I</td>
<td>4.0</td>
</tr>
<tr>
<td>GRA 221</td>
<td>Graphic Arts II</td>
<td>4.0</td>
</tr>
<tr>
<td>GRA 151</td>
<td>Computer Graphics I</td>
<td>2.0</td>
</tr>
<tr>
<td>GRA 152</td>
<td>Computer Graphics II</td>
<td>2.0</td>
</tr>
<tr>
<td>GRA 153</td>
<td>Computer Graphics III</td>
<td>2.0</td>
</tr>
<tr>
<td>GRA 255</td>
<td>Image Manipulation I</td>
<td>2.0</td>
</tr>
<tr>
<td>GRA 256</td>
<td>Image Manipulation II</td>
<td>2.0</td>
</tr>
<tr>
<td>GRD 141</td>
<td>Graphic Design I</td>
<td>4.0</td>
</tr>
<tr>
<td>PRN 131</td>
<td>Flexography I</td>
<td>4.0</td>
</tr>
<tr>
<td>PRN 132</td>
<td>Flexography II</td>
<td>4.0</td>
</tr>
<tr>
<td>PRN 231</td>
<td>Flexography III</td>
<td>4.0</td>
</tr>
<tr>
<td>PRN 232</td>
<td>Flexography IV</td>
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<td>PRN 241</td>
<td>Flexo Applications I</td>
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<tr>
<td>PRN 242</td>
<td>Flexo Applications II</td>
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<tr>
<td>WBL 111</td>
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Technical Electives

Select 8.0 credits from the following: 8.0
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>PRN 155</td>
<td>Screen Printing I</td>
</tr>
<tr>
<td>GRA 110</td>
<td>Graphic Arts Orientation</td>
</tr>
<tr>
<td>GRA 140</td>
<td>Graphic Arts Imaging</td>
</tr>
<tr>
<td>PRN 156</td>
<td>Screen Printing II</td>
</tr>
<tr>
<td>GRA 222</td>
<td>Graphic Arts III</td>
</tr>
<tr>
<td>PRN 171</td>
<td>Introduction to Brand Protection and Anti-Counterfeiting Technology</td>
</tr>
<tr>
<td>PRN 271</td>
<td>Graphic Imaging for Brand Protection and Anti-Counterfeiting Technology</td>
</tr>
<tr>
<td>PRN 272</td>
<td>Brand Protection and Anti-Counterfeiting Technology Implementation</td>
</tr>
<tr>
<td>GRA 154</td>
<td>Computer Graphics IV</td>
</tr>
<tr>
<td>BUS 110</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>WBL 112</td>
<td>Work-Based Learning I</td>
</tr>
<tr>
<td>WBL 122</td>
<td>Work-Based Learning II</td>
</tr>
</tbody>
</table>
Health Information Technology

The Health Information Technology curriculum prepares individuals with the knowledge and skills to process, analyze, abstract, compile, maintain, 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, outpatient clinics, physicians’ offices, hospices, mental health facilities, IT departments working with electronic health records, and electronic health record vendors.

For specific information about potential positions and wages in health information employment, visit the Central Piedmont Career Coach website.

Health Information Technology (A45360)

Program Accreditation

The Health Information Technology program at Central Piedmont 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 an Admissions Application to Central Piedmont.
- Submit official high school transcripts and any official college transcripts (if applicable) to the Central Piedmont 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. For more information, visit the Health Information Technology website.
- 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.
- BIO 168, BIO 169, CIS 110, DBA 112, MED 121, and MED 122 must have been completed within the five years previous to registration for a HIT course for which they are prerequisites or co-requisites.

No diplomas are offered in Graphics Arts and Imaging Technology.

Graphic Arts and Imaging Technology Certificates (C30180)

- Graphic Arts and Imaging Technology Certificate Specialization in Screen Printing Company Ownership (C30180-14) (p. 150)
- Graphic Arts and Imaging Technology Certificate Specialization in Brand Protection and Anti-Counterfeiting Technology (C30180-20) (p. 150)

Graphic Arts and Imaging Technology Certificate Specialization in Screen Printing Company Ownership (C30180-14)

Major Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRN 156</td>
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<td>GRA 153</td>
<td>Computer Graphics III</td>
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</tr>
<tr>
<td>GRA 255</td>
<td>Image Manipulation I</td>
<td>2.0</td>
</tr>
<tr>
<td>BUS 139</td>
<td>Entrepreneurship I</td>
<td>3.0</td>
</tr>
<tr>
<td>GRA 221</td>
<td>Graphic Arts II</td>
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</tr>
<tr>
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</tr>
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</table>

Graphic Arts and Imaging Technology Certificate Specialization in Brand Protection and Anti-Counterfeiting Technology (C30180-20)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRA 121</td>
<td>Graphic Arts I</td>
<td>4.0</td>
</tr>
<tr>
<td>PRN 131</td>
<td>Flexography I</td>
<td>4.0</td>
</tr>
<tr>
<td>PRN 171</td>
<td>Introduction to Brand Protection and Anti-Counterfeiting Technology</td>
<td>2.0</td>
</tr>
<tr>
<td>PRN 271</td>
<td>Graphic Imaging for Brand Protection and Anti-Counterfeiting Technology</td>
<td>2.0</td>
</tr>
<tr>
<td>PRN 272</td>
<td>Brand Protection and Anti-Counterfeiting Technology Implementation</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>Total Credits</td>
<td>15</td>
</tr>
</tbody>
</table>

This certificate program is designed to educate individuals looking to enter the security printing industry. This program will include important topics geared toward understanding how counterfeiting is impacting world trade and what technologies are in place to deter brand infringement. Students will learn the many ways a brand can be impacted by criminals. They will gain the skills required to develop and implement a plan of protection for a brand. Students who complete this certificate will understand the legal aspects and scope of counterfeiting, be knowledgeable in the technologies designed to combat counterfeiting, and be able to develop a plan of protection for a brand to reduce infringement to their intellectual property.
• 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 Central Piedmont 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 require 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, visit the Health Information Technology website. For further assistance, contact the Health Sciences Admissions Clerk at 704.330.6958.

General Education Requirements
ENG 111 Writing and Inquiry 3.0
PSY 150 General Psychology 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
  MAT 110 Mathematical Measurement and Literacy
  MAT 143 Quantitative Literacy
Select 3 credits of the following: 3.0
  ART 111 Art Appreciation
  ART 114 Art History Survey I
  ART 115 Art History Survey II
  DRA 111 Theatre Appreciation
  HUM 120 Cultural Studies
  HUM 130 Myth in Human Culture
  MUS 110 Music Appreciation
  MUS 112 Introduction to Jazz
  PHI 215 Philosophical Issues
  PHI 240 Introduction to Ethics

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

Technical Electives
Take 2 credits of the following: 2.0
  HIT 220 Health Informatics & EHRs
  HIT 221 Lifecycle of Electronic Health Record
  HIT 225 Healthcare Informatics
  HIT 227 Informatics Project Management

Total Credits 74

No diplomas are offered in Health Information Technology.

There are no certificates offered in this program.

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 following exams:

1. the North Carolina Certified Plant Professional Exam,
2. the licensed pesticide applicators exam, and
3. the ISA (International Society of Arboriculture) certified arborist exam.

For specific information about potential positions and wages in horticulture employment, visit the Central Piedmont Career Coach website.

**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 Central Piedmont) is required.
- Central Piedmont placement tests are required in English and mathematics. Developmental Studies mathematics and English courses are available for students to build basic skills and knowledge.
- Consult with an Advisement Counselor and attend an orientation session after 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, contact the Program Chair at 704.330.4826.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>ENG 111</td>
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<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
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<td>Literature-Based Research</td>
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<td>Professional Research &amp; Reporting</td>
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<td>COM 231</td>
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<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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<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>Precalculus Algebra</td>
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<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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<tr>
<td>HOR 161</td>
<td>Plant Materials II</td>
<td>3.0</td>
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<td>HOR 162</td>
<td>Applied Plant Science</td>
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<td>HOR 164</td>
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<td>HOR 166</td>
<td>Soils and Fertilizers</td>
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<td>HOR 168</td>
<td>Plant Propagation</td>
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<td>HOR 235</td>
<td>Horticulture Turfgrass</td>
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<td>HOR 257</td>
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**Technical Electives**

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<td>HOR 114</td>
<td>Landscape Construction</td>
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<td>HOR 118</td>
<td>Equipment Operation and Maintenance</td>
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<td>HOR 142</td>
<td>Fruit &amp; Vegetable Production</td>
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<tr>
<td>HOR 154</td>
<td>Introduction to Horticulture Therapy</td>
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<td>HOR 170</td>
<td>Horticultural Computer Applications</td>
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<td>HOR 213</td>
<td>Landscape Design II</td>
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<td>HOR 245</td>
<td>Horticultural Specialty Crops</td>
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<td>HOR 251</td>
<td>Insects &amp; Diseases</td>
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<td>HOR 255</td>
<td>Interiorscapes</td>
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<td>HOR 257</td>
<td>Arboriculture Practices</td>
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<td>HOR 268</td>
<td>Advanced Propagation</td>
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<tr>
<td>HOR 293</td>
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</table>
No diplomas are offered in Horticulture Technology.

Horticulture Technology Certificates (C15240)

- Horticulture Technology Certificate with a Specialization in Landscape Design (C15240-C1) (p. 153)
- Horticulture Technology Certificate with a Specialization in Horticulture Maintenance (C15240-C5) (p. 153)
- Horticulture Technology Certificate with a Specialization in Plant Production (C15240-C6) (p. 153)
- Horticulture Technology Certificate with a Specialization in Horticulture (C15240-C7) (p. 153)
- Horticulture Technology Certificate with a Specialization in Landscape Maintenance (C15240-C8) (p. 153)
- Horticulture Technology Certificate with a Specialization in Urban Agriculture (C15240-C9) (p. 153)

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</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HOR 160</td>
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<tr>
<td>HOR 213</td>
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<td>HOR 112</td>
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<td>HOR 161</td>
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<td>Total Credits</td>
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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>
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<tbody>
<tr>
<td>HOR 116</td>
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<td>HOR 118</td>
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<tr>
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<td>3.0</td>
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<tr>
<td>Total Credits</td>
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</table>

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>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOR 160</td>
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<tr>
<td>HOR 162</td>
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<tr>
<td>HOR 166</td>
<td>3.0</td>
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<tr>
<td>HOR 168</td>
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<tr>
<td>Total Credits</td>
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</table>

Horticulture Technology Certificate Specialization in Horticulture (C15240-C7)

This program also is available to high school students through the Career and College Promise program.

**Major Requirements**

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<tr>
<td>TRF 152</td>
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<tr>
<td>Total Credits</td>
<td>18</td>
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</tbody>
</table>
Programs of Study

HOR 164  Horticultural Pest Management  3.0
HOR 168  Plant Propagation  3.0
HOR 166  Soils and Fertilizers  3.0
Total Credits  14

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.

Course work includes guest services, leadership, management, restaurant operations, lodging operations, marketing, sanitation, food preparation, food and beverage management, and other critical areas.

Graduates should qualify for management or entry-level supervisory positions in food and lodging operations, including restaurants, food service, beverage service, catering, front office, reservations, and housekeeping. Opportunities are also available in product services, technical support, and sales.

For specific information about potential positions and wages in hospitality management employment, visit the Central Piedmont Career Coach website.

Hospitality Management (A25110)

Degree Awarded

The Associate in Applied Science Degree – Hospitality Management is awarded by the college upon completion of this program.

Admissions

- Complete an admissions application to Central Piedmont.
- Submit an official high school diploma, as well as college transcripts, to Admissions, Records & Registration.
- Take placement tests in English, reading, and mathematics.
- Complete all needed developmental studies courses prior to beginning CUL, HRM, and BPA prefix courses.
- Make an appointment for a consultation with an academic advisor.
- Make an appointment for a consultation with 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.

General Education Requirements

ENG 111  Writing and Inquiry  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

COM 110  Introduction to Communication
COM 231  Public Speaking

Select 3 credits of the following:  3.0

MAT 121  Algebra/Trigonometry I
MAT 143  Quantitative Literacy
MAT 152  Statistical Methods I
MAT 171  Pre-calculus Algebra
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
HUM 120  Cultural Studies
HUM 130  Myth in Human Culture
MUS 110  Music Appreciation
MUS 112  Introduction to Jazz
PHI 215  Philosophical Issues
PHI 240  Introduction to Ethics
REL 110  World Religions

Select 3 credits of the following:  3.0

ECO 251  Principles of Microeconomics
ECO 252  Principles of Macroeconomics
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

Major Requirements

HRM 110  Introduction to Hospitality and Tourism  3.0
HRM 120  Front Office Procedures  3.0
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 135  Food and Beverage Service  2.0
CUL 135A  Food and Beverage Service Lab  1.0
CUL 273  Career Development  1.0
ACC 120  Principles of Financial Accounting  4.0
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 an admissions application to Central Piedmont.
- Submit an official high school diploma as well as college transcripts to Admission, Records & Registration.
- Take placement tests in English, reading, and mathematics.
- Complete all needed developmental studies courses prior to beginning CUL, HRM and BPA prefix courses.
- Make an appointment for a consultation with an academic advisor.
- Make an appointment for a consultation with 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, 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

<table>
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<th>Credits</th>
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<td>ENG 111</td>
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Select 3 credits of the following: 3.0

Major Requirements

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<td>HRM 110</td>
<td>Introduction to Hospitality and Tourism</td>
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<td>Legal Issues-Hospitality</td>
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<td>HRM 220</td>
<td>Cost Control-Food and Beverage</td>
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<td>HRM 245</td>
<td>Human Resource Management-Hospitality</td>
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<td>HRM 280</td>
<td>Management Problems-Hospitality</td>
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<td>HRM 225</td>
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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 and 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

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<tr>
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<td>Algebra/Trigonometry I</td>
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Select 3 credits of the following: 3.0

Major Requirements

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<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUL 110</td>
<td>Sanitation and Safety</td>
<td>2.0</td>
</tr>
<tr>
<td>HRM 110</td>
<td>Introduction to Hospitality and Tourism</td>
<td>3.0</td>
</tr>
<tr>
<td>HRM 140</td>
<td>Legal Issues-Hospitality</td>
<td>3.0</td>
</tr>
<tr>
<td>HRM 245</td>
<td>Human Resource Management-Hospitality</td>
<td>3.0</td>
</tr>
<tr>
<td>HRM 280</td>
<td>Management Problems-Hospitality</td>
<td>3.0</td>
</tr>
<tr>
<td>HRM 225</td>
<td>Beverage Management</td>
<td>3.0</td>
</tr>
</tbody>
</table>
Programs of Study

Hospitality Management Certificate (C25110-C2)

This curriculum trains students to acquire the skills needed for entry-level hotel supervisory positions.

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRM 110</td>
<td>Introduction to Hospitality and Tourism</td>
<td>3.0</td>
</tr>
<tr>
<td>HRM 245</td>
<td>Human Resource Management-Hospitality</td>
<td>3.0</td>
</tr>
<tr>
<td>HRM 120</td>
<td>Front Office Procedures</td>
<td>3.0</td>
</tr>
<tr>
<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>
<tr>
<td>CUL 111</td>
<td>Success in Hospitality Studies</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Total Credits: 16

Hotel Management Certificate I (C25110-C1)

This curriculum introduces students who would like to be employed in entry-level service or supervisory positions in the hospitality industry.

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUL 111</td>
<td>Sanitation and Safety</td>
<td>2.0</td>
</tr>
<tr>
<td>HRM 245</td>
<td>Human Resource Management-Hospitality</td>
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</tr>
<tr>
<td>HRM 225</td>
<td>Beverage Management</td>
<td>3.0</td>
</tr>
<tr>
<td>CUL 135</td>
<td>Food and Beverage Service</td>
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</tr>
</tbody>
</table>

Total Credits: 15

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

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRM 140</td>
<td>Legal Issues-Hospitality</td>
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</tr>
<tr>
<td>HRM 240</td>
<td>Marketing for Hospitality</td>
<td>3.0</td>
</tr>
<tr>
<td>HRM 245</td>
<td>Human Resource Management-Hospitality</td>
<td>3.0</td>
</tr>
<tr>
<td>HRM 225</td>
<td>Beverage Management</td>
<td>3.0</td>
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<tr>
<td>HRM 150</td>
<td>Training for Hospitality</td>
<td>3.0</td>
</tr>
<tr>
<td>CUL 111</td>
<td>Success in Hospitality Studies</td>
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</tbody>
</table>

Total Credits: 16

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUL 110</td>
<td>Sanitation and Safety</td>
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</tr>
<tr>
<td>HRM 240</td>
<td>Marketing for Hospitality</td>
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</tr>
<tr>
<td>HRM 210</td>
<td>Meetings and Event Planning</td>
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</tr>
<tr>
<td>CUL 135</td>
<td>Food and Beverage Service</td>
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<td>CUL 135A</td>
<td>Food and Beverage Service Lab</td>
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<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>
<td>1.0</td>
</tr>
</tbody>
</table>

Total Credits: 15

Service Certificate (C25110-C5)

This curriculum introduces students to the basic practices and concepts of providing guest service in a hospitality setting. This certificate prepares students for entry-level service or supervisory positions in the hospitality industry.

Major Requirements

<table>
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<th>Course</th>
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<tbody>
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<td>HRM 245</td>
<td>Human Resource Management-Hospitality</td>
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<td>CUL 135</td>
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Total Credits: 15
Major Requirements

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CUL 110</td>
<td>Sanitation and Safety</td>
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<tr>
<td>HRM 120</td>
<td>Front Office Procedures</td>
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<td>HRM 210</td>
<td>Meetings and Event Planning</td>
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<tr>
<td>CUL 135</td>
<td>Food and Beverage Service</td>
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<tr>
<td>CUL 135A</td>
<td>Food and Beverage Service Lab</td>
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<tr>
<td>HRM 150</td>
<td>Training for Hospitality</td>
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<tr>
<td>CUL 111</td>
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Hospitality Leadership Certificate (C25110-C6)

Major Requirements

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<td>HRM 150</td>
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<td>HRM 240</td>
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<td>ACC 115</td>
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Human Services Technology

The Human Services Technology curriculum prepares students for entry and mid-level positions in institutions and agencies that provide social, community and educational services.

Students take courses from a variety of disciplines. Emphasis in core courses is placed on development of relevant knowledge, skills and attitudes in human services. Fieldwork experience provides opportunities for application of knowledge and skills learned in the classroom.

Graduates should qualify for positions in mental health, childcare, family services, social services, rehabilitation, correction and educational agencies.

For specific information about potential positions and wages in human services employment, visit the Central Piedmont Career Coach website.

Human Services Technology (A45380)

- Human Services Technology (A45380) (p. 157)
- Human Services Technology Developmental Disabilities Concentration (A4538A) (p. 158)
- Human Services Technology Substance Abuse Concentration (A4538E) (p. 159)

Degree Awarded

The Associate in Applied Science Degree - Human Services Technology is awarded by the college upon completion of this program.

Admissions

- Complete the required Central Piedmont admissions application.
- Submit high school transcripts as well as any college transcripts.
- Take required placement tests.
- Complete necessary Developmental reading and writing classes with a “C” or better.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Program Accreditation

The Human Services Technology Associates Degree in Applied Sciences has articulation agreements with Queens University of Charlotte and Pfeiffer University. Many of the Human Services courses are accepted in these universities. Some of these courses also may be approved by Gardner-Webb and Wingate University.

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 the Program Chair at 704.330.6153, or visit the Health and Human Services website.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<td>ENG 113 Literature-Based Research</td>
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<td>ENG 114 Professional Research &amp; Reporting</td>
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<td>Take 3 credits from the following:</td>
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<tr>
<td></td>
<td>COM 110 Introduction to Communication</td>
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<td>Take 3 credits from the following:</td>
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<td>MAT 143 Quantitative Literacy</td>
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<td></td>
<td>MAT 152 Statistical Methods I</td>
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<td>MAT 171 Precalculus Algebra</td>
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<tr>
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<td>ART 114 Art History Survey I</td>
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<td>ART 115 Art History Survey II</td>
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<td>DRA 111 Theatre Appreciation</td>
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<td>HUM 120 Cultural Studies</td>
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<td>HUM 130 Myth in Human Culture</td>
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<td></td>
<td>MUS 110 Music Appreciation</td>
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<td></td>
<td>MUS 112 Introduction to Jazz</td>
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<td></td>
<td>PHI 215 Philosophical Issues</td>
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<td>PHI 240 Introduction to Ethics</td>
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<td></td>
<td>REL 110 World Religions</td>
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Major Requirements

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<th>Title</th>
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<tr>
<td>HSE 110</td>
<td>Introduction to Human Services</td>
<td>3.0</td>
</tr>
<tr>
<td>HSE 112</td>
<td>Group Process I</td>
<td>2.0</td>
</tr>
<tr>
<td>HSE 123</td>
<td>Interviewing Techniques</td>
<td>3.0</td>
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<td>HSE 125</td>
<td>Counseling</td>
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### Programs of Study

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<th>Course Name</th>
<th>Credits</th>
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<tr>
<td>HSE 210</td>
<td>Human Services Issues</td>
<td>2.0</td>
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<tr>
<td>HSE 225</td>
<td>Crisis Intervention</td>
<td>3.0</td>
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<tr>
<td>PSY 150</td>
<td>General Psychology</td>
<td>3.0</td>
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<tr>
<td>SOC 213</td>
<td>Sociology of the Family</td>
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<tr>
<td>PSY 241</td>
<td>Developmental Psychology</td>
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<td>PSY 281</td>
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**Take one of the following courses:**

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<th>Course Name</th>
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<td>HSE 212</td>
<td>Group Process II</td>
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<td>HSE 220</td>
<td>Case Management</td>
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<td>HSE 227</td>
<td>Children &amp; Adolescents in Crisis</td>
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<td>SAB 110</td>
<td>Substance Abuse Overview</td>
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<td>WBL 111</td>
<td>Work-Based Learning I</td>
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<tr>
<td>WBL 115</td>
<td>Work-Based Learning Seminar I</td>
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</tr>
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<td>WBL 121</td>
<td>Work-Based Learning II</td>
<td>1.0</td>
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<td>WBL 125</td>
<td>Work-Based Learning Seminar II</td>
<td>1.0</td>
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<tr>
<td>DDT 110</td>
<td>Developmental Disabilities</td>
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<td>CIS 110</td>
<td>Introduction to Computers</td>
<td>3.0</td>
</tr>
<tr>
<td>HSE 242</td>
<td>Family Systems</td>
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</tbody>
</table>

**Total Credits:** 70

### Human Services Technology 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 specialize in the areas of developmental disabilities and intellectual disabilities.

Students 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 are 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 education programs and other programs for individuals with developmental and intellectual disabilities.

### 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 the required Central Piedmont admissions application.
- Submit high school transcripts and any college transcripts.
- Take required placement tests.
- Complete necessary Developmental 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. 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 also are 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 Health and Human Services Division. For more information, call the Program Chair, Sherina Dubose Tillman, at 704.330.6748, or visit the Health and Human Services website.

### General Education Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</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>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
<td>3.0</td>
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<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>COM 110</td>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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<td>Take 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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<td>MAT 152</td>
<td>Statistical Methods I</td>
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<td>Precalculus Algebra</td>
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<td>Select 3 credits of the following:</td>
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<tr>
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<tr>
<td>ART 114</td>
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<td>MUS 110</td>
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<td>Introduction to Jazz</td>
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<tr>
<td>REL 110</td>
<td>World Religions</td>
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</tbody>
</table>
The Human Services Technology/Substance Abuse program is designed to prepare students for a career in the field of substance use 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 use 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 Addictions Specialist Professional Practice Board qualify for positions as substance use counselors, prevention and education specialists, 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 Addictions Specialist 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 also are accepted for certification/licensure by NAADAC, the Association for Addiction Professionals. All Human Services Programs, including the Substance Abuse Program, articulate with Queens University, Gardner Webb University, and Pfeiffer University Human Services/Human Relations Programs.

Some Human Services Technology Substance Abuse courses may be used in applying for certification by the North Carolina Addiction Specialist 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.

**Admissions**

- Complete the required Central Piedmont admissions application.
- Submit high school transcripts and any college transcripts.
- Request that college transcripts be evaluated for transfer credit to Central Piedmont.
- Take any required placement tests.
- For course sequence and registration advisement, contact the program chair at 704.330.6749.

**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 students to begin internships. 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, call the Program Chair, DeAn White at 704-330-6749 or visit the Substance Abuse Program website.

**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>
</tbody>
</table>

**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 use 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 use 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 Addictions Specialist Professional Practice Board qualify for positions as substance use counselors, prevention and education specialists, 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 Addictions Specialist 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 also are accepted for certification/licensure by NAADAC, the Association for Addiction Professionals. All Human Services Programs, including the Substance Abuse Program, articulate with Queens University, Gardner Webb University, and Pfeiffer University Human Services/Human Relations Programs.

Some Human Services Technology Substance Abuse courses may be used in applying for certification by the North Carolina Addiction Specialist 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.

**Admissions**

- Complete the required Central Piedmont admissions application.
- Submit high school transcripts and any college transcripts.
- Request that college transcripts be evaluated for transfer credit to Central Piedmont.
- Take any required placement tests.
- For course sequence and registration advisement, contact the program chair at 704.330.6749.

**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 students to begin internships. 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, call the Program Chair, DeAn White at 704-330-6749 or visit the Substance Abuse Program website.

**General Education Requirements**

<table>
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<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
<td>3.0</td>
</tr>
</tbody>
</table>
No diplomas are offered in Human Services Technology.

**Human Services Technology Certificates (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) (p. 160)
- Human Services Technology Certificate with a Specialization in Case Management (C45380-C2) (p. 160)
- Human Services Technology Certificate with a Specialization in Supported Employment (C45380-C2) (p. 161)
- Human Services Technology Certificate Specialization in Developmental Disabilities & Deaf Studies (C4538A-C3) (p. 161)
- Human Services Technology Certificate Specialization in Children with Exceptionalities (C4538A-C4) (p. 161)
- Human Services Technology Certificate Specialization in Developmental Disabilities for Healthcare Professionals (C4538A-C5) (p. 161)
- Human Services Technology Certificate with a Specialization in Substance Abuse Counseling (C4538E-C2) (p. 162)
- Human Services Technology Certificate with a Specialization in Substance Abuse Counseling (C4538E-C3) (p. 162)
- Human Services Technology Certificate with a Specialization in Substance Abuse & Behavioral Health Prevention (C4538E-C5) (p. 162)
- Human Services Technology Certificate with a Specialization in Substance Abuse & Criminal Justice (C4538E-C6) (p. 162)

**Human Services Technology Certificate with a Specialization in Human Services Technology (C45380-C1)**

**Major Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>HSE 110</td>
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<td>HSE 123</td>
<td>Group Process I</td>
<td>2.0</td>
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<tr>
<td>HSE 210</td>
<td>Human Services Issues</td>
<td>2.0</td>
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<tr>
<td>HSE 225</td>
<td>Crisis Intervention</td>
<td>3.0</td>
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<tr>
<td>PSY 150</td>
<td>General Psychology</td>
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<td>SOC 213</td>
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<td>PSY 281</td>
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**Concentration Requirements:**

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<tr>
<td>WBL 115</td>
<td>Work-Based Learning Seminar I</td>
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<tr>
<td>SAB 110</td>
<td>Substance Abuse Overview</td>
<td>3.0</td>
</tr>
<tr>
<td>SAB 120</td>
<td>Intake and Assessment</td>
<td>3.0</td>
</tr>
<tr>
<td>SAB 125</td>
<td>SA Case Management</td>
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<td>SAB 135</td>
<td>Addictive Process</td>
<td>3.0</td>
</tr>
<tr>
<td>SAB 240</td>
<td>Sab Issues in Client Serv</td>
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**Other Major Requirements**

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<tr>
<td>SAB 210</td>
<td>Sub Abuse Counseling</td>
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<td>SAB 220</td>
<td>Group Techniques/Therapy</td>
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<td>SAB 230</td>
<td>Family Therapy</td>
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<td>SAB 250</td>
<td>Prevention and Education</td>
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<td>WBL 121</td>
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<tr>
<td>WBL 125</td>
<td>Work-Based Learning Seminar II</td>
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<td>HSE 120</td>
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<td>SAB 255</td>
<td>Environmental Prevention</td>
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<tr>
<td>DDT 110</td>
<td>Developmental Disabilities</td>
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<td>GRO 120</td>
<td>Gerontology</td>
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<td>SAB 140</td>
<td>Pharmacology</td>
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Total Credits: 76

**Human Services Technology Certificate with a Specialization in Case Management (C45380-C2)**

**Major Requirements**

<table>
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<td>HSE 110</td>
<td>Introduction to Human Services</td>
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</tr>
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<td>HSE 123</td>
<td>Group Process I</td>
<td>2.0</td>
</tr>
<tr>
<td>HSE 225</td>
<td>Crisis Intervention</td>
<td>3.0</td>
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<tr>
<td>WBL 111</td>
<td>Work-Based Learning I</td>
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</tr>
<tr>
<td>WBL 115</td>
<td>Work-Based Learning Seminar I</td>
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</tbody>
</table>

Total Credits: 15
HSE 123 Interviewing Techniques 3.0
HSE 210 Human Services Issues 2.0
HSE 225 Crisis Intervention 3.0
HSE 220 Case Management 3.0
WBL 111 Work-Based Learning I 1.0
WBL 115 Work-Based Learning Seminar I 1.0
Total Credits 16

Human Services Technology Certificate with a Specialization in Working with At-Risk Youth (C45380-C3)

Major Requirements
HSE 110 Introduction to Human Services 3.0
HSE 225 Crisis Intervention 3.0
HSE 227 Children & Adolescents in Crisis 3.0
SAB 110 Substance Abuse Overview 3.0
HSE 242 Family Systems 3.0
Take 1 of the following courses:
PSY 150 General Psychology 3.0
or SOC 210 Introduction to Sociology
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 is 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 the program office at 704.330.6153 or visit the Health and Human Services website.

Major Requirements
DDT 110 Developmental Disabilities 3.0
DDT 120 Teaching Developmental Disabled 3.0
WBL 111 Work-Based Learning I 1.0
WBL 115 Work-Based Learning Seminar I 1.0
ASL 120 ASL for the Workplace 3.0
ASL 225 Global Deaf Community 3.0
Total Credits 14

Human Services Technology Certificate Specialization in Children with Exceptionalities (C4538A-C4)

Major Requirements
EDU 131 Child, Family, and Community 3.0
EDU 188 Issues in Early Childhood Education 2.0
EDU 288 Advanced Issues in Early Childhood Education 2.0
DDT 110 Developmental Disabilities 3.0
DDT 120 Teaching Developmental Disabled 3.0
DDT 220 Program Planning Process 3.0
DDT 220 Program Planning Process 3.0
Total Credits 16

Human Services Technology Certificate Specialization in Developmental Disabilities for Healthcare Professionals (C4538A-C5)

Major Requirements
DDT 110 Developmental Disabilities 3.0
DDT 210 DDT Health Issues 3.0
**Programs of Study**

**DDT 240**  
Aging Lifelong Disability  
3.0

**ASL 111**  
Elementary ASL I  
3.0

**ASL 181**  
ASL Lab I  
1.0

**Total Credits**  
13

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**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 students to begin their internship.

The certificates are designed to provide students with a concentrated course of study in the field of Substance Abuse. Selection of certificate choice depends on the student’s specific career goals. Upon completion of these courses, a certificate is 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 recommended that certificate students who are interested in a career as a substance abuse counselor take all of the substance abuse (SAB) courses, not just those required for 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 the Substance Abuse Program website.

---

**Human Services Technology Certificate with a Specialization in Substance Abuse (C4538E-C2)**

The certificate is designed to provide students with a concentrated course of study in the field of Substance Abuse. Upon completion of the courses, a certificate of study is awarded by the college.

Note that this certificate does not include an internship.

**Major Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSE 112</td>
<td>Group Process I</td>
<td>2.0</td>
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<tr>
<td>SAB 110</td>
<td>Substance Abuse Overview</td>
<td>3.0</td>
</tr>
<tr>
<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>
<td>3.0</td>
</tr>
<tr>
<td>WBL 111</td>
<td>Work-Based Learning I</td>
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<td>WBL 115</td>
<td>Work-Based Learning Seminar I</td>
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<td>SAB 220</td>
<td>Group Techniques/Therapy</td>
<td>3.0</td>
</tr>
<tr>
<td>WBL 121</td>
<td>Work-Based Learning II</td>
<td>1.0</td>
</tr>
<tr>
<td>WBL 125</td>
<td>Work-Based Learning Seminar II</td>
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</tbody>
</table>

**Total Credits**  
18

**Human Services Technology Certificate with a Specialization in Substance Abuse & Behavioral Health Prevention (C4538E-C5)**

The certificate is designed to provide students 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 is awarded by the college.

Note that this certificate may be accomplished completely online and does not include an internship.

**Major Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSE 110</td>
<td>Introduction to Human Services</td>
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</tr>
<tr>
<td>SAB 110</td>
<td>Substance Abuse Overview</td>
<td>3.0</td>
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<td>SAB 240</td>
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<tr>
<td>SAB 250</td>
<td>Prevention and Education</td>
<td>2.0</td>
</tr>
<tr>
<td>SAB 255</td>
<td>Environmental Prevention</td>
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</table>

**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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<th>Course</th>
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</thead>
<tbody>
<tr>
<td>SAB 110</td>
<td>Substance Abuse Overview</td>
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<tr>
<td>SAB 120</td>
<td>Intake and Assessment</td>
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<td>SAB 240</td>
<td>Sab Issues in Client Serv</td>
<td>3.0</td>
</tr>
<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 241</td>
<td>Community-Based Corrections</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Total Credits**  
18

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**Information Technology**

The Information Technology (IT) curriculum prepares graduates for employment in a variety of technology fields, including software development, networking, cybersecurity, database management, virtualization, and web design.

Course work includes the development of a student’s ability to create, store, communicate, exchange and use information to solve technical issues related to information support and services, network systems, programming and software development, information security and other emerging technologies based on the selected area of study.
Graduates should qualify for employment in entry-level positions with businesses, educational systems, and governmental agencies that rely on computer systems to design and manage information. The program incorporates the competencies of many industry-recognized certifications.

For specific information about potential positions and wages in information technology employment, visit the Central Piedmont Career Coach website.

Information Technology (A25590)

- Information Technology - IT/Business Analysis (A25590B) (p. 163)
- Information Technology - Database Development/Business Intelligence (A25590D) (p. 163)
- Information Technology - Information Assurance & Digital Forensics (A25590F) (p. 164)
- Information Technology - Networking Technologies (A25590N) (p. 165)
- Information Technology - Full Stack Programming (A25590P) (p. 165)
- Information Technology - Web Technologies (A25590W) (p. 166)

Information Technology - IT/Business Analysis (A25590B)

General Education Requirements

<table>
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<tr>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
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<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>
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<tr>
<td>or ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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<tr>
<td>MAT 152</td>
<td>Statistical Methods I</td>
<td>4.0</td>
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</tbody>
</table>

Select 3.0 credits from the following:

- ART 111   | Art Appreciation                     | 3.0     |
- ART 114   | Art History Survey I                 |         |
- ART 115   | Art History Survey II                |         |
- HUM 120   | Cultural Studies                     |         |
- HUM 130   | Myth in Human Culture                |         |
- MUS 110   | Music Appreciation                   |         |
- MUS 112   | Introduction to Jazz                 |         |
- PHI 215   | Philosophical Issues                 |         |
- PHI 240   | Introduction to Ethics               |         |
- REL 110   | World Religions                      |         |

Select 3.0 credits from the following:

- ECO 251   | Principles of Microeconomics         | 3.0     |
- ECO 252   | Principles of Macroeconomics         |         |
- 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            |         |

IT Core

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<tr>
<td>CTI 110</td>
<td>Web, Programming, and Database Foundation</td>
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<tr>
<td>CTI 120</td>
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</table>

Information Technology - Database Development/ Business Intelligence (A25590D)

General Education Requirements

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<tr>
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<tr>
<td>ENG 111</td>
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<td>ENG 112</td>
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<td>3.0</td>
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<tr>
<td>or ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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</table>

Select 3.0 credits from the following:

- MAT 143   | Quantitative Literacy               | 3.0     |
- MAT 152   | Statistical Methods I                |         |
- MAT 171   | Precalculus Algebra                  |         |

Select 3.0 credits from the following:

- ART 111   | Art Appreciation                     | 3.0     |
- ART 114   | Art History Survey I                 |         |
- ART 115   | Art History Survey II                |         |
- HUM 120   | Cultural Studies                     |         |
- HUM 130   | Myth in Human Culture                |         |
- MUS 110   | Music Appreciation                   |         |
- MUS 112   | Introduction to Jazz                 |         |
- PHI 215   | Philosophical Issues                 |         |
- PHI 240   | Introduction to Ethics               |         |
- REL 110   | World Religions                      |         |

Select 3.0 credits from the following:

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- HIS 131   | American History I                   |         |
- HIS 132   | American History II                  |         |
- POL 120   | American Government                  |         |
- PSY 150   | General Psychology                   |         |
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IT Core

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### Programs of Study

#### CTI 130 Operating Systems and Device Foundation 6.0

#### CTS 115 Information Systems Business Concepts 3.0

**Major Requirements**

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<th>Title</th>
<th>Credits</th>
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<td>CSC 120</td>
<td>Computing Fundamentals I</td>
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<td>CSC 143</td>
<td>Object-Oriented Programming</td>
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<td>CSC 152</td>
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<td>CTS 240</td>
<td>Project Management</td>
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<td>DBA 110</td>
<td>Database Concepts</td>
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<td>DBA 112</td>
<td>Database Utilization</td>
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<td>DBA 120</td>
<td>Database Programming I</td>
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<td>DBA 125</td>
<td>Database Reporting</td>
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<tr>
<td>DBA 210</td>
<td>Database Administration</td>
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<tr>
<td>DBA 220</td>
<td>Oracle Database Programming II</td>
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**Total Credits** | 69 |

#### Information Technology - Information Assurance & Digital Forensics (A25590F)

**General Education Requirements**

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**Total Credits** | 70 |

#### Information Technology - Networking Technologies (A25590N)

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**Information Technology - Full Stack Programming (A25590P)**

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**Information Technology - Software Development (A25590S)**

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<td>Cultural Studies</td>
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</tr>
<tr>
<td>HUM 130</td>
<td></td>
<td>Myth in Human Culture</td>
<td></td>
</tr>
<tr>
<td>MUS 110</td>
<td></td>
<td>Music Appreciation</td>
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<td>Select 3.0 credits from the following:</td>
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### Programs of Study

#### MUS 112
Introduction to Jazz

#### PHI 215
Philosophical Issues

#### PHI 240
Introduction to Ethics

#### REL 110
World Religions

Select 3.0 credits from the following:

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<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>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>
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<td>American Government</td>
</tr>
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<td>PSY 150</td>
<td>General Psychology</td>
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#### SOC 210
Introduction to Sociology

#### IT Core Requirements

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<tbody>
<tr>
<td>CTI 110</td>
<td>Web, Programming, and Database Foundation</td>
</tr>
<tr>
<td>CTI 120</td>
<td>Network and Security Foundation</td>
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<td>CTI 130</td>
<td>Operating Systems and Device Foundation</td>
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<tr>
<td>CTS 115</td>
<td>Information Systems Business Concepts</td>
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#### Major Requirements

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<tbody>
<tr>
<td>CIS 110</td>
<td>Introduction to Computers</td>
</tr>
<tr>
<td>WEB 110</td>
<td>Internet/Web Fundamentals</td>
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<tr>
<td>DBA 120</td>
<td>Database Programming I</td>
</tr>
<tr>
<td>CTS 240</td>
<td>Project Management</td>
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<td>CSC 143</td>
<td>Object-Oriented Programming</td>
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<tr>
<td>CSC 151</td>
<td>JAVA Programming</td>
</tr>
<tr>
<td>CSC 154</td>
<td>Software Development</td>
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<td>CSC 174</td>
<td>Server-Side Javascript</td>
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<td>CSC 249</td>
<td>Data Structure &amp; Algorithms</td>
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<td>CSC 251</td>
<td>Advanced JAVA Programming</td>
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<td>CSC 256</td>
<td>Software Quality Assurance</td>
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<td>or CSC 284</td>
<td>Emerging Computer Prog Technologies</td>
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<td>CTI 289</td>
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#### Total Credits: 69

### Information Technology - Cloud & Virtualization Technologies (A25590V)

#### General Education Requirements

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<td>ENG 111</td>
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<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
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<tr>
<td>or ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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<tr>
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<th>Course Title</th>
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<tbody>
<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>
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</table>

#### Total Credits: 72

### Information Technology - Web Technologies (A25590W)

#### General Education Requirements

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</tr>
<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
</tr>
<tr>
<td>or ENG 114</td>
<td>Professional Research &amp; Reporting</td>
</tr>
<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<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>
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<th>Credits</th>
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<td>Art Appreciation</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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<td>HUM 120</td>
<td>Cultural Studies</td>
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<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</td>
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<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
<td></td>
</tr>
<tr>
<td>PHI 215</td>
<td>Philosophical Issues</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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Select 3.0 credits from the following:  

<table>
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<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</td>
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</tr>
<tr>
<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>HIS 111</td>
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<td>World Civilizations II</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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<tr>
<td>POL 120</td>
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<td>PSY 150</td>
<td>General Psychology</td>
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<td>SOC 210</td>
<td>Introduction to Sociology</td>
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**IT Core**  

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<tr>
<td>CTI 110</td>
<td>Web, Programming, and Database Foundation</td>
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<td>CTI 120</td>
<td>Network and Security Foundation</td>
<td>3.0</td>
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<td>Information Systems Business Concepts</td>
<td>3.0</td>
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**Major Requirements**  

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CIS 110</td>
<td>Introduction to Computers</td>
<td>3.0</td>
</tr>
<tr>
<td>CSC 143</td>
<td>Object-Oriented Programming</td>
<td>3.0</td>
</tr>
<tr>
<td>CTS 240</td>
<td>Project Management</td>
<td>3.0</td>
</tr>
<tr>
<td>DBA 120</td>
<td>Database Programming I</td>
<td>3.0</td>
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<tr>
<td>WEB 110</td>
<td>Internet/Web Fundamentals</td>
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<td>WEB 115</td>
<td>Web Markup and Scripting</td>
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<td>Introduction to Internet Multimedia</td>
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<td>Web Development Tools</td>
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<td>Web Design</td>
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</tr>
<tr>
<td>WEB 215</td>
<td>Advanced Markup and Scripting</td>
<td>3.0</td>
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<td>WEB 250</td>
<td>Database Driven Websites</td>
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<tr>
<td>CTI 289</td>
<td>Computer Technology Integration Capstone Project</td>
<td>3.0</td>
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</table>

Total Credits: 69

No diplomas are offered in Information Technology.

**Information Technology Certificates (C25590)**

- Information Technology Certificate Specialization in Information Technology Fundamentals (C25590-C3) (p. 167)
- Information Technology Certificate Specialization in Web Development Fundamentals (C25590-21) (p. 167)
- Information Technology Certificate Specialization in Applications Software Fundamentals (C25590-40) (p. 167)

- Information Technology Certificate Specialization in Computer Programming Fundamentals (C25590-41) (p. 168)
- Information Technology Certificate Specialization in IT Business Analytics I (C25590-42) (p. 168)
- Information Technology Certificate Specialization in IT Business Analytics II (C25590-43) (p. 168)
- Information Technology Certificate Specialization in Cyber Security (C25590-60) (p. 168)
- Information Technology Certificate Specialization in Cyber Security Specialist (C25590-61) (p. 168)
CSC 139  Visual BASIC Programming
CSC 143  Object-Oriented Programming
CSC 151  JAVA Programming
CSC 153  C# Programming

Total Credits  15

Information Technology Certificate Specialization in Computer Programming Fundamentals (C25590-41)

Major Requirements
CSC 154  Software Development  3.0
Select one from the following
CSC 120  Computing Fundamentals I  3.0-4.0
  or  CSC 143  Object-Oriented Programming
CSC 151  JAVA Programming  3.0
Select one from the following
CSC 249  Data Structure & Algorithms  3.0
  or  CSC 251  Advanced JAVA Programming

Total Credits  12-13

Information Technology Certificate Specialization in Business Analytics I (C25590-42)

CIS 110  Introduction to Computers  3.0
CTS 130  Spreadsheet  3.0
CTS 230  Advanced Spreadsheet  3.0
CTS 225  Spreadsheet Data Analysis  3.0

Total Credits  12

Information Technology Certificate Specialization in Business Analytics II (C25590-43)

CTI 110  Web, Programming, and Database Foundation  3.0
CIS 115  Introduction to Programming and Logic  3.0
CSC 124  Introduction to Data Science Programming  3.0
DBA 120  Database Programming I  3.0
CSC 152  SAS  3.0

Total Credits  15

Information Technology Certificate Specialization in Cyber Security (C25590-60)

Major Requirements
CTI 120  Network and Security Foundation  3.0
CTI 130  Operating Systems and Device Foundation  6.0
SEC 110  Security Concepts  3.0
CCT 121  Computer Crime Investigation  4.0

Total Credits  16

Information Technology Certificate Specialization in Cyber Security Specialist (C25590-61)

Major Requirements
SEC 151  Introduction to Protocol Analysis  3.0
SEC 258  Security Compliance  3.0
CCT 240  Data Recovery Techniques  3.0

CCT 241  Advanced Data Recovery  3.0
CCT 260  Mobile Phone Examination  3.0

Total Credits  15

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 Central Piedmont prepares students to design the interior spaces of today and tomorrow using the best of today’s technology.

For specific information about potential positions and wages in interior design employment, visit the Central Piedmont Career Coach website.

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 Equivalency and High School Diploma classes are available at Central Piedmont.
- Central Piedmont 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 to enter the Interior Design program.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Contact Information

For more information, call the Interior Design Department at 704.330.6548, or visit the Interior Design Program website.

General Education Requirements

ENG 111  Writing and Inquiry  3.0
PSY 150  General Psychology  3.0

Take one of the following:

ENG 112  Writing and Research in the Disciplines  3.0
ENG 113  Literature-Based Research  3.0
**Interior Design Diplomas (D30220)**

- Residential Interior Decoration Diploma and Home Staging (D30220-D2) (p. 169)
- Kitchen and Bath Design Diploma (D30220-D3) (p. 170)

**Residential Interior Decoration Diploma and Home Staging (D30220D2)**

The Residential Interior Decoration and Home Staging Diploma 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 students to complete the diploma in three full-time semesters or in six to seven part-time semesters.

For more information, please visit the Interior Design Program website.

**General Education Requirements**

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<td>MAT 110</td>
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<td>MAT 143</td>
<td>Quantitative Literacy</td>
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<td>MAT 152</td>
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<td>MAT 271</td>
<td>Calculus I</td>
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**Major Requirements**

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<td>Building and Construction Systems</td>
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<td>DES 120</td>
<td>CAD for Interior Design</td>
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<td>DES 125</td>
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<td>Digital Applications and Interior Design</td>
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<td>DES 135</td>
<td>Principles and Elements of Design I</td>
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<td>DES 210</td>
<td>Professional Practices for Interior Design</td>
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<td>Interior Design Fundamentals</td>
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<td>DES 225</td>
<td>Textiles for Interiors</td>
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<td>DES 230</td>
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<td>Furniture Design &amp; Construction</td>
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<td>Codes and Standards/Interior Design</td>
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**Technical Electives**

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<tbody>
<tr>
<td>DES 115</td>
<td>Color Theory</td>
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<td>DES 121</td>
<td>CAD for Interior Design/Advanced</td>
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<tr>
<td>DES 242</td>
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<tr>
<td>DES 265</td>
<td>Lighting/Interior Design</td>
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<td>SST 140</td>
<td>Green Building and Design Concepts</td>
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<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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<td>ARC 220</td>
<td>Advanced Architectural CAD</td>
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<td>ARC 221</td>
<td>Architectural 3-D CAD</td>
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<td>ARC 225</td>
<td>Architectural Building Information Modeling I</td>
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<td>ARC 262</td>
<td>Architectural Animation &amp; Video</td>
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<td>WBL 111</td>
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<td>WBL 112</td>
<td>Work-Based Learning I</td>
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<tr>
<td>DES 243</td>
<td>Advanced Kitchen and Bath Design</td>
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**Total Credits** 70
Kitchen and Bath Design Diploma (D30220-D3)

The Diploma in Kitchen and Bath Design equips students with the knowledge, skills, and competence needed for working in this specialized design area. Coursework includes the basics of design; both computer-aided and manual drafting techniques; 3D computer modeling; kitchen and bath materials, products, and business practices.

Graduates should qualify for a variety of jobs with businesses that specialize in or relate to design, sales, and installation of residential kitchens and baths.

Major Requirement

<table>
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<th>Course Code</th>
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<td>Color Theory</td>
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<td>DES 121</td>
<td>CAD for Interior Design/Advanced</td>
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<tr>
<td>DES 242</td>
<td>Kitchen and Bath Design</td>
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<td>DES 243</td>
<td>Advanced Kitchen and Bath Design</td>
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<tr>
<td>ARC 225</td>
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<td>ARC 226</td>
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<td>ARC 250</td>
<td>Survey of Architecture</td>
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Total Credits: 39

Interior Design Certificate Specialization in Professional Interior Design

Major Requirement

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<tbody>
<tr>
<td>DES 115</td>
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<td>DES 121</td>
<td>CAD for Interior Design/Advanced</td>
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<td>DES 242</td>
<td>Kitchen and Bath Design</td>
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<td>Lighting/Interior Design</td>
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<td>Survey of Architecture</td>
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<tr>
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Total Credits: 12

Interpreter Education

Becoming an American Sign Language - English interpreter

Students who wish 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 - English interpreters who provide communication access for people who are Deaf and hard of hearing within a variety of interactive settings. An AAS Degree in Interpreter Education (A55300) is available for students wanting to become ASL-English Interpreters.

The AAS in Interpreter Education is a 76-credit program that typically takes up to eight semesters to complete because foundational ASL skills must be acquired before learning to interpret between ASL and English. Because the program is spread out over eight semesters, the program is essentially part-time with most semesters requiring between 9 and 11 credits of study. Because of course sequencing, students wishing to complete the AAS in Interpreter Education are strongly encouraged to begin their studies with ASL 111 and ASL 181 in the Fall term. Students also are strongly encouraged to seek academic advising directly from the program faculty.

The curriculum also provides excellent opportunities for interpreters already working in the field who want to enhance their knowledge and interpretation skills or work toward achieving National Registry of Interpreters for the Deaf (RID) certification.

Certification in Basic ASL Communication

Some students take ASL classes to satisfy foreign/modern language requirements in other degree programs and only take 2 or 3 semesters of ASL instruction. Some students seek more in-depth ASL instruction but do not wish to become ASL-English Interpreters. For those students, a Certificate in Basic ASL Communication Skills (C55300-C6) is available to document a social level of ASL proficiency for a variety of employment or personal reasons. ASL 111, ASL 181, ASL 112, ASL 182, ASL 211, ASL 281, ASL 212, ASL 282 are transferable courses under the Comprehensive Articulation Agreement.

Little or No Experience in American Sign Language

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. Students who have never taken a college-level American Sign Language course are required to start with Beginning ASL 111 and ASL 181 (lab).

Prior College-Level ASL Courses
Students who have taken at least four semesters of college-level ASL course(s) at a regionally accredited institution and possess at least an intermediate level of fluency in American Sign Language, as demonstrated by both the ASL placement test and an intermediate score on the American Sign Language Proficiency Interview (ASLPI Gallaudet), may be able to complete the Interpreter Education program in four semesters. A student who does not have formal collegiate-level ASL course credits must begin their ASL studies in ASL 111 and ASL 181 (lab). There is no credit-by-exam available for ASL courses.

Employment Opportunities
Entry-level employment for professional interpreters is available in a variety of community and educational settings. Interpreters may consider part-time, full-time, self-employment and private practice positions or apply American Sign Language skills to other related areas of human services.

AAS in Interpreter Education graduates interested in working in the K-12 educational setting are able to be qualified to work in NC Public Schools by obtaining a 3.0 or better on the Educational Interpreters Performance Assessment (EIPA).

AAS Interpreter Education graduates working in settings other than educational or religious, including medical, business, mental health, legal, performing arts, community and video relay/remote settings in NC, must be licensed by the NC Interpreters and Translators Licensing Board (NCITLB). Graduation with an AAS in Interpreter Education is one pathway to obtain a provisional license to begin entry-level employment. Provisional licenses are renewable for a limited number of years. To convert a provisional NCITLB license to a full license, interpreters must obtain National Interpreter Certification (NIC) through the National Registry of Interpreters for the Deaf (RID). To sit for NIC, interpreters must have a BA/BS degree in any field or a demonstrated equivalency of credits through the RID alternate pathway. Multiple avenues are available for students to meet the requirements for NIC testing that should be discussed with a program advisor.

For specific information about potential positions and wages in interpreter education employment, visit the Central Piedmont Career Coach website.

Interpreter Education (A55300)
Degree Awarded
The Associate in Applied Science (A55300) degree - Interpreter Education is awarded by the college upon completion of this program.

Admissions
- A high school diploma or equivalent is required.
- Central Piedmont 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 attain a minimum required score on the American Sign Language Proficiency Interview (ASLPI Gallaudet) 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.

Eligible Scores: ASLPI ratings older than one year cannot be accepted for admission into the program.

Expired Placement Tests
- Students for whom ASL placement or ASLPI tests have expired, must repeat and pass the placement test and/or achieve an intermediate score on the ASLPI to enter or return to the Interpreter Education program.

Coursework
Many courses have prerequisites or co-requisites; check the Courses section for details.

Coursework includes:
- Acquisition of American Sign Language (ASL): grammar, structure and socio-linguistic properties, cognitive processes associated with interpretation between ASL and English, and Deaf culture
- Ethical decision-making,
- Acquisition of consecutive and simultaneous interpreting skills.
- Students must earn a grade “C” or better in all ASL, IPP, and WBL prefix courses to advance to the next level of courses and for those course credits to count toward satisfying degree completion requirements.

See the Interpreter Education Program website for more information.

Lapse in Proficiency
- Students for whom two or more consecutive terms have lapsed since taking an ASL course must take a placement interview before registering for ASL courses (except for ASL 111 and 181, Beginning ASL 1) to determine proper placement in ASL and IPP (Interpreting) courses. Courses may need to be repeated if skills have declined significantly. This requirement includes students transferring ASL credit from another college or university.

A student must receive a final grade of “C” or higher in all ASL, IPP, or WBL courses to receive credit for that course toward an Interpreter Education A.A.S. (A55300) degree or to advance to the next level of coursework.

Articulation Agreement
An articulation agreement is in place between the Central Piedmont Interpreter Education program and Gallaudet University - Bachelor degree in Interpretation (BAI). At Gallaudet University, students must apply for acceptance into the program and pass an ASL placement test. Once accepted, Gallaudet guarantees the transfer of Central Piedmont college-level credits with a grade of “C” or equivalent and requires that 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 Cata Campus. For more information about the Interpreting degree or Interpreting courses, ASL courses, ASL placement testing or the ASLPI, contact Program Chair, Ms. Martha Ingel, M.S.Ed., CI/CT at martha.ingel@cpcc.edu (kellie.stewart@cpcc.edu).

General Education Requirements
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<thead>
<tr>
<th>Course</th>
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Select 3 credits of the following:

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Programs of Study

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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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<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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<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
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<td>MAT 143</td>
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**Major Requirements**

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<td>Linguistics of American Sign Language</td>
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<td>IPP 111</td>
<td>Introduction to Interpretation</td>
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<td>IPP 112</td>
<td>Comparative Cultures</td>
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**Total Credits**: 76

No diplomas are offered in Interpreter Education.

**Interpreter Education Certificate (C55300)**

**Interpreter Education Certificate Specialization in Basic ASL Communication Skills (C55300-C6)**

This certificate is available through the Career & College Promise program.

The Basic ASL Communication Skills Certificate (C55300-C6) is designed to provide students with the foundational ASL skills needed to continue in the Interpreter Education Program (A55300) AAS degree. It also serves to demonstrate basic ASL Communication proficiency for students whose primary goal is to develop ASL communication skills for either personal or employment-related reasons.

This certificate may be used to demonstrate a particular level of proficiency in ASL to employers, but it will not qualify students to work as Sign Language Interpreters in any setting in North Carolina. Students obtaining the Basic ASL Communication Skills Certificate (C55300-C6), who desire work as interpreters, must continue their studies to complete the degree requirements for the AAS (A55300) Interpreter Education degree.

Middle College and High School students taking the Basic ASL Communication Skills Certificate (C55300-C6), who ultimately wish to complete the AAS (A55300) degree in Interpreter Education, should meet with a program advisor in the Interpreter Education program to discuss degree map and course sequencing to foster correct course registration and sequence.

**Major Requirements**

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<tr>
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<tr>
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<td>Introduction to Discourse Analysis</td>
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Lateral Entry Teacher

Lateral entry is an alternate route to teaching which allows school systems to hire candidates with at least a bachelor's degree to teach, based on their commitment to complete a teacher education program over the next three years. Individual plans of study are prescribed for lateral entry teachers who must complete necessary educational coursework required for a professional educator's license. The North Carolina State Board of Education requires up to 10 pedagogical competencies for licensure.

Central Piedmont offers courses for six of these competencies as, either individual courses, or as a Lateral Entry Certificate. All courses are available fully online each semester. In addition, Central Piedmont offers a variety of Lateral Entry Licensure curriculum-specific courses.

The courses are designed for teachers who have been evaluated by a North Carolina RALC-Regional Alternative Licensing Center (ralc.us/) and have a signed plan of study to complete licensure requirements. A Lateral Entry Certificate does not replace the need for a professional educator's license.

For admission, frequently asked questions and other information, visit the Lateral Entry website.

For specific information about potential positions and wages in lateral entry teacher employment, visit the Central Piedmont Career Coach website.

No degrees are offered for Lateral Entry Teacher.

No diplomas are offered for Lateral Entry Teacher.

Lateral Entry Teacher Certificate (C55430)

Admissions

The program requires students to submit a copy of their undergraduate transcripts and their signed plan of study to the program coordinator.

Contact Information

For more information, call 704.330.4740 or visit Lateral Entry on the Teaching and Education website.

Major Requirements

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<td>Learning Theory</td>
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<td>EDU 245</td>
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<td>EDU 244</td>
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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 technicians assist in the design, development, testing, process design and improvement, and troubleshooting and repair of engineered systems. Graduates should qualify to obtain occupations such as technical service providers, materials and technologies testing service technicians, process improvement technicians, engineering technicians, industrial and technology managers, or research technicians.

Mechanical Engineering Technology course work includes engineering graphics, engineering fundamentals, materials and manufacturing processes, mathematics, and physics. Emphasis is placed on the integration of theory and hands-on application of engineering principles. In addition, students study computer applications, critical thinking, planning and problem solving, and oral and written communications.

Graduates of the curriculum 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, SME, and NICET.

For specific information about potential positions and wages in mechanical engineering technology employment, visit the Central Piedmont Career Coach website.

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 bachelors-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 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 Central Piedmont is accredited by the Engineering Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET).
Notes
The Mechanical Engineering Technology curriculum at Central Piedmont features the use of CAD 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 the Mechanical Engineering Technology website or contact the Program Chair at 704.330.2772 ext. 3151.

General Education Requirements
ENG 111 Writing and Inquiry 3.0
ENG 114 Professional Research & Reporting 3.0
or ENG 112 Writing and Research in the Disciplines
or ENG 113 Literature-Based Research
COM 110 Introduction to Communication 3.0
or COM 231 Public Speaking
MAT 171 Precalculus Algebra 4.0
Select 1 of the following: 3.0
ART 111 Art Appreciation
or ART 114 Art History Survey I
or ART 115 Art History Survey II
or HUM 120 Cultural Studies
or HUM 130 Myth in Human Culture
or MUS 110 Music Appreciation
or MUS 112 Introduction to Jazz
or PHI 215 Philosophical Issues
or PHI 240 Introduction to Ethics
or REL 110 World Religions
Select 1 of the following: 3.0
ECO 251 Principles of Microeconomics
or ECO 252 Principles of Macroeconomics
or HIS 111 World Civilizations I
or HIS 112 World Civilizations II
or HIS 131 American History I
or HIS 132 American History II
or POL 120 American Government
or PSY 150 General Psychology
or SOC 210 Introduction to Sociology

Major Requirements
DFT 151 Intro to Solid Modeling 3.0
EGR 250 Statics/Strength of Mater 5.0
MEC 161 Manufacturing Processes I 3.0
MEC 180 Engineering Materials 3.0
MEC 265 Fluid Mechanics 3.0
PHY 151 College Physics I 4.0
DFT 151 CAD I (Select 1 of the following:) 3.0
or DFT 170 Engineering Graphics
Other Major Requirements:
CSC 134 C++ Programming 3.0
ELC 131 Circuit Analysis I 4.0
MAT 172 Precalculus Trigonometry 4.0
MAT 271 Calculus I 4.0
MEC 111 Machine Processes I 3.0
MEG 275 Engineering Mechanics 3.0
PHY 152 College Physics II 4.0
Select 1 of the following: **Students interested in continuing to UNCC should take CHM 151** 2.0
CHM 151 General Chemistry I
or WBL 111 Work-Based Learning I
or WBL 112 Work-Based Learning I

Total Credits 70

No diplomas are offered in Mechanical Engineering Technology.

Mechanical Engineering Certificates (C40320)

Mechanical Engineering Certificate Specialization in Mechanical CAD Operations (C40320-C2)

Major Requirements
DFT 151 CAD I 3.0
DFT 154 Intro to Solid Modeling 3.0
DFT 170 Engineering Graphics 3.0
MEC 161 Manufacturing Processes I 3.0
Total Credits 12

Mechanical Engineering Technology Certificate Specialization in Mechanical Engineering Technology Pathway (C40320-C3)

This program also is available to high school students enrolled in Career and College Promise.

Major Requirements
DFT 151 CAD I 3.0
DFT 154 Intro to Solid Modeling 3.0
MEC 111 Machine Processes I 3.0
MEC 161 Manufacturing Processes I 3.0
Total Credits 12

Mechanical Engineering Technology Certificate Specialization in Academic Preparation for Future Engineers (C40320-C4)

Major Requirements
DFT 151 CAD I 3.0
ENG 111 Writing and Inquiry 3.0
Piedmont 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 the Mechatronics Engineering Technology website or call the Program Chair at 704.330.6545.

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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<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</td>
<td>3.0</td>
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<tr>
<td>Take 1 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>or 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>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>Take 1 of the following:</td>
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<tr>
<td>ART 111</td>
<td>Art Appreciation</td>
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<tr>
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<td>or PHI 240</td>
<td>Introduction to Ethics</td>
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<td>or REL 110</td>
<td>World Religions</td>
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Major Requirements

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<tr>
<td>PHY 131</td>
<td>Physics-Mechanics</td>
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<td>or PHY 151</td>
<td>College Physics I</td>
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<tr>
<td>ISC 112</td>
<td>Industrial Safety</td>
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<tr>
<td>EGR 125</td>
<td>Appl Software for Tech</td>
<td>2.0</td>
</tr>
<tr>
<td>MEC 130</td>
<td>Mechanisms</td>
<td>3.0</td>
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<td>MEC 265</td>
<td>Fluid Mechanics</td>
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<td>ELC 130</td>
<td>Advanced Motors and Controls</td>
<td>3.0</td>
</tr>
<tr>
<td>ELC 131</td>
<td>Circuit Analysis I</td>
<td>4.0</td>
</tr>
<tr>
<td>ATR 112</td>
<td>Introduction to Automation</td>
<td>3.0</td>
</tr>
<tr>
<td>ELC 213</td>
<td>Instrumentation</td>
<td>4.0</td>
</tr>
</tbody>
</table>
Programs of Study

ELN 260   Prog Logic Controllers  4.0
PCI 173   Programmable Systems  4.0
or PCI 170   DAQ and Control
DFT 154   Intro to Solid Modeling  3.0
ISC 212   Metrology  2.0
MEC 180   Engineering Materials  3.0
Take 2 credits from the following:
   WBL 111   Work-Based Learning I
   & WBL 121   and Work-Based Learning II
   WBL 112   Work-Based Learning I
   MEC 161   Manufacturing Processes I
MEC 210   Applied Mechanics  3.0
Total Credits  67

No diplomas are offered in Mechatronics Engineering Technology.

Mechatronics Engineering Technology Certificates (C40350)

Mechatronics Engineering Technology Certificate Specialization in Mechatronics Engineering Pathway (C40350-C5)

This certificate is available to high school students enrolled in Career and College Promise.

Major Requirements
MAT 121   Algebra/Trigonometry I  3.0
EGR 125   Appl Software for Tech  2.0
ISC 112   Industrial Safety  2.0
ELC 131   Circuit Analysis I  4.0
ELC 130   Advanced Motors and Controls  3.0
Total Credits  14

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.

For specific information about potential positions and wages in medical assisting employment, visit the Central Piedmont Career Coach website.

Medical Assisting (A45400)

Degree Awarded
A Degree in Medical Assisting is awarded by the college upon completion of the degree requirements.

Admissions
• Complete a Central Piedmont admissions application.
• Submit high school transcripts as well as any college transcripts (if applicable).
• Take required placement tests.
• Complete any necessary Developmental classes with a “C” or better.
• Students are 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.
• Submit a physical examination (including a drug screen) documenting the ability to complete all program requirements.
• Demonstrate word processing proficiency including keying (typing) at an acceptable speed with accurate level and document formatting. The typing speed required is at least 30 wpm with 80 percent accuracy. If a student cannot demonstrate word processing proficiency, the course OSL 131 is required.
• Demonstrate basic computer competencies through course work or testing. The division director of Computer Office and Information Systems determines equivalence and competencies. Course 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 Central Piedmont 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, visit the Medical Assisting Program website. If further information is needed, contact the program chair at 704.330.6482.

General Education Requirements
ENG 111   Writing and Inquiry  3.0
Select one of the following:  3.0
   MAT 143   Quantitative Literacy
Take 3 credits from the following:

- MED 232
- BUS 135
- MED 272
- MED 262
- MED 260
- MED 240
- MED 150
- MED 140
- MED 131
- MED 130
- MED 122
- MED 121
- MED 118
- MED 116
- MED 110

Major Requirements

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MED 110</td>
<td>Orientation to Medical Assisting</td>
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</tr>
<tr>
<td>MED 116</td>
<td>Introduction to Anatomy &amp; Physiology</td>
<td>4.0</td>
</tr>
<tr>
<td>MED 118</td>
<td>Medical Law and Ethics</td>
<td>2.0</td>
</tr>
<tr>
<td>MED 121</td>
<td>Medical Terminology I</td>
<td>3.0</td>
</tr>
<tr>
<td>MED 122</td>
<td>Medical Terminology II</td>
<td>3.0</td>
</tr>
<tr>
<td>MED 130</td>
<td>Administrative Office Procedures I</td>
<td>2.0</td>
</tr>
<tr>
<td>MED 131</td>
<td>Administrative Office Procedures II</td>
<td>2.0</td>
</tr>
<tr>
<td>MED 140</td>
<td>Examining Room Procedures I</td>
<td>5.0</td>
</tr>
<tr>
<td>MED 150</td>
<td>Laboratory Procedures I</td>
<td>5.0</td>
</tr>
<tr>
<td>MED 240</td>
<td>Examining Room Procedures II</td>
<td>5.0</td>
</tr>
<tr>
<td>MED 260</td>
<td>MED Clinical Practicum</td>
<td>5.0</td>
</tr>
<tr>
<td>MED 262</td>
<td>Clinical Perspectives</td>
<td>1.0</td>
</tr>
<tr>
<td>CIS 110</td>
<td>Introduction to Computers</td>
<td>3.0</td>
</tr>
<tr>
<td>MED 272</td>
<td>Drug Therapy</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 135</td>
<td>Principles of Supervision</td>
<td>3.0</td>
</tr>
<tr>
<td>MED 232</td>
<td>Medical Insurance Coding</td>
<td>2.0</td>
</tr>
<tr>
<td>or MED 274</td>
<td>Diet Therapy/Nutrition</td>
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<tr>
<td>or BIO 155</td>
<td>Nutrition</td>
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</tbody>
</table>

Take 3 credits from the following:

- MED 270 Symptomatology
- MED 134 Medical Transcription

Medical Assisting Diploma (D45400)

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.

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.

Admissions

- Complete a Central Piedmont admissions application.
- Submit high school transcripts as well as any college transcripts (if applicable).
- Take required placement tests.
- Complete any necessary 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 typing (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 on Central Campus is accredited by the Commission on Accreditation of Allied Health Education Programs, 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.

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 Central Piedmont 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, visit the Medical Assisting Program website. For further assistance, contact the program chair at 704.330.6482.

### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<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>COM 120</td>
<td>Intro to Interpersonal Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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</table>

### Major Requirements

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<tr>
<th>Course</th>
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</thead>
<tbody>
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<td>MED 118</td>
<td>Medical Law and Ethics</td>
<td>2.0</td>
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<td>MED 121</td>
<td>Medical Terminology I</td>
<td>3.0</td>
</tr>
<tr>
<td>MED 122</td>
<td>Medical Terminology II</td>
<td>3.0</td>
</tr>
<tr>
<td>MED 130</td>
<td>Administrative Office Procedures I</td>
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<td>MED 131</td>
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<td>MED 262</td>
<td>Clinical Perspectives</td>
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<td>MED 240</td>
<td>Examining Room Procedures II</td>
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</tr>
<tr>
<td>MED 272</td>
<td>Drug Therapy</td>
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</table>

**Medical Assisting Certificate Specialization in Medical Scribe (C45400-C4)**

This certificate is offered to credentialed Medical Assistants only.

### Major Requirements

<table>
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<tr>
<th>Course</th>
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<tr>
<td>MED 232</td>
<td>Medical Insurance Coding</td>
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<td>MED 270</td>
<td>Symptomatology</td>
<td>3.0</td>
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<tr>
<td>or HIT 226</td>
<td>Principles of Disease</td>
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<tr>
<td>MED 134</td>
<td>Medical Transcription</td>
<td>3.0</td>
</tr>
<tr>
<td>MED 183</td>
<td>Electronic Medical Records I</td>
<td>5.0</td>
</tr>
</tbody>
</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 or treatment of disease.

Course work emphasizes mathematical and scientific concepts related to specimen collection, laboratory testing and procedures, quality assurance in 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.

For specific information about potential positions and wages in medical laboratory technology employment, visit the Central Piedmont Career Coach website.

**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.

### Admissions

- Complete an admissions application to Central Piedmont.
- Submit high school transcripts as well as any college transcripts to Admissions, Records & Registration.
- Take the required placement tests.
- Complete any required Developmental classes with a “C” or better.
- Complete and submit an MLT admissions packet.
- Complete the TEAS test and submit scores with admissions packet.
- Applicants must present evidence of good physical and mental health. A physical examination documenting the applicant’s ability to complete all program requirements is required.
• Students must be selected to enter the Medical Laboratory Technology 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.
• Many courses have prerequisites or co-requisites; check the Courses section for details.

Program Accreditation

The Medical Laboratory Technology Program is accredited by the National Accrediting Agency for Laboratory Sciences (NAACLS), 5600 N. River Rd., Suite 720, Rosemont, IL 60018-5119. 847.939.3597, 773.714.8880.

Notes

In addition to tuition and textbooks, costs of this program include: uniforms, and professional white shoes, fluid-resistant lab coat, safety glasses/goggles, a physical examination including immunizations and drug screening.

Students 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 North Carolina 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, visit the Medical Careers Laboratory Program website. If further assistance is needed, contact the Program Chair at 704.330.6272 ext. 3425.

General Education Requirements

<table>
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<tr>
<th>Course</th>
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<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
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<tr>
<td>COM 110</td>
<td>Introduction to Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY 150</td>
<td>General Psychology</td>
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<td>Select 3 credits of the following:</td>
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<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
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<td>Professional Research &amp; Reporting</td>
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<td>Select 3 credits of the following:</td>
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<td>ART 115</td>
<td>Art History Survey II</td>
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<td>DRA 111</td>
<td>Theatre Appreciation</td>
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<td>HUM 120</td>
<td>Cultural Studies</td>
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Major Requirements

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Total Credits 75

No diplomas are offered in Medical Laboratory Technology.

No certificates are offered in Medical Laboratory Technology.

Medical Office Administration

This curriculum prepares individuals for employment in medical and other healthcare-related offices.

Coursework includes medical terminology, information systems, office management, medical coding, billing and insurance, legal and ethical issues plus formatting and word processing. Students 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 healthcare-related organizations.

For specific information about potential positions and wages in medical office administration employment, visit the Central Piedmont Career Coach website.

Medical Office Administration (A25310)

Degree Awarded

The Associate in Applied Science degree - Medical Office Administration is awarded upon completion of this program.

The Medical Office Administration degree is available in two tracks:
1) Medical Office Administration (A25310), and
2) Medical Office Administration – Medical Billing and Coding (A25310B)
Admissions

- Complete an admissions application to Central Piedmont.
- Submit high school transcript and any college transcripts to Central Piedmont Admissions, Records & Registration.
- Take the required placement tests to determine placement in English (ENG) and mathematics (MAT) courses.
- A counseling/orientation appointment follows placement testing.
- Check the Course Descriptions section to see 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. Contact the program office at 704.330.6851. For complete details, visit the Office Administration website.

Medical Office Administration (A25310)

General Education Requirements

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Contact Information

Medical Office Administration – Medical Billing and Coding Track (A25310B)

General Education Requirements

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Medical Office Administration – Medical Billing and Coding Track (A25310B)

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**No diplomas offered are offered in Medical Office Administration.**

**Medical Office Administration Certificates (C25310)**

**Medical Office Administration Certificate Specialization in Procedural and Diagnostic Coding (C25310-C1)**

**Major Requirements**

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**Total Credits** 18

**Medical Office Administration Certificate Specialization in Medical Office Administration (C25310-C2)**

**Major Requirements**

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**Total Credits** 17

**Nondestructive Examination Technology**

The Nondestructive 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. 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.

For specific information about potential positions and wages in NDE employment, visit the Central Piedmont Career Coach website.

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 Technology is in the Applied Technologies Division. To receive a suggested sequence of courses, contact instructors through the NDE Technology program office at 704.330.4434. For more information, contact the Applied Technologies Division at 704.330.4413.

General Education Requirements

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<td>Introduction to Sociology</td>
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Select 3 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 110</td>
<td>Conceptual Physics &amp;</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Conceptual Physics Lab</td>
<td></td>
</tr>
<tr>
<td>PHY 110A</td>
<td>Conceptual Physics Lab</td>
<td></td>
</tr>
<tr>
<td>PHY 131</td>
<td>Physics-Mechanics</td>
<td></td>
</tr>
<tr>
<td>PHY 151</td>
<td>College Physics I</td>
<td></td>
</tr>
</tbody>
</table>

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLD 141</td>
<td>Symbols and Specifications</td>
<td>3.0</td>
</tr>
<tr>
<td>NDE 110</td>
<td>Intro to Nondestructive Examination</td>
<td>3.0</td>
</tr>
<tr>
<td>NDE 111</td>
<td>NDE Codes and Specifications</td>
<td>2.0</td>
</tr>
<tr>
<td>NDE 142</td>
<td>Visual Testing-1,2</td>
<td>2.0</td>
</tr>
<tr>
<td>NDE 143</td>
<td>Liquid Penetrant Testing-1,2</td>
<td>2.0</td>
</tr>
<tr>
<td>NDE 152</td>
<td>Magnetic Particle Testing-1,2</td>
<td>2.0</td>
</tr>
<tr>
<td>NDE 121</td>
<td>Principles of Ultrasonic Examination-UT Level I</td>
<td>4.0</td>
</tr>
<tr>
<td>NDE 122</td>
<td>Angle Beam Examination</td>
<td>4.0</td>
</tr>
<tr>
<td>NDE 131</td>
<td>Radiation Safety and Principles of Radiographic Testing</td>
<td>4.0</td>
</tr>
<tr>
<td>NDE 132</td>
<td>RT Industrial Applications</td>
<td>3.0</td>
</tr>
<tr>
<td>NDE 153</td>
<td>Eddy Current Testing-1</td>
<td>3.0</td>
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<td>NDE 252</td>
<td>Eddy Current Testing (ET)</td>
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<tr>
<td>CIS 110</td>
<td>Introduction to Computers</td>
<td>3.0</td>
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<tr>
<td>PHY 110</td>
<td>Conceptual Physics &amp;</td>
<td>4.0</td>
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<tr>
<td></td>
<td>Conceptual Physics Lab</td>
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<td>PHY 110A</td>
<td>Conceptual Physics Lab</td>
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Technical Electives

Select 8.0 credits from the following:

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<th>Course</th>
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<tbody>
<tr>
<td>DFT 151</td>
<td>CAD I</td>
<td></td>
</tr>
<tr>
<td>DFT 170</td>
<td>Engineering Graphics</td>
<td></td>
</tr>
<tr>
<td>EGR 120</td>
<td>Engineering and Design Graphics</td>
<td></td>
</tr>
<tr>
<td>EGR 125</td>
<td>Appi Software for Tech</td>
<td></td>
</tr>
<tr>
<td>EGR 150</td>
<td>Intro to Engineering</td>
<td></td>
</tr>
<tr>
<td>ELC 111</td>
<td>Introduction to Electricity</td>
<td></td>
</tr>
<tr>
<td>ELC 117</td>
<td>Motors and Controls</td>
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</tr>
<tr>
<td>ISC 110</td>
<td>Workplace Safety</td>
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<tr>
<td>ISC 112</td>
<td>Industrial Safety</td>
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</tr>
<tr>
<td>ISC 131</td>
<td>Quality Management</td>
<td></td>
</tr>
<tr>
<td>ISC 212</td>
<td>Metrology</td>
<td></td>
</tr>
<tr>
<td>MEC 180</td>
<td>Engineering Materials</td>
<td></td>
</tr>
<tr>
<td>NDE 221</td>
<td>UT Industrial Applications</td>
<td></td>
</tr>
</tbody>
</table>
Nuclear Plant Inspection Diploma (D50350-D1)

The Nuclear Plant Inspection Diploma focuses on the Ultrasonic testing method, specifically as it relates to nuclear power plant piping welds examined during construction and in-service inspections. Applied math and physics are an integral part of NDE and this curriculum. Students gain knowledge of the nuclear industry’s Performance Demonstration (PD) examination for the detection and sizing of defects in welds, heat affected zones and base materials. This diploma prepares the student to be successful when taking a PD examination in accordance with ASME Section XI, Appendix VIII, Supplement 3. These PDs are not part of this curriculum course and are administered by the Electric Power Research Institute (EPRI) in Charlotte, N.C.

Diploma Awarded

A Diploma in Nuclear Plant Inspection is awarded by the college upon successful completion of this program.

Working in nuclear plants or with companies supplying equipment for these plants requires additional security and adherence to specific work requirements (criminal convictions and substance use criteria). These additional requirements 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>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Central Piedmont Community College

Non-Destructive Examination Technology Certificates (C50350)

- Non-Destructive Examination Technology Certificate with a Specialization in Ultrasonic Examination (C50350-C1) (p. 183)
- Non-Destructive Examination Technology Certificate with a Specialization in Visual and Penetrant Examination (C50350-C2) (p. 184)
- Non-Destructive Examination Technology Certificate with a Specialization in Radiographic Examination (C50350-C4) (p. 184)
- Non-Destructive Examination Technology Certificate with a Specialization in Advanced Nuclear Plant Inspection of Ferritic and Stainless Steel Piping Welds (C50350-C5) (p. 184)
- Non-Destructive Examination Technology Certificate with a Specialization in Level 1 and Level 2 Surface Examination (C50350-C8) (p. 184)
- Non-Destructive Examination Technology Certificate with a Specialization in Magnetic Particle & Eddy Current Examinations (C50350-C9) (p. 184)
- Non-Destructive Examination Technology Certificate with a Specialization in Advanced Visual Testing (C50350-10) (p. 184)

These are special, short-term certificates offered in the NDET program. The courses listed are taken from the NDET diploma and degree programs. These certificates are issued in accordance with Central Piedmont policy and certify that students have 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 Central Piedmont.

Students may earn certificates which build to earning a diploma or degree. Students may earn certificates in the same semester that they earn a degree or diploma.
Non-Destructive Examination Technology Certificate with a Specialization in Ultrasonic Examination (C50350-C1)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<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>
</tr>
<tr>
<td>NDE 121</td>
<td>Principles of Ultrasonic Examination-UT Level I</td>
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<tr>
<td>NDE 122</td>
<td>Angle Beam Examination</td>
<td>4.0</td>
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<tr>
<td></td>
<td><strong>Total Credits</strong></td>
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</table>

Non-Destructive Examination Technology Certificate with a Specialization in Visual and Penetrant Examination (C50350-C2)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<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>
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<tr>
<td>WLD 141</td>
<td>Symbols and Specifications</td>
<td>3.0</td>
</tr>
<tr>
<td>NDE 142</td>
<td>Visual Testing-1,2</td>
<td>2.0</td>
</tr>
<tr>
<td>NDE 143</td>
<td>Liquid Penetrant Testing-1,2</td>
<td>2.0</td>
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<tr>
<td></td>
<td><strong>Total Credits</strong></td>
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Non-Destructive Examination Technology Certificate with a Specialization in Radiographic Examination (C50350-C4)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
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<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 131</td>
<td>Radiation Safety and Principles of Radiographic Testing</td>
<td>4.0</td>
</tr>
<tr>
<td>NDE 132</td>
<td>RT Industrial Applications</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
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</table>

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>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>NDE 221</td>
<td>UT Industrial Applications</td>
<td>4.0</td>
</tr>
<tr>
<td>NDE 261</td>
<td>Performance Demonstration Initiative -1, Ultrasonic Testing, Carbon Steel Pipe Welds</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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<tr>
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</table>

With a Specialization in Advanced Nuclear Plant Inspection - UT Inspection and Sizing of Piping and Dissimilar Welds (C50350-C6)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NDE 263</td>
<td>Perf Demonstration Initiative -3, Ultrasonic Testing, C-Thru Wall Sizing</td>
<td>3.0</td>
</tr>
<tr>
<td>NDE 264</td>
<td>Perf Demonstration Initiative -8, Ultrasonic Testing, Weld Overlay and Dissimilar Metal C-Thru Wall Sizing</td>
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<tr>
<td>NDE 265</td>
<td>Performance Demonstration Initiative -10 Ultrasonic 3.0 Testing, Dissimilar Metal Detection and Length Sizing</td>
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</tr>
<tr>
<td>NDE 221</td>
<td>UT Industrial Applications</td>
<td>4.0</td>
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<tr>
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Non-Destructive Examination Technology Certificate with Specialization in Visual and Penetrant Examination (C50350-C7)

Major Requirements

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<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Intro to Nondestructive Examination</td>
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<tr>
<td>NDE 112</td>
<td>Materials and Processes</td>
<td>3.0</td>
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<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>
</tr>
<tr>
<td>NDE 143</td>
<td>Liquid Penetrant Testing-1,2</td>
<td>2.0</td>
</tr>
<tr>
<td>NDE 152</td>
<td>Magnetic Particle Testing-1,2</td>
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<tr>
<td></td>
<td><strong>Total Credits</strong></td>
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Non-Destructive Examination Certificate Specialization in Magnetic Particle & Eddy Current Examinations (C50350-C9)

Required Courses

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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<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 153</td>
<td>Eddy Current Testing-1</td>
<td>4.0</td>
</tr>
<tr>
<td>NDE 252</td>
<td>Eddy Current Testing (ET)</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 141</td>
<td>Symbols and Specifications</td>
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Non-Destructive Examination Certificate in Advanced Visual Testing (C50350-C10)

Major Requirements

<table>
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<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>NDE 110</td>
<td>Intro to Nondestructive Examination</td>
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<td>NDE 112</td>
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<td>NDE 242</td>
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<td>NUC 110</td>
<td>Nuclear Reactor Systems</td>
<td>3.0</td>
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<tr>
<td></td>
<td><strong>Total Credits</strong></td>
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</tbody>
</table>

Nurse Aide

The Nurse 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.

For specific information about potential positions and wages in nurse aide employment, visit the Central Piedmont Career Coach website.

**No degrees are offered for Nurse Aide.**

**No diplomas are offered for Nurse Aide.**

**Nurse Aide Certificate (C45840)**

**Certificate Awarded**

A Nurse Aide Certificate is awarded by the college upon completion of certificate requirements.

**Admission Steps**

1. Complete an application to the college.
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.

   Visit the Testing and Assessment website to schedule a test, take practice tests, access review materials or for placement testing information.

**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 Nurse Aide 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 Nurse Aide 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 Nurse Aide Certificate is in the Health & Human Services Division. For information, visit the Nurse Aide website.

**Major Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Credits</th>
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<tbody>
<tr>
<td>NAS 101</td>
<td>Nurse Aide I</td>
<td>6.0</td>
</tr>
<tr>
<td>NAS 102</td>
<td>Nurse Aide II</td>
<td>6.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

**Nursing, Associate Degree**

The Christa A. Overcash Associate Degree Nursing curriculum provides knowledge, skills, and strategies to integrate safety and quality into nursing care, to practice in a dynamic environment, and to meet individual needs that impact health, quality of life and achievement of potential.

Coursework includes and builds upon the domains of healthcare, nursing practice, and the holistic individual. Content emphasizes the nurse as a member of the interdisciplinary team, providing safe, individualized care while employing evidence-based practice, quality improvement, and informatics.

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 are vast within the global healthcare system and may include positions within acute, chronic, extended, industrial and community healthcare facilities

For specific information about potential positions and wages in nursing employment, visit the Central Piedmont Career Coach website.

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
3343 Peachtree Road NE, Suite 850
Atlanta, Georgia 30326
Phone: 404.975.5000
Fax: 404.975.5020
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 admissions application to Central Piedmont.
- Submit high school transcripts and any college transcripts to Central Piedmont Admissions, Records and Registration.
- Meet with college counselors on Central Campus, in the Central High Building, Room 212. Call for an appointment at 704.330.6433.
- Complete an application to the nursing program.
- Show proof of meeting the required cut scores for the ATI Teas admission test.
- Show proof of having taken the N.C. state-approved nurse aide program.
- Provide a copy of the current nurse aide listing from the N.C. nurse aide registry.

Application information may be found on the Associate Degree Nursing website.

Additional Costs and Requirements

In addition to tuition and textbooks, the costs of this program include the following:

- cost of ATI Teas admission test
- uniforms, lab coat
- stethoscope
- a physical examination including a 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; 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.
- application fees for N.C. State Board of Nursing National Council Licensure Examination; 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 or an otherwise legally authorized resident.

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.

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>PSY 150</td>
<td>General Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>BIO 168</td>
<td>Anatomy and Physiology I</td>
<td>4.0</td>
</tr>
<tr>
<td>Select 3 credits of the following:</td>
<td>3.0</td>
<td></td>
</tr>
</tbody>
</table>

No diplomas are offered in Nursing.

No certificates are offered in Nursing.

Occupational Therapy Assistant

The Occupational Therapy Assistant curriculum prepares individuals to work under the supervision of a licensed occupational therapist in screening, assessing, planning and implementing treatment as well as documenting progress for clients receiving occupational therapy services.

Course work focuses on human growth and development, conditions that interfere with activities of daily living, theory and process of occupational therapy, individual or group treatment activities, the therapeutic use of self, activity analysis as well as grading or 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 or extended care facilities, sheltered workshops, schools, outpatient clinics, home health programs, and community programs.

For specific information about potential positions and wages in occupational therapy assistant employment, visit the Central Piedmont Career Coach website.

Occupational Therapy Assistant (A45500)

Degree Awarded

An Associate in Applied Science Degree is awarded by the college upon completion of this program.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 143</td>
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<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
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<tr>
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<tr>
<td>ART 114</td>
<td>Art History Survey I</td>
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</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey I</td>
<td></td>
</tr>
<tr>
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<td>Theatre Appreciation</td>
<td></td>
</tr>
<tr>
<td>MUS 110</td>
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<td>MUS 112</td>
<td>Introduction to Jazz</td>
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<td>PHI 240</td>
<td>Introduction to Ethics</td>
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<td>NUR 113</td>
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<td>NUR 114</td>
<td>Holistic Health Concepts</td>
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<td>NUR 211</td>
<td>Health Care Concepts</td>
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<td>NUR 212</td>
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<td>NUR 213</td>
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<tr>
<td>Total Credits</td>
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</table>
Admissions

• A high school diploma or equivalent is required.
• Complete a general admission application to Central Piedmont.
• Take the required placement tests.
• Meet with an academic advisor or counselor for preliminary counseling.
• Take the Test of Essential Academic Skills (TEAS).
• Submit all official high school and college transcripts to Admissions, Records & Registration.
• Complete any required preparatory courses with a grade of “C” or better.
• 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 the 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.

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 6116 Executive Boulevard, Suite 200, North Bethesda, MD 20852-49299. The council may be contacted online in the care of AOTA or by phone at 301-652-AOTA (2682).

Notes

Students 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.

Graduates of the program are 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, individuals are Certified Occupational Therapy Assistants (COTA).

In addition, all states require licensure in order to practice. Eligibility for state licenses usually is based on results of the NBCOT Certification Examination.

Please Note: a felony conviction may affect a graduate’s eligibility to sit for the NBCOT certification examination or to attain state licensure.

Contact Information

The Occupational Therapy Assistant program is in the Health Sciences Division. For more information, visit the Occupational Therapy Assistant. For further assistance, contact the Program Chair at 704.330.6424.

General Education Requirements

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<tr>
<th>Course Code</th>
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<td>OTA 130</td>
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<td>OTA 150</td>
<td>Pediatric Concepts and Interventions</td>
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<td>Fieldwork I-Placement 1</td>
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<td>PSY 281</td>
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<td>BIO 168</td>
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<td>OTA 280</td>
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<tr>
<td>or MED 121</td>
<td>Medical Terminology I</td>
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</tbody>
</table>

Total Credits 76
No diplomas are offered for Occupational Therapy Assistant.

No certificates are offered for Occupational Therapy Assistant.

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 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).

For specific information about potential positions and wages in office administration employment, visit the Central Piedmont Career Coach website.

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 an admissions application to Central Piedmont.
- Submit a high school transcript and any college transcripts.
- Take the required placement tests to determine placement in English (ENG) and mathematics (MAT) courses.
- Consult with a counselor by calling the Advisement & Student Success Center on Cato Campus at 704.330.2722 ext. 7801.
- Check the Courses section to determine prerequisites or co-requisites required to register for courses.

Contact Information

The Office Administration program is in the Professional Careers Division. For more information, call the Office Administration Program Chair at 704.330.6851 or visit the Medical, Legal and Office Administration website.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<td>COM 110</td>
<td>Introduction to Communication</td>
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<tr>
<td>ENG 113</td>
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<td>ENG 114</td>
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Select 3 credits of the following:

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<thead>
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<th>Course</th>
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<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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<thead>
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<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>MAT 121</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>
</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
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<tr>
<td>MAT 271</td>
<td>Calculus I</td>
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</tr>
<tr>
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<td>ART 115</td>
<td>Art History Survey II</td>
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<td>DRA 111</td>
<td>Theatre Appreciation</td>
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<td>HUM 120</td>
<td>Cultural Studies</td>
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<td>Myth in Human Culture</td>
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<td>MUS 112</td>
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<td>Philosophical Issues</td>
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<td>ECO 252</td>
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<td>HIS 112</td>
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<td>PSY 150</td>
<td>General Psychology</td>
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<td>SOC 210</td>
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<td>Office Computations</td>
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<td>OST 138</td>
<td>Office Applications II</td>
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<td>OST 236</td>
<td>Advanced Word Processing</td>
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<td>OST 240</td>
<td>Emerging Technologies</td>
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<td>CTS 112</td>
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Other Major Requirements:

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Technical Electives

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<td>Algebra/Trigonometry I</td>
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<td>Precalculus Algebra</td>
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<tr>
<td>MAT 271</td>
<td>Calculus I</td>
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Select 3 credits of the following:

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<tbody>
<tr>
<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
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<td>ENG 113</td>
<td>Literature-Based Research</td>
</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
</tr>
<tr>
<td>Select one of the following:</td>
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<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
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<td>Literature-Based Research</td>
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<td>Professional Research &amp; Reporting</td>
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<tr>
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</table>
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 is fulfilled through skill development in the areas of word processing, records management, and ten-key skills. Through these skills and through the development of personal competencies and qualities, individuals are 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 co-requisites; check the Courses section for details.

Contact Information

The Office Administration Diploma is in the Professional Careers Division. For more information, call the Office Administration Program Chair at 704.330.6851 or visit the Medical, Legal and Office Administration website.

General Education Requirements

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<td>ANT 220</td>
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<td>ANT 221</td>
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</tr>
<tr>
<td>ECO 251</td>
<td>Principles of Microeconomics</td>
<td></td>
</tr>
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<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>GEO 111</td>
<td>World Regional Geography</td>
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<td>HIS 112</td>
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<td>HIS 132</td>
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<td>POL 220</td>
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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 co-requisites; check the Courses section for details.

Contact Information

The Word Processing Operator Diploma is in the Professional Careers Division. For more information, call the Office Administration Program Chair at 704.330.6851 or visit the Medical, Legal and Office Administration website.

General Education Requirements

<table>
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<td>Writing and Inquiry</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>ECO 151</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>HIS 111</td>
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<td>HIS 112</td>
<td>World Civilizations II</td>
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<td>HIS 132</td>
<td>American History II</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>Introduction to Sociology</td>
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<td>SOC 213</td>
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<tr>
<td>SOC 225</td>
<td>Social Diversity</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>OST 184</td>
<td>Records Management</td>
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<td>CIS 110</td>
<td>Introduction to Computers</td>
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<td>OST 286</td>
<td>Professional Development</td>
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<td>OST 136</td>
<td>Word Processing</td>
<td>3.0</td>
</tr>
<tr>
<td>OST 134</td>
<td>Text Entry &amp; Formatting</td>
<td>3.0</td>
</tr>
<tr>
<td>OST 236</td>
<td>Advanced Word Processing</td>
<td>3.0</td>
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<tr>
<td>OST 137</td>
<td>Office Applications I</td>
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<td>OST 138</td>
<td>Office Applications II</td>
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<td>CTS 120</td>
<td>Windows (TM)</td>
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<tr>
<td>OST 233</td>
<td>Office Publications Design</td>
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<tr>
<td>CTS 130</td>
<td>Spreadsheet</td>
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<tr>
<td>WBL 112</td>
<td>Work-Based Learning I</td>
<td>2.0-3.0</td>
</tr>
<tr>
<td>or BUS 110</td>
<td>Introduction to Business</td>
<td></td>
</tr>
</tbody>
</table>

**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 the Office Administration Program Chair at 704.330.6851 or visit the Medical, Legal and Office Administration website.

**Office Administration Certificate with a Specialization in Software Use (C25370-C2)**

The Certificate in Software Use provides students with an introductory knowledge of software used to function effectively in an office environment using the touch keying system. Students gain knowledge of word processing, database, spreadsheets, and electronic mail applications. The courses in this certificate can be applied toward the A.A.S. degree in Office Administration.

Graduates should qualify for employment in entry-level positions in business, government, and industry.

**Certificate Awarded**

The Certificate in Software Use – 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 Software Use Certificate is in the Professional Careers Division. For more information, call the Office Administration Program Chair at 704.330.6851 or visit the Medical, Legal and Office Administration website.
Office Administration Certificate Specialization in Office Finance (C25370-C3)

Major Requirements
OST 131 Keyboarding 2.0
OST 137 Office Applications I 3.0
OST 122 Office Computations 3.0
OST 153 Office Finance Solutions 3.0
OST 238 Office Applications III 3.0
OST 286 Professional Development 3.0

Total Credits 17

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 the Office Administration Program Chair at 704.330.6851 or visit the Medical, Legal and Office Administration website.

Major Requirements
OST 131 Keyboarding 2.0
OST 134 Text Entry & Formatting 3.0
OST 164 Office Editing 3.0
OST 136 Word Processing 3.0
OST 137 Office Applications I 3.0
OST 286 Professional Development 3.0

Total Credits 17

Ophthalmic Medical Personnel (A45210)

Degree Awarded
The Associate in Applied Science degree - Ophthalmic Medical Personnel is awarded by the college upon completion of this program.

Admissions
- Complete a Central Piedmont Admissions Form.
- Submit an official high school diploma as well as college transcripts to the Student Records.
- Complete the Central Piedmont placement tests for course placement.
- Schedule an appointment and meet 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” before registering for an OPH course.

Students may be required to submit results of a North Carolina state or national criminal background check at their own expense to participate in clinical education experiences at health care facilities. As a condition of program admission, students may have to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

Contact Information
The Ophthalmic Medical Personnel program is in the Medical Careers Division. For more information, visit the Ophthalmic Medical Personnel Program website. For further assistance, contact the Program Chair at 704.330.2722, ext. 3444.

General Education Requirements
ENG 111 Writing and Inquiry 3.0
ENG 112 Writing and Research in the Disciplines 3.0
COM 231 Public Speaking 3.0
MAT 143 Quantitative Literacy 3.0
PSY 150 General Psychology 3.0
Select 3 credits from the following:

| ART 111 | Art Appreciation |
| ART 114 | Art History Survey I |
| ART 115 | Art History Survey II |
| HUM 120 | Cultural Studies |
| HUM 130 | Myth in Human Culture |
| MUS 110 | Music Appreciation |
| MUS 112 | Introduction to Jazz |
| PHI 215 | Philosophical Issues |
| PHI 240 | Introduction to Ethics |
| REL 110 | World Religions |

**Major Requirements**

- OPH 113 Introduction to Diseases of the Eye 2.0
- OPH 114 Basic Ophthalmic Pharmacology 2.0
- OPH 115 Ophthalmic Clinical Procedures I 2.0
- OPH 116 Ophthalmic Medical Assistant Practicum I 6.0
- OPH 117 Ophthalmic Clinical Procedures II 2.0
- OPH 118 Ophthalmic Patient Care 2.0
- OPH 119 Ophthalmic Optics & Basic Refractometry 2.0
- OPH 120 Ophthalmic Medical Assistant Practicum II 6.0
- OPH 150 Intro to Ophthalmic Medical Assisting 2.0
- OPH 151 Ocular Anatomy & Physiology 2.0
- OPH 217 Ophthalmic Clinical Procedures III 2.0
- OPH 218 Advanced Ophthalmic Patient Care 2.0
- OPH 219 Ophthalmic Optics and Refractometry II 2.0
- OPH 220 Ophthalmic Medical Assistant Practicum III 8.0
- BIO 163 Basic Anatomy & Physiology 5.0
- MED 121 Medical Terminology I 3.0

Total Credits 68

**Ophthalmic Medical Personnel (D45210)**

**Diploma Awarded**

A diploma in Ophthalmic Medical Personnel is awarded by the college upon completion of this program.

**Admissions**

- Complete a Central Piedmont Admissions Form.
- Submit an official high school diploma as well as college transcripts to the Student Records.
- Complete Central Piedmont placement tests for course placement.
- Schedule an appointment and meet 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.

United States citizens or are otherwise legally authorized residents of the United States.

**Contact Information**

The Ophthalmic Medical Personnel program is in the Medical Careers Division. For more information, visit the Ophthalmic Medical Personnel Program website. For further assistance, contact the program chair at 704.330.2722, ext. 3444.

**General Education Requirements**

| ENG 111 | Writing and Inquiry | 3.0 |
| PSY 150 | General Psychology  | 3.0 |
| Select 3.0 Credits from the following | 3.0 |
| COM 110 | Introduction to Communication  | 3.0 |
| COM 231 | Public Speaking (Select 3.0 Credits from the following) | |

**Major Requirements**

- OPH 150 Intro to Ophthalmic Medical Assisting 2.0
- OPH 151 Ocular Anatomy & Physiology 2.0
- OPH 113 Introduction to Diseases of the Eye 2.0
- OPH 114 Basic Ophthalmic Pharmacology 2.0
- OPH 115 Ophthalmic Clinical Procedures I 2.0
- OPH 116 Ophthalmic Medical Assistant Practicum I 6.0
- OPH 117 Ophthalmic Clinical Procedures II 2.0
- OPH 118 Ophthalmic Patient Care 2.0
- OPH 119 Ophthalmic Optics & Basic Refractometry 2.0
- OPH 120 Ophthalmic Medical Assistant Practicum II 6.0
- MED 121 Medical Terminology I 3.0

Total Credits 40

No certificates are offered for Ophthalmic Medical Personnel.

**Paralegal Technology**

**Approved by the 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 is designed to prepare individuals to work under the supervision of attorneys by performing routine legal tasks and assisting with substantive legal work. The program offers both an Associate Degree and a Post Baccalaureate Diploma for those who hold a bachelor’s degree.

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. The program also offers a review course that prepares students for the North Carolina State Paralegal Certification Exam. Required courses also include subjects such as English and computer utilization.

Graduates are trained to assist attorneys in various areas of the law in drafting, filing legal documents, writing, researching, and managing the office. Employment opportunities are available in private law firms.
governmental agencies, banks, insurance agencies, and other business organizations.

A paralegal/legal assistant may not practice law, give legal advice, or represent clients in a court of law.

For specific information about potential positions and wages in paralegal employment, visit the Central Piedmont Career Coach website.

**Paralegal Technology (A25380)**

**Degree Awarded**

An Associate in Applied Science in Paralegal Technology degree is awarded by the college upon completion of this program.

**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).

**Contact Information**

The Paralegal Technology Program is in the Professional Careers Division. For more information, visit the Central Piedmont Paralegal Program website. The Paralegal Technology program chair can be reached by email at Nina.Neal@cpcc.edu or by phone at 704.330.4857. A college counselor can be reached by calling the Student Success Center on Cato Campus at 704.330.2722, ext. 7801.

**General Education Requirements**

<table>
<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>
</tr>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
<td>3.0</td>
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<tr>
<td>COM 231</td>
<td>Public Speaking</td>
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<td>or COM 110</td>
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Select 3 credits of the following:

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<td>ART 111</td>
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<td>ART 114</td>
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<td>HUM 120</td>
<td>Cultural Studies</td>
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<td>HUM 130</td>
<td>Myth in Human Culture</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>
<td></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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<td>REL 110</td>
<td>World Religions</td>
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Select one of the following:

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**Major Requirements**

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<td>LEX 120</td>
<td>Legal Research/Writing I</td>
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<tr>
<td>LEX 130</td>
<td>Civil Injuries</td>
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<td>LEX 140</td>
<td>Civil Litigation I</td>
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<td>LEX 150</td>
<td>Commercial Law I</td>
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<td>LEX 210</td>
<td>Real Property I</td>
<td>3.0</td>
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<td>LEX 240</td>
<td>Family Law</td>
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<td>LEX 250</td>
<td>Wills, Estates, &amp; Trusts</td>
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<td>LEX 141</td>
<td>Civil Litigation II</td>
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<tr>
<td>LEX 121</td>
<td>Legal Research/Writing II</td>
<td>3.0</td>
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<tr>
<td>OST 136</td>
<td>Word Processing</td>
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<tr>
<td>LEX 280</td>
<td>Ethics &amp; Professionalism</td>
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<td>LEX 270</td>
<td>Law Office Management/Technology</td>
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<td>CIS 110</td>
<td>Introduction to Computers</td>
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<td>ACC 120</td>
<td>Principles of Financial Accounting</td>
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**Technical Elective**

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<td>Work-Based Learning I</td>
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<td>WBL 121</td>
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<tr>
<td>WBL 122</td>
<td>Work-Based Learning II</td>
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<tr>
<td>LEX 160</td>
<td>Criminal Law &amp; Procedure</td>
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<tr>
<td>LEX 170</td>
<td>Administrative Law</td>
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</tr>
<tr>
<td>LEX 211</td>
<td>Real Property II</td>
<td></td>
</tr>
<tr>
<td>LEX 220</td>
<td>Corporate Law</td>
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</tr>
<tr>
<td>LEX 260</td>
<td>Bankruptcy and Collections</td>
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</tr>
<tr>
<td>LEX 285</td>
<td>Workers’ Compensation Law</td>
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<tr>
<td>LEX 180</td>
<td>Case Analysis &amp; Reasoning</td>
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<tr>
<td>LEX 283</td>
<td>Investigation</td>
<td></td>
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<tr>
<td>LEX 289</td>
<td>U.S. Constitutional Law</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>
<td></td>
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<tr>
<td>LEX 151</td>
<td>Commercial Law II</td>
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</tr>
</tbody>
</table>
Paralegal Technology Diploma (D25380)

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 Central Piedmont Paralegal Program website. The Paralegal Technology program chair can be reached by email at Nina.Neal@cpcc.edu or by phone at 704.330.4857. A college counselor can be reached by calling the Student Success Center on Cato Campus at 704.330.2722, ext. 7801.

General Education Requirements
ENG 111 Writing and Inquiry 3.0
COM 231 Public Speaking 3.0
or COM 110 Introduction to Communication

Major Requirements
LEX 110 Intro to Paralegal Study 2.0
LEX 120 Legal Research/Writing I 3.0
LEX 140 Civil Litigation I 3.0
LEX 141 Civil Litigation II 3.0
LEX 121 Legal Research/Writing II 3.0
OST 136 Word Processing 3.0
LEX 280 Ethics & Professionalism 2.0
LEX 150 Commercial Law I 3.0
LEX 210 Real Property I 3.0
LEX 270 Law Office Management/Technology 2.0
CIS 110 Introduction to Computers 3.0

Technical Elective
Select 5 credits of the following: 5.0
WBL 111 Work-Based Learning I
WBL 121 Work-Based Learning II
LEX 160 Criminal Law & Procedure
LEX 170 Administrative Law
LEX 211 Real Property II
LEX 220 Corporate Law
LEX 260 Bankruptcy and Collections
LEX 285 Workers’ Compensation Law
LEX 180 Case Analysis & Reasoning
LEX 130 Civil Injuries
LEX 240 Family Law
LEX 250 Wills, Estates, & Trusts
LEX 283 Investigation
LEX 289 U.S. Constitutional Law
LEX 271 Law Office Writing
LEX 281 Intellectual Property
LEX 282 Immigration Law
LEX 151 Commercial Law II
LEX 272 North Carolina Certified Paralegal Review Course
LEX 273 North Carolina Certified Paralegal Review Course

Total Credits 41

No certificates are offered in Paralegal Technology.

Pharmacy Technology

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 an admissions application to Central Piedmont.

• Submit high school transcripts, as well as any college transcripts, to Admissions, Records and Registration.

• Take the required placement tests.
• Consult 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 grade of ‘C’ or better.
• Complete and submit a Pharmacy Technology AAS degree application by the deadline date.
• Students must take the TEAS exam and have scores to submit with their AAS degree applications.
• 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 are ranked based upon points earned, and the students with the highest number of points will be selected each year. Admission points are 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 determines 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 also are 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, visit the Pharmacy Technology Program website. For further assistance, contact the Program Chair at 704.330.6432.

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>PSY 150</td>
<td>General Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>Select 3.0 credits from the following:</td>
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<tr>
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<td>3.0</td>
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<tr>
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<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>
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<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>HUM 120</td>
<td>Cultural Studies</td>
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</tr>
<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</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>PHI 215</td>
<td>Philosophical Issues</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>Select 3 credits of the following:</td>
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</tr>
<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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<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
<td>3.0</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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Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHM 110</td>
<td>Introduction to Pharmacy</td>
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<tr>
<td>PHM 111</td>
<td>Pharmacy Practice I</td>
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<td>Pharmacy Calculations</td>
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<td>PHM 118</td>
<td>Sterile Products</td>
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<td>Pharmacology I</td>
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<td>PHM 125</td>
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<td>Trends in Pharmacy</td>
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<td>PHM 150</td>
<td>Hospital Pharmacy</td>
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<td>PHM 155</td>
<td>Community Pharmacy</td>
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<tr>
<td>PHM 160</td>
<td>Pharm Dosage Forms</td>
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<td>PHM 165</td>
<td>Pharmacy Prof Practice</td>
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<td>PHM 132</td>
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<td>PHM 134</td>
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<td>PHM 138</td>
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<td>or PHM 133</td>
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<td>or PHM 135</td>
<td>Pharmacy Clinical</td>
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<tr>
<td>or PHM 136</td>
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<tr>
<td>or MED 121</td>
<td>Medical Terminology I</td>
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</table>

Take 1 course from the following: 3.0-5.0

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO 161</td>
<td>Introduction to Human Biology</td>
<td></td>
</tr>
<tr>
<td>BIO 110</td>
<td>Principles of Biology</td>
<td></td>
</tr>
<tr>
<td>BIO 111</td>
<td>General Biology I</td>
<td></td>
</tr>
<tr>
<td>BIO 112</td>
<td>General Biology II</td>
<td></td>
</tr>
<tr>
<td>BIO 163</td>
<td>Basic Anatomy &amp; Physiology</td>
<td></td>
</tr>
</tbody>
</table>
Pharmacy Technology Diploma (D45580)

The Diploma Program prepares graduates to perform essential functions in various areas of retail pharmacy practice. The program provides employers with competent technicians to assist the pharmacist within their scope of practice and to perform necessary unsupervised daily tasks including basic to extensive medication preparation, dosage calculations, compounding, patient information maintenance, inventory, and quality control. Graduates of the diploma program are eligible to take the National Certification Exam administered by the Pharmacy Technician Certification Board (PTCB) to become a Certified Pharmacy Technician.

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 161</td>
<td>Introduction to Human Biology</td>
<td>3.0-5.0</td>
</tr>
<tr>
<td>or BIO 110</td>
<td>Principles of Biology</td>
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<tr>
<td>or BIO 111</td>
<td>General Biology I</td>
<td></td>
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<tr>
<td>or BIO 112</td>
<td>General Biology II</td>
<td></td>
</tr>
<tr>
<td>or BIO 163</td>
<td>Basic Anatomy &amp; Physiology</td>
<td></td>
</tr>
<tr>
<td>or BIO 168</td>
<td>Anatomy and Physiology I</td>
<td></td>
</tr>
<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
<td>3.0-4.0</td>
</tr>
<tr>
<td>or MAT 152</td>
<td>Statistical Methods I</td>
<td></td>
</tr>
<tr>
<td>or MAT 171</td>
<td>Precalculus Algebra</td>
<td></td>
</tr>
<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>or COM 231</td>
<td>Public Speaking</td>
<td></td>
</tr>
<tr>
<td>MED 120</td>
<td>Survey of Medical Terminology</td>
<td>2.0</td>
</tr>
<tr>
<td>or MED 121</td>
<td>Medical Terminology I</td>
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</table>

Total Credits

Health Sciences Certificate (C45940)

Health Sciences Certificate with a Specialization in Fundamentals in Pharmacy Technology (C45940-C1)

This certificate also is available to high school students through the Career and College Promise program.

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HSC 110</td>
<td>Orientation to Health Careers</td>
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<td>HSC 140</td>
<td>Transcultural Healthcare</td>
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<tr>
<td>HEA 112</td>
<td>First Aid &amp; CPR</td>
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<td>MED 121</td>
<td>Medical Terminology I</td>
<td>3.0</td>
</tr>
<tr>
<td>PHM 110</td>
<td>Introduction to Pharmacy</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits

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 general admission application to Central Piedmont.
- Take required placement tests.
- Meet with an academic advisor or counselor for preliminary counseling.
- Take the Test of Essential Academic Skills (TEAS).
- Submit all official high school transcripts and any college transcripts to Admissions, Records & Registration.
- Complete any required Preparatory courses with a grade of “C” or better.
- Complete and submit the Physical Therapist Assistant application by the deadline.
- 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 Central Piedmont 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 re-certification, a licensure application fee 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, visit the Physical Therapist Assistant website. For further assistance, contact the Program Chair at 704.330.6746.

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>PSY 150</td>
<td>General Psychology</td>
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<tr>
<td>ENG 112</td>
<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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<tr>
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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>
<td></td>
</tr>
<tr>
<td>ART 115</td>
<td>Art History Survey II</td>
<td></td>
</tr>
<tr>
<td>HUM 120</td>
<td>Cultural Studies</td>
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<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</td>
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<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
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</tr>
<tr>
<td>MUS 112</td>
<td>Introduction to Jazz</td>
<td></td>
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<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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<td>REL 110</td>
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<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>COM 231</td>
<td>Public Speaking</td>
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Major Requirements

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<td>PTA 110</td>
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<td>PTA 125</td>
<td>Gross &amp; Functional Anatomy</td>
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<td>PTA 135</td>
<td>Pathology</td>
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<tr>
<td>PTA 145</td>
<td>Therapeutic Procedures</td>
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<td>PTA 212</td>
<td>Health Care/Resources</td>
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<td>PTA 215</td>
<td>Therapeutic Exercise</td>
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<tr>
<td>PTA 222</td>
<td>Professional Interactions</td>
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<td>PTA 225</td>
<td>Intro to Rehabilitation</td>
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<td>PTA 235</td>
<td>Neurological Rehab</td>
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<td>PTA Clinical IV</td>
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<td>BIO 168</td>
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<td>BIO 169</td>
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<tr>
<td>PTA 270</td>
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<td>MED 121</td>
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<tr>
<td>or MED 120</td>
<td>Survey of Medical Terminology</td>
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</tbody>
</table>

Total Credits: 76

No diplomas are offered for Physical Therapy Assistant.

No certificates are offered for Physical Therapy Assistant.

Polysomnography

The Polysomnography program prepares individuals with the knowledge and skills to critically assess, plan, implement and evaluate clinical care and management of sleep disorders and daytime alertness.

Students in this program learn to use sleep technology as part of a team, under the general supervision of a licensed physician, by applying a unique body of knowledge and methodological skills involved in the education, evaluation, treatment, and follow-up of sleep disorders in patients of all ages. The curriculum includes instruction in performing tests such as the Polysomnogram, PAP Titration Studies, Multiple Sleep Latency Test, Maintenance of Wakefulness Test, Actigraphy, Home Sleep Testing and others used by a physician to diagnose and treat sleep disorders. These tests include the recording, monitoring and analysis of electroencephalography (EEG), electromyography (EMG), electrooculography (EOG), electrocardiography (ECG), respiration, blood oxygen levels, and other physiological parameters. Testing procedures may involve application and adjustment of therapeutic modalities such as supplemental oxygen or positive airway pressure and include application of techniques, equipment, and procedures that are safe, aseptic, preventative, and restorative. Interpretive knowledge is required to recognize and respond to respiratory, cardiac, or behavioral events that may occur during testing procedures. Students also learn to provide support services related to the ongoing treatment of sleep-related problems. The professional realm of this support includes patient instruction on the use of devices for the treatment of breathing problems during sleep and helping individuals develop sleeping habits that promote good sleep hygiene.

Polysomnographic Technologists may be employed in facility-based or private sleep diagnostic and treatment centers, durable medical equipment companies, medical specialty sales, research, and more.

For specific information about potential positions and wages in polysomnography employment, visit the Central Piedmont Career Coach website.

Polysomnography (A45670)

Degree Awarded
The Associate in Applied Science Degree – Polysomnography is awarded by the college upon completion of this program.

Admissions

- Complete an admissions application to Central Piedmont.
- Submit high school transcripts, as well as any college transcripts, to Admissions, Records & Registration.
- Take the required placement tests.
- Complete any required Developmental classes with a “C” or better.
- Complete and submit a Polysomnography admissions packet.
- Complete the TEAS test and submit scores with the admissions packet.
- Applications must present evidence of good physical and mental health appropriate for students to meet the clinical standards of the profession. A physical examination documenting the applicant’s ability to complete all program requirements is required.
- Students must be selected to enter the Polysomnography 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 PSG prefix course in each semester.
- Many courses have prerequisites or co-requisites; check the Courses section for details.

Please refer to enrollment instruction for a degree or transfer student under the Admissions Enroll Now tab.

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 include scores on the TEAS test, past academic performance, and experience in the field of interest.

Additional Expenses and Requirements

In addition to tuition and textbooks, costs of this program include uniforms, and professional shoes, a physical examination including immunizations and drug screening.

A student must provide documentation of both health-related and accident insurance.

In order to participate in clinical education experiences at health care facilities, students may be required to submit results of a North Carolina 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 are required to be certified in Health Care Provider CPR or CPR for Professional Rescuer before entering the Polysomnography program.

Contact Information

The Polysomnography program is in the Health Sciences Division. For more information, visit the Polysomnography website. For further assistance, contact the program chair at 704-330-2722, ext. 3179.

### Polysomnography (A45670)

#### General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<tr>
<td>ENG 111</td>
<td>Writing and Inquiry</td>
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<td>ENG 112</td>
<td>Writing and Research in the Disciplines</td>
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</tr>
<tr>
<td>or ENG 114</td>
<td>Professional Research &amp; Reporting</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
<td>3.0</td>
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<tr>
<td>PSY 150</td>
<td>General Psychology</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>3.0</td>
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</table>

Take 3.0 credits from the following courses: 3.0

- ART 111 Art Appreciation
- ART 114 Art History Survey I
- ART 115 Art History Survey II
- DRA 111 Theatre Appreciation
- HUM 120 Cultural Studies
- HUM 130 Myth in Human Culture
- MUS 110 Music Appreciation
- MUS 112 Introduction to Jazz
- PHI 215 Philosophical Issues
- PHI 240 Introduction to Ethics
- REL 110 World Religions

#### Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>PSG 110</td>
<td>Intro to Polysomnography</td>
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<tr>
<td>PSG 111</td>
<td>Neuro/Cardiopulmonary A&amp;P</td>
<td>4.0</td>
</tr>
<tr>
<td>PSG 113</td>
<td>Polysomnography Instrumentation</td>
<td>3.0</td>
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<tr>
<td>PSG 210</td>
<td>Polysomnography I</td>
<td>7.0</td>
</tr>
<tr>
<td>PSG 211</td>
<td>Polysomnography II</td>
<td>7.0</td>
</tr>
<tr>
<td>PSG 112</td>
<td>Polysomnography Fundamentals</td>
<td>3.0</td>
</tr>
<tr>
<td>PSG 114</td>
<td>Polysomnography Clinical Education I</td>
<td>3.0</td>
</tr>
<tr>
<td>PSG 212</td>
<td>Infant/Pediatric Polysomnography</td>
<td>4.0</td>
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<tr>
<td>PSG 213</td>
<td>Case Study/Exam Review</td>
<td>1.0</td>
</tr>
<tr>
<td>PSG 214</td>
<td>PSG Clinical Applications I</td>
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<td>PSG 215</td>
<td>PSG Clinical Applications II</td>
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<td>MED 118</td>
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<td>MED 120</td>
<td>Survey of Medical Terminology</td>
<td>2.0</td>
</tr>
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<td>BIO 163</td>
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</tr>
<tr>
<td>CIS 110</td>
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</tbody>
</table>

Total Credits 68

### No diplomas are offered in Polysomnography

#### Respiratory Therapy

The Respiratory Therapy curriculum prepares individuals to perform as professional respiratory therapists. In these roles, individuals complete diagnostic tests, physical exams, treatments, patient, and family education; assist physicians with procedures; and manage patients with heart and lung diseases.

Students learn to master many skills for treating patients with cardipulmonary diseases. These skills include assessment, life support, monitoring, and drug administration involving patients of all ages in various settings (emergency room, critical care, or general floor). Graduates of
accredited programs are eligible to take the Therapist Multiple-Choice (TMC) Examination and Clinical Simulation Examination (CSE) from the National Board for Respiratory Care (NBRC). Graduates may be employed in acute and long-term care hospitals, clinics, physician offices, nursing homes, education, industry, and home care.

For specific information about potential positions and wages in respiratory therapy employment, visit the Central Piedmont Career Coach website.

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 Central Piedmont admissions application.
- Admission to the Respiratory Therapy program is competitive. Please note that, in addition to the general application to Central Piedmont, students must complete a separate application for the Respiratory Therapy Program when they are ready to apply.
- See the 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 Central Piedmont 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 liter,
- 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 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 the program chair at 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 website.

General Education Requirements

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<th>Course</th>
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<td>POL 120</td>
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Major Requirements

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<td>RCP 110</td>
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<td>RCP 111</td>
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<td>C-P Anatomy &amp; Physiology</td>
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Programs of Study

RCP 115  C-P Pathophysiology  2.0
RCP 122  Special Practice Lab  1.0
RCP 123  Special Practice Lab  1.0
RCP 145  RCP Clinical Practice II  5.0
RCP 152  RCP Clinical Practice III  2.0
RCP 210  Critical Care Concepts  4.0
RCP 211  Adv Monitoring/Procedures  4.0
RCP 214  Neonatal and Pediatric Respiratory Care  2.0
RCP 222  Special Practice Lab  1.0
RCP 223  Special Practice Lab (Special Practice Lab)  1.0
RCP 235  RCP Clinical Practice IV  5.0
RCP 247  RCP Clinical Practice V  7.0
Select 5 credits from one of the following:  5.0

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<td>substituted if student has completed BIO 168</td>
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<tr>
<td>or BIO 168 &amp; BIO 169</td>
<td>Anatomy and Physiology I and Anatomy and Physiology II</td>
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<tr>
<td>MED 120</td>
<td>Survey of Medical Terminology (Student may</td>
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<tr>
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<td>complete MED 121 as a substitute for MED 120)</td>
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<td></td>
<td>or MED 121 Medical Terminology I</td>
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</table>

Total Credits  74

No diplomas are offered in Respiratory Therapy.

No certificates are offered in Respiratory Therapy.

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, and programming for the purpose of creating simulations and games.

Graduates may qualify for employment as designers, artists, animators, programmers, testers, and quality assurance analysts in the entertainment industry, healthcare industry, engineering, forensics, education, NASA, and other government agencies.

Among the tools used in the program are: Maya, Adobe Premiere Pro, MS Visual Studio, Adobe Photoshop, Adobe After Effects, Adobe Animate, Adobe Illustrator, ZBrush, Mudbox3D, Unreal Engine and Unity 3D. Students use various programming languages and scripts to create their simulations and games, including: C#, JavaScript, C++.

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, Virtual Heroes, and the International Game Developers Association. The program also offers one diploma and six certificates.

For specific information about potential positions and wages in simulation and game development employment, visit the Central Piedmont Career Coach website.

Simulation and Game Development (A25450)

Degree Awarded

The Associate in Applied Science degree in Simulation and Game Development 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 Simulation and Game Development program is in the Digital Media, Journalism and Communication Division. For more information, call the program chair at 704.330.6398 or the program office at 704.330.6549.

General Education Requirements

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<td>Writing and Research in the Disciplines 3.0</td>
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<td>ENG 113</td>
<td>Literature-Based Research 3.0</td>
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<td>Professional Research &amp; Reporting 3.0</td>
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<td>Select 3 credits of the following:</td>
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<td>COM 110</td>
<td>Introduction to Communication 3.0</td>
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<td>Quantitative Literacy 3.0</td>
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<td>MAT 152</td>
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<td>MAT 171</td>
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<td>Calculus I 3.0</td>
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<td>ART 114</td>
<td>Art History Survey I 3.0</td>
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<td>ECO 251</td>
<td>Principles of Microeconomics 3.0</td>
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200
## Central Piedmont Community College

### Simulation and Game Development Diploma (D25450)

#### General Education Requirements
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<td>ENG 111</td>
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#### Major Requirements
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<td>SGD 111</td>
<td>Introduction to Simulation and Game Development</td>
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<td>SGD 165</td>
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<td>SGD 168</td>
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<td>SGD 172</td>
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<td>SGD 212</td>
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### Simulation and Game Development Diploma Specialization in Game Development (D25450-21)

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Total Credits: 36

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Total Credits: 39

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#### Major Requirements

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<td>Simulation and Game Audio and Video</td>
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<td>Lighting and Shading Algorithms</td>
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<tr>
<td>SGD 268</td>
<td>Mobile Simulation and Game Programming II</td>
<td></td>
</tr>
<tr>
<td>SGD 274</td>
<td>Simulation and Game Level Design</td>
<td></td>
</tr>
<tr>
<td>SGD 285</td>
<td>Simulation and Game Software Engineering</td>
<td></td>
</tr>
<tr>
<td>SEL 293</td>
<td>Selected Topics in ____________</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 68
### Programs of Study

#### Simulation and Game Development Diploma Specialization in 3D Modeling (D25450-24)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGD 111</td>
<td>Introduction to Simulation and Game Development</td>
<td>3.0</td>
</tr>
<tr>
<td>SGD 113</td>
<td>Simulation and Game Development Programming</td>
<td>3.0</td>
</tr>
<tr>
<td>SGD 213</td>
<td>Simulation Game Development Programming II</td>
<td>3.0</td>
</tr>
<tr>
<td>SGD 232</td>
<td>Survey of Game Engines</td>
<td>3.0</td>
</tr>
<tr>
<td>SGD 125</td>
<td>Simulation and Game Artificial Intelligence</td>
<td>3.0</td>
</tr>
<tr>
<td>SGD 135</td>
<td>Serious Games</td>
<td>3.0</td>
</tr>
<tr>
<td>SGD 168</td>
<td>Mobile Simulation and Game Programming I</td>
<td>3.0</td>
</tr>
<tr>
<td>SGD 171</td>
<td>Flash Simulation and Game Programming</td>
<td>3.0</td>
</tr>
<tr>
<td>SGD 172</td>
<td>Virtual Simulation and Game Environments</td>
<td>3.0</td>
</tr>
<tr>
<td>SGD 268</td>
<td>Mobile Simulation and Game Programming II</td>
<td>3.0</td>
</tr>
<tr>
<td>SGD 271</td>
<td>Advanced Flash Programming</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Total Credits:** 39

#### General Education Requirements

- COM 231 Public Speaking 3.0
- ART 111 Art Appreciation 3.0

#### Major Requirements

- SGD 116 Graphic Design Tools 3.0
- SGD 114 3D Modeling 3.0
- SGD 214 3D Modeling II 3.0
- SGD 232 Survey of Game Engines 3.0
- SGD 117 Art for Games 3.0
- SGD 165 Simulation and Game Character Development 3.0
- SGD 172 Virtual Simulation and Game Environments 3.0
- SGD 173 Lighting and Shading Algorithms 3.0
- SGD 174 Simulation and Game Level Design 3.0
- SGD 244 3D Modeling III 3.0
- SGD 274 Simulation and Game Level Design II 3.0

**Total Credits:** 39

#### Simulation and Game Development Diploma Specialization in Animation (D25450-25)

<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>COM 231</td>
<td>Public Speaking</td>
<td>3.0</td>
</tr>
</tbody>
</table>

#### 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 3.0
- SGD 181 Machinima 3.0
- SGD 210 3D Data Capture 3.0
- SGD 237 Rigging 3D Models 3.0

**Total Credits:** 39

#### Simulation and Game Development Certificate Specialization in Simulation and Game Development Level I (C25450-21)

This certificate is also available to high school 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

#### Simulation and Game Development Certificate Specialization in Simulation and Game Development Level II (C25450-22)

**Major Requirements**

- SGD 165 Simulation and Game Character Development 3.0
- SGD 212 Simulation and Game Development Design II 3.0
- SGD 213 Simulation Game Development Programming II 3.0
- SGD 214 3D Modeling II 3.0

**Total Credits:** 12

#### Simulation and Game Development Certificate Specialization in Mobile Game Development (C25450-23)

**Major Requirements**

- SGD 168 Mobile Simulation and Game Programming I 3.0
- SGD 172 Virtual Simulation and Game Environments 3.0
- SGD 162 Simulation and Game 3-D Animation 3.0
Simulation and Game Development Certificate
Specialization in Game Design Level 1
(C25450-24)

Major Requirements
- SGD 111 Introduction to Simulation and Game Development 3.0
- SGD 112 Simulation and Game Development Design 3.0
- SGD 159 SGD Production Management 3.0
- SGD 165 Simulation and Game Character Development 3.0
- SGD 174 Simulation and Game Level Design 3.0

Total Credits 15

Simulation and Game Development Certificate
Specialization in Game Design Level 2
(C25450-29)

Major Requirements
- SGD 124 Massive Multiplayer Online Programming 3.0
- SGD 135 Serious Games 3.0
- SGD 172 Virtual Simulation and Game Environments 3.0
- SGD 212 Simulation and Game Development Design II 3.0
- SGD 274 Simulation and Game Level Design II 3.0

Total Credits 15

Simulation and Game Development Certificate
Specialization in SG Programming Level 1
(C25450-26)

Major Requirements
- SGD 111 Introduction to Simulation and Game Development 3.0
- SGD 113 Simulation and Game Development Programming 3.0
- SGD 168 Mobile Simulation and Game Programming I 3.0
- SGD 172 Virtual Simulation and Game Environments 3.0
- SGD 213 Simulation Game Development Programming II 3.0

Total Credits 15

Simulation and Game Development Certificate
Specialization in SG Programming Level 2
(C25450-27)

Major Requirements
- SGD 122 Simulation and Game Database Programming 3.0
- SGD 125 Simulation and Game Artificial Intelligence 3.0
- SGD 126 Simulation and Game Engine Design 3.0
- SGD 268 Mobile Simulation and Game Programming II 3.0
- SGD 285 Simulation and Game Software Engineering 3.0

Total Credits 15

Speech Language Pathology Assistant

The Speech Language Pathology Assistant (SLPA) curriculum prepares individuals to assist a licensed Speech Language Pathologist in conducting therapy in articulation, fluency, receptive and expressive language, augmentative/alternative communication, and oral motor skills. Coursework includes instruction in protocols designed to remediate individual speech and language disorders. Supervised field work experience includes working with toddlers, preschool, and school-age children with communication difficulties.

The Speech Language Pathology Assistant program at Central Piedmont is offered in collaboration with Caldwell Community College and Technical Institute. Required general education courses can be completed as usual at any Central Piedmont campus. SLPA program-specific courses are offered on Central Campus via live participatory classes broadcast to Central Piedmont. 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.

For specific information about potential positions and wages in speech language pathology employment, visit the Central Piedmont Career Coach website.

Degree Awarded
The Associate in Applied Science Degree-Speech Language Pathology Assistant is awarded by Caldwell Community College and Technical Institute.

Admissions Steps
Students participating in the SLPA program must enroll in both Central Piedmont and Caldwell Community College and Technical Institute. Both schools have online applications.
Programs of Study

1. Complete an application to Caldwell Community College and Technical Institute.
2. Complete an application to Central Piedmont.

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 Central Piedmont. Additional information is available on the following websites:

• Central Piedmont: Speech-Language Pathology Assistant
• Caldwell Community College: Speech-Language Pathology Assistant

For further assistance, email the Central Piedmont Heath Programs Admissions Specialist at healthsciences@cpcc.edu (healthsciences@cpcc.edu?subject=Question%20about%20SLPA%20Program) or call 704.330.6958. For more information about Caldwell Community College and Technical Institute (CCC&TI) SLPA program, please contact the following person for information.

Jessica Raby, Director/Instructor
Caldwell Community College and Technical Institute Speech Language Pathology Assistant Program
Health Sciences
Caldwell - E - 345
828.726.2345  email: jraby@cccti.edu

No diplomas are offered in Speech Language Pathology.

No certificates are offered in Speech Language Pathology.

Supply Chain Management

The Supply Chain Management 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 economics and finance, transportation, warehousing, inventory control, material handling, purchasing, computerization, supply chain operations, federal transportation, and safety regulations are emphasized.

Graduates should qualify for positions in a wide range of supply chain and logistics positions in government agencies, manufacturing, and service organizations. Employment opportunities include entry-level distribution, planning, material management, warehousing, inventory, transportation, international freight, and logistics.

For specific information about potential positions and wages in supply chain management employment, visit the Central Piedmont Career Coach website.

Supply Chain Management (A25620)

Degree Awarded
The Associate in Applied Science Degree in Supply Chain Management is awarded by the college upon completion of this program

For more information, call the Business & Accounting Division office at 704.330.4228 or check the Business & Accounting Division website.

Associate in Applied Science Degree in Supply Chain Management (A25620)

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>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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</table>

Select 3 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>HIS 111</td>
<td>World Civilizations I</td>
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<tr>
<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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<td>HIS 132</td>
<td>American History II</td>
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<td>POL 120</td>
<td>American Government</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY 150</td>
<td>General Psychology</td>
<td>3.0</td>
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<tr>
<td>SOC 210</td>
<td>Introduction to Sociology</td>
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Select 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>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>DRA 111</td>
<td>Theatre Appreciation</td>
<td>3.0</td>
</tr>
<tr>
<td>HUM 120</td>
<td>Cultural Studies</td>
<td>3.0</td>
</tr>
<tr>
<td>HUM 130</td>
<td>Myth in Human Culture</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>PHI 215</td>
<td>Philosophical Issues</td>
<td>3.0</td>
</tr>
<tr>
<td>PHI 240</td>
<td>Introduction to Ethics</td>
<td>3.0</td>
</tr>
<tr>
<td>REL 110</td>
<td>World Religions</td>
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</table>

Select 4 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<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>BUS 137</td>
<td>Principles of Management</td>
<td>3.0</td>
</tr>
<tr>
<td>MKT 120</td>
<td>Principles of Marketing</td>
<td>3.0</td>
</tr>
<tr>
<td>OMT 110</td>
<td>Intro to Operations Mgmt</td>
<td>3.0</td>
</tr>
<tr>
<td>INT 110</td>
<td>International Business</td>
<td>3.0</td>
</tr>
<tr>
<td>or INT 230</td>
<td>International Law</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Supply Chain Management (A25620)

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 115</td>
<td>Business Law I</td>
<td>3.0</td>
</tr>
<tr>
<td>LOG 110</td>
<td>Introduction to Logistics</td>
<td>3.0</td>
</tr>
<tr>
<td>CIS 110</td>
<td>Introduction to Computers</td>
<td>3.0</td>
</tr>
<tr>
<td>ACC 120</td>
<td>Principles of Financial Accounting</td>
<td>4.0</td>
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</tbody>
</table>

Select one of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
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<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 137</td>
<td>Principles of Management</td>
<td>3.0</td>
</tr>
<tr>
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<td>Principles of Marketing</td>
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<td>INT 110</td>
<td>International Business</td>
<td>3.0</td>
</tr>
<tr>
<td>or INT 230</td>
<td>International Law</td>
<td>4.0</td>
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Select 4 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
</table>
SPA 111 & SPA 181  
Elementary Spanish I and Spanish Lab 1

GER 111 & GER 181  
Elementary German I and German Lab 1

FRE 111 & FRE 181  
Elementary French I and French Lab 1

Other Major Requirements:

ACA 122  
College Transfer Success 1.0

Technical Electives

Select 3 credits from the following: 3.0

ACC 121  
Principles of Managerial Accounting

BAS 120  
Introduction to Analytics

BAS 121  
Data Visualization

BUS 139  
Entrepreneurship I

BUS 153  
Human Resource Management

BUS 240  
Business Ethics

INT 180  
Travel Study Abroad

MKT 224  
International Marketing

WBL 111  
Work-Based Learning I

WBL 112  
Work-Based Learning I

ACC 140  
Payroll Accounting

ACC 149  
Introduction to Accounting Spreadsheets

BUS 152  
Human Relations

ECM 210  
Introduction to E-Commerce

MKT 232  
Social Media Marketing

BUS 112  
SIFE Business Development

BUS 110  
Introduction to Business

TOM 260  
Operations of Trucking II

Select one of the following tracks: 15.0

Global Logistics Track:

LOG 125  
Transportation Logistics 3.0

LOG 215  
Supply Chain Management 3.0

LOG 235  
Import/Export Management 3.0

LOG 240  
Purchasing Logistics 3.0

LOG 250  
Advanced Global Logistics 4.0

Total Credits 16

Distribution Management Track:

LOG 120  
Global Logistics 3.0

LOG 210  
Fleet Management 3.0

LOG 211  
Distribution Management 3.0

LOG 220  
Logistics Management 3.0

LOG 230  
Transportation Management 3.0

Total Credits 15

Trucking Operations Track:

BUS 153  
Human Resource Management 3.0

LOG 125  
Transportation Logistics 3.0

TOM 130  
Fleet Maintenance 3.0

TOM 250  
Operations of Trucking I 3.0

LOG 210  
Fleet Management 3.0

Total Credits 15

No diplomas are offered in Supply Chain Management.

Supply Chain Management Technology Certificate (C25620)

Supply Chain Management Technology Certificate Specialization in Global Logistics Technology (C25620-C1)

This certificate is designed to provide the student with a concentrated course of study in the field of global logistics. Coursework includes studies in global logistics, transportation, supply chain management and import/export management. Students are expected to demonstrate knowledge of the importance of the design of a supply chain to the competitive advantage of every industry.

Upon completion of the five required courses, a certificate is awarded by the college. This certificate may be applied toward the Associate in Applied Science degree in Supply Chain Management with a concentration in Global Logistics Technology.

For more information, call the Business & Accounting Division office at 704.330.4228 or check the Business & Accounting Division website.

Major Requirements

LOG 110  
Introduction to Logistics 3.0

LOG 125  
Transportation Logistics 3.0

LOG 215  
Supply Chain Management 3.0

LOG 235  
Import/Export Management 3.0

LOG 250  
Advanced Global Logistics 4.0

Total Credits 16

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 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.

For specific information about potential positions and wages in surgical technology employment, visit the Central Piedmont Career Coach website.

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, in addition to a general application to CPCC, students also must complete a separate application for the Surgical Technology program when they are ready to apply.
- See the Surgical Technology website.
- 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 a13-panel drug screening test, immunizations such as tetanus toxoid, hepatitis B, influenza vaccinations, TB test, blood tests (VDRL, rubella titer, etc.), current CPR with AED certification and a criminal background check. The student also must 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 are 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 on third floor in the Belk (BL) Wing of the Health Careers Building.

For an admission packet, frequently asked questions and other information, visit the Surgical Technology website.

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>PSY 150</td>
<td>General Psychology</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>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>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 143</td>
<td>Quantitative Literacy</td>
<td></td>
</tr>
</tbody>
</table>

Select 3 credits from the following:

MAT 152 Statistical Methods I
MAT 171 Precalculus Algebra

Select 3 credits from the following:

ART 111 Art Appreciation
ART 114 Art History Survey I
ART 115 Art History Survey II
DRA 111 Theatre Appreciation
HUM 120 Cultural Studies
HUM 130 Myth in Human Culture
MUS 110 Music Appreciation
MUS 112 Introduction to Jazz
PHI 215 Philosophical Issues
PHI 240 Introduction to Ethics
REL 110 World Religions

Select 3 credits from the following:

COM 110 Introduction to Communication
COM 231 Public Speaking

Major Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUR 110</td>
<td>Intro to Surgical Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>SUR 111</td>
<td>Periop Patient Care</td>
<td>7.0</td>
</tr>
<tr>
<td>SUR 122</td>
<td>Surgical Procedures I</td>
<td>6.0</td>
</tr>
<tr>
<td>SUR 123</td>
<td>Sur Clinical Practice I</td>
<td>7.0</td>
</tr>
<tr>
<td>SUR 134</td>
<td>Surgical Procedures II</td>
<td>5.0</td>
</tr>
<tr>
<td>SUR 135</td>
<td>SUR Clinical Practice II</td>
<td>4.0</td>
</tr>
<tr>
<td>SUR 137</td>
<td>Professional Success Preparation</td>
<td>1.0</td>
</tr>
<tr>
<td>SUR 210</td>
<td>Advanced Sur Clinical Practice</td>
<td>2.0</td>
</tr>
<tr>
<td>SUR 211</td>
<td>Advanced Theoretical Concepts</td>
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</tr>
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<td>SUR 212</td>
<td>Surgical Clinical Supplement</td>
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<tr>
<td>BIO 168</td>
<td>Anatomy and Physiology I</td>
<td>4.0</td>
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<td>BIO 169</td>
<td>Anatomy and Physiology II</td>
<td>4.0</td>
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<td>BIO 175</td>
<td>General Microbiology</td>
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<tr>
<td>or BIO 275</td>
<td>Microbiology</td>
<td></td>
</tr>
<tr>
<td>MED 121</td>
<td>Medical Terminology I</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Credits 73

No diplomas are offered in Surgical Technology.

No certificates are offered in Surgical Technology.

Sustainability Technologies

The Sustainability Technologies curriculum prepares individuals for employment in solar energy installation and design, renewable energy, energy management, sustainable construction, corporate sustainability, environmental monitoring, and related industries. Major emphasis is placed on minimizing the impact on the natural environment while increasing social capital and promoting sustainable economics.

Course work includes environmental monitoring, solar technologies, green building practices, energy auditing and management, safety, problem-solving, and landscape analysis. Computer application addresses the
construction, modeling, and analysis of specific scenarios relating to creating a sustainable environment.

Graduates should qualify for numerous positions within the solar energy, renewable energy, green building, energy management, design, and engineering industry. Employment opportunities include, but are not limited to, the following: solar energy technicians, solar energy designers, sustainability technicians, energy auditors, environmental engineering technicians, construction management, and renewable energy specialists.

For specific information about potential positions and wages in sustainability technologies employment, visit the Central Piedmont Career Coach website.

### Sustainability Technologies (A40370)

#### Degree Awarded

The Associate in Applied Science degree – Sustainability Technologies is awarded by the college upon completion of this program.

#### Admissions

- A high school diploma or equivalent is required.
- Central Piedmont 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.
- Counseling and orientation appointments follow 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 requirements of the college catalog in effect at the time of re-entry.

#### Contact Information

Sustainability Technologies is in the Science Division. For more information, contact the Program Chair, Matt Miller, at 704.330.6836 or visit the Sustainability Technologies page on the Science website.

#### 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>COM 110</td>
<td>Introduction to Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>or COM 231</td>
<td>Public Speaking</td>
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<tr>
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</tr>
<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>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>MAT 121</td>
<td>Algebra/Trigonometry I</td>
<td></td>
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<tr>
<td>MAT 171</td>
<td>Precalculus Algebra</td>
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<tr>
<td>MAT 271</td>
<td>Calculus I</td>
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<td>ECO 251</td>
<td>Principles of Microeconomics</td>
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<tr>
<td>ECO 252</td>
<td>Principles of Macroeconomics</td>
<td></td>
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<tr>
<td>HIS 111</td>
<td>World Civilizations I</td>
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</tr>
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<td>HIS 112</td>
<td>World Civilizations II</td>
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#### Major Requirements

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<thead>
<tr>
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<tbody>
<tr>
<td>ENV 110</td>
<td>Environmental Science</td>
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<tr>
<td>SST 110</td>
<td>Introduction to Sustainability</td>
<td>3.0</td>
</tr>
<tr>
<td>SST 120</td>
<td>Energy Use Analysis</td>
<td>3.0</td>
</tr>
<tr>
<td>SST 210</td>
<td>Issues in Sustainability</td>
<td>3.0</td>
</tr>
<tr>
<td>ENV 110A</td>
<td>Environmental Science Laboratory</td>
<td>1.0</td>
</tr>
<tr>
<td>ENV 226</td>
<td>Environmental Law</td>
<td>3.0</td>
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<tr>
<td>ARC 114</td>
<td>Architectural CAD</td>
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<tr>
<td>SST 250</td>
<td>Sustainability Capstone Project</td>
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<tr>
<td>ARC 225</td>
<td>Architectural Building Information Modeling I</td>
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</tr>
<tr>
<td>PHY 110</td>
<td>Conceptual Physics</td>
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<tr>
<td>PHY 110A</td>
<td>Conceptual Physics Lab</td>
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<tr>
<td>LID 111</td>
<td>Low Impact Development Design Principles</td>
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</tr>
<tr>
<td>or ELC 111</td>
<td>Introduction to Electricity</td>
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#### Energy/Bldng Track

Complete one of two groups (See below) 12.0

#### Technical Electives

Select 7 credits from the following: 7.0

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>ACA 122</td>
<td>College Transfer Success</td>
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<tr>
<td>SST 140</td>
<td>Green Building and Design Concepts</td>
<td></td>
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<tr>
<td>ARC 111</td>
<td>Introduction to Architectural Technology</td>
<td></td>
</tr>
<tr>
<td>BUS 139</td>
<td>Entrepreneurship I</td>
<td></td>
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<tr>
<td>BUS 230</td>
<td>Small Business Management</td>
<td></td>
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<tr>
<td>WBL 112</td>
<td>Work-Based Learning I</td>
<td></td>
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<tr>
<td>WBL 122</td>
<td>Work-Based Learning II</td>
<td></td>
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<tr>
<td>ENV 120</td>
<td>Earth Science</td>
<td></td>
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<tr>
<td>GEO 131</td>
<td>Physical Geography I</td>
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<tr>
<td>GEO 111</td>
<td>World Regional Geography</td>
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<td>GEL 120</td>
<td>Physical Geology</td>
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<td>GEL 230</td>
<td>Environmental Geology</td>
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<tr>
<td>ALT 110</td>
<td>Biofuels I</td>
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<tr>
<td>ARC 112</td>
<td>Construction Materials &amp; Methods</td>
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<tr>
<td>CIV 230</td>
<td>Construction Estimating</td>
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<td>LAR 120</td>
<td>Sustainable Development</td>
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<td>LAR 111</td>
<td>Introduction to Landscape Architecture Technology</td>
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<td>Residential Landscape Design</td>
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<td>EGR 120</td>
<td>Engineering and Design Graphics</td>
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<tr>
<td>MEC 111</td>
<td>Machine Processes I</td>
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<tr>
<td>MEC 161</td>
<td>Manufacturing Processes I</td>
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<td>MEC 180</td>
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<td>BIO 140</td>
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<td>SRV 111</td>
<td>Surveying II</td>
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<td>AHR 111</td>
<td>HVACR Electricity</td>
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<td>AHR 112</td>
<td>Heating Technology</td>
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<td>AHR 113</td>
<td>Comfort Cooling</td>
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<td>ELC 112</td>
<td>DC/AC Electricity</td>
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<td>CMT 214</td>
<td>Planning and Scheduling</td>
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<td>CMT 216</td>
<td>Costs and Productivity</td>
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<td>Introduction to Architectural Technology</td>
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<td>ARC 210</td>
<td>Intro to Sustain Design</td>
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<td>ARC 230</td>
<td>Environmental Systems</td>
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<td>Introduction to Carpentry</td>
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<td>CAR 114</td>
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<td>Soils and Foundations</td>
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<td>Georeferencing &amp; Mapping</td>
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<td>PHY 131</td>
<td>Physics-Mechanics</td>
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<td>PHY 132</td>
<td>Physics-Electricity &amp; Magnetism</td>
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<td>SRV 110</td>
<td>Surveying I</td>
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<td>CMT 210</td>
<td>Construction Management Fundamentals</td>
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<td>BPR 130</td>
<td>Print Reading-Construction</td>
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<td>SRV 210</td>
<td>Surveying III</td>
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<td>ELC 221</td>
<td>Advanced Photovoltaic System Designs</td>
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<td>CEG 210</td>
<td>Construction Materials &amp; Methods</td>
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<td>CEG 230</td>
<td>Subdivision Planning &amp; Design</td>
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<td>CEG 212</td>
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<td>ELC 220</td>
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<td>ELC 230</td>
<td>Wind and Hydro Power Systems</td>
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<td>Statics/Strength of Mater</td>
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<td>CEG 211</td>
<td>Hydrology &amp; Erosion Control</td>
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<td>GIS 111</td>
<td>Introduction to GIS</td>
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<td>Air Photo Interpretation</td>
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<td>GIS 249</td>
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<td>GIS 125</td>
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<tr>
<td>BIO 111</td>
<td>General Biology I</td>
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</table>

**Energy/Bldng Tracks**

**Group 1**

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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ALT 120</td>
<td>Renewable Energy Technologies</td>
<td>3.0</td>
</tr>
<tr>
<td>SST 130</td>
<td>Modeling Renewable Energy</td>
<td>3.0</td>
</tr>
<tr>
<td>ALT 250</td>
<td>Thermal Systems</td>
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</tr>
<tr>
<td>ELC 220</td>
<td>Photovoltaic System Technology</td>
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</table>

**Group 2**

<table>
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<tr>
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<td>Construction I</td>
<td>4.0</td>
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<tr>
<td>CST 150</td>
<td>Building Science</td>
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<td>CMT 120</td>
<td>Codes and Inspections</td>
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<tr>
<td>SST 140</td>
<td>Green Building and Design Concepts</td>
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<tr>
<td>Total Credits</td>
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</tr>
</tbody>
</table>

**No diplomas are offered in Sustainability Technologies.**

**Sustainability Technology Certificates (C40370)**

- Sustainability Technologies Certificate – Specialization in Renewable Energy (C40370-C1) (p. 208)
- Sustainability Technologies Certificate – Specialization in Energy and the Environment (C40370-C5) (p. 208)

**Sustainability Technologies Certificate – Specialization in Renewable Energy (C40370-C1)**

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SST 110</td>
<td>Introduction to Sustainability</td>
<td>3.0</td>
</tr>
<tr>
<td>SST 120</td>
<td>Energy Use Analysis</td>
<td>3.0</td>
</tr>
<tr>
<td>SST 130</td>
<td>Modeling Renewable Energy</td>
<td>3.0</td>
</tr>
<tr>
<td>ELC 220</td>
<td>Photovoltaic System Technology</td>
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<tr>
<td>ALT 120</td>
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</table>

**Sustainability Technologies Certificate – Specialization in Energy and the Environment (C40370-C5)**

**Major Requirements**

<table>
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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SST 110</td>
<td>Introduction to Sustainability</td>
<td>3.0</td>
</tr>
<tr>
<td>SST 120</td>
<td>Energy Use Analysis</td>
<td>3.0</td>
</tr>
<tr>
<td>ALT 120</td>
<td>Renewable Energy Technologies</td>
<td>3.0</td>
</tr>
<tr>
<td>ENV 110</td>
<td>Environmental Science</td>
<td>3.0</td>
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<td>ENV 110A</td>
<td>Environmental Science Laboratory</td>
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<tr>
<td>ENV 226</td>
<td>Environmental Law</td>
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<tr>
<td>Total Credits</td>
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</tbody>
</table>
Turfgrass Management Technology

The Turfgrass Management Technology Curriculum is designed to prepare individuals for various careers in management of high-end turfgrass. 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:

- 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 scientific principles needed to understand plants and their management and care.

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 or national parks, sports complexes, highway vegetation, and turf maintenance companies, private and public gardens. Graduates also should be prepared to take the following exams:

1. the licensed pesticide applicators exam, and
2. the ISA (International Society of Arboriculture) certified arborist exam.

For specific information about potential positions and wages in turfgrass management employment, visit the Central Piedmont Career Coach website.

Turfgrass Management Technology (A15420)

Degree Awarded

The college awards the Associate in Applied Science in Turfgrass Management Technology upon completion of this program.

Admissions

- A high school diploma or equivalent (available through Central Piedmont) is required.
- Central Piedmont placement tests are required in English and Mathematics. Developmental Studies Mathematics and English courses are available for students to build basic skills and knowledge.
- Advising and orientation appointments follow 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 the Program Chair at 704.330.4826.

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>
<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
<td>3.0</td>
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</table>

Select 3 credits of the following:

- ENG 112 Writing and Research in the Disciplines
- ENG 113 Literature-Based Research
- ENG 114 Professional Research & Reporting

Select 3 credits of the following:

- COM 110 Introduction to Communication
- COM 231 Public Speaking

Select 3 credits of the following:

- ART 111 Art Appreciation
- ART 114 Art History Survey I
- ART 115 Art History Survey II
- DRA 111 Theatre Appreciation
- HUM 120 Cultural Studies
- HUM 130 Myth in Human Culture
- MUS 110 Music Appreciation
- MUS 112 Introduction to Jazz
- PHI 215 Philosophical Issues
- PHI 240 Introduction to Ethics
- REL 110 World Religions

Select 3 credits of the following:

- ECO 251 Principles of Microeconomics
- ECO 252 Principles of Macroeconomics
- 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

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>TRF 110</td>
<td>Introduction Turfgrass Cultivation &amp; Id And Identification</td>
<td>4.0</td>
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<tr>
<td>TRF 120</td>
<td>Turfgrass Irrigation and Design</td>
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<tr>
<td>TRF 152</td>
<td>Landscape Maintenance</td>
<td>3.0</td>
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<tr>
<td>HOR 166</td>
<td>Soils and Fertilizers</td>
<td>3.0</td>
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<td>TRF 210</td>
<td>Turfgrass Eqmt Mgmt</td>
<td>3.0</td>
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<tr>
<td>TRF 230</td>
<td>Turfgrass Mgmt Apps</td>
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<td>TRF 240</td>
<td>Turfgrass Pest Control</td>
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<td>Adv Turfgrass Mgmt</td>
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<td>TRF 220</td>
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<tr>
<td>HOR 160</td>
<td>Plant Materials I</td>
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<td>HOR 162</td>
<td>Applied Plant Science</td>
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<td>SPA 120</td>
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<tr>
<td>TRF 250</td>
<td>Golf /Sport Field Const</td>
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<td>WBL 111</td>
<td>Work-Based Learning I</td>
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<td>CIS 111</td>
<td>Basic PC Literacy</td>
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Technical Electives

Select 9 credits of the following:

- ACA 122 College Transfer Success
- HOR 112 Landscape Design I
- HOR 114 Landscape Construction
- HOR 116 Landscape Management I
Programs of Study

No diplomas are offered in Turfgrass Management Technology.

Turfgrass Management Technology Certificates (C15420)

Turfgrass Management Technology Certificate with a Specialization in Turfgrass Management (C15420-C1)

This certificate is designed to prepare individuals for basic entry-level positions in the area of Turfgrass Management Technology. Coursework includes turfgrass culture and identification, equipment, irrigation, pest management and soils and fertilizers.

Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HOR 166</td>
<td>Soils and Fertilizers</td>
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<td>HOR 253</td>
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<td>TRF 120</td>
<td>Turfgrass Irrigation and Design</td>
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<td>TRF 210</td>
<td>Turfgrass Eqmt Mgmt</td>
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<td>TRF 230</td>
<td>Turfgrass Mgmt Apps</td>
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<tr>
<td>TRF 240</td>
<td>Turfgrass Pest Control</td>
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</table>

Total Credits 18

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 nondestructive testing provide students 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.

For specific information about potential positions and wages in welding employment, visit the Central Piedmont Career Coach website.

Welding Technology (A50420)

Degree Awarded

The Associate in Applied Science - Welding Technology is awarded by the college upon completion of this program.

- Welding Technology - Automation (A50420A) (p. 210)
- Welding Technology - Construction Pipe and Heavy Maintenance Welding (A50420C) (p. 211)
- Welding Technology - Entrepreneurial Welding Business & Technical Sales (A50420E) (p. 212)
- Welding Technology - Fabrication and Manufacturing (A50420F) (p. 212)
- Welding Technology = Construction Pipe-Fitting and Installation (A50420P) (p. 213)

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 the Welding Technology Program Chair at 704.330.4429 or the Applied Technologies Division at 704.330.4445.

Welding Technology - Automation

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>TRF 210</td>
<td>Turfgrass Eqmt Mgmt</td>
<td>3.0</td>
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<tr>
<td>HOR 118</td>
<td>Equipment Operation and Maintenance</td>
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<tr>
<td>ENG 13</td>
<td>Literature-Based Research</td>
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<tr>
<td>ENG 14</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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Welding Technology - Automation (A50420A)

<table>
<thead>
<tr>
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<th>Credits</th>
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</thead>
<tbody>
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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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Select one of the following: 3.0

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 114</td>
<td>Professional Research &amp; Reporting</td>
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<tr>
<td>MAT 110</td>
<td>Mathematical Measurement and Literacy</td>
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</tbody>
</table>
## MAT 143: Quantitative Literacy
Select one of the following:  3.0
- COM 110: Introduction to Communication
- COM 231: Public Speaking

## General Education Requirements
### ENG 111: Writing and Inquiry  3.0
Take 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 one of the following:  3.0
- MAT 110: Mathematical Measurement and Literacy
  or MAT 143: Quantitative Literacy

Select one of the following:  3.0
- COM 110: Introduction to Communication
  or COM 231: Public Speaking

Select 3 credits of the following:  3.0
- ECO 251: Principles of Microeconomics
- ECO 252: Principles of Macroeconomics
- 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

Select 3 credits of the following:  3.0
- ART 111: Art Appreciation
- ART 114: Art History Survey I
- ART 115: Art History Survey II
- DRA 111: Theatre Appreciation
- HUM 120: Cultural Studies
- HUM 130: Myth in Human Culture
- MUS 112: Introduction to Jazz
- PHI 215: Philosophical Issues
- PHI 240: Introduction to Ethics
- REL 110: World Religions

### CIS 110: Introduction to Computers  3.0
### PFT 110: Introduction to Pipe Fitting  4.0
### WLD 110: Cutting Processes  2.0
### WLD 115: SMAW (Stick) Plate  5.0
### WLD 121: GMAW (MIG) FCAW/Plate  4.0
### WLD 131: GTAW (TIG) Plate  4.0
### WLD 141: Symbols and Specifications  3.0
### WLD 270: Orbital Welding TIG/Pipe  4.0
### WLD 143: Welding Metallurgy  2.0
### WLD 265: Automated Welding/Cutting  4.0
### WLD 262: Inspection & Testing  3.0
### or NDE 110: Intro to Nondestructive Examination
### WLD 268: Robotic Gas Metal Arc Welding  4.0
### WLD 151: Fabrication I  4.0
### ELC 111: Introduction to Electricity  3.0

Take 1 credit of the following:  1.0
- ACA 122: College Transfer Success
- WOL 110: Basic Construction Skills
- MAC 118: Course MAC 118 Not Found
- ISC 112: Industrial Safety
- WBL 111: Work-Based Learning I
- WBL 121: Work-Based Learning II

### Total Credits  68
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<td>WLD 262</td>
<td>Inspection &amp; Testing</td>
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<tr>
<td>or NDE 110</td>
<td>Intro to Nondestructive Examination</td>
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<tr>
<td>Select 3 credits of the following:</td>
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<td>CIS 110</td>
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<td>CIS 111</td>
<td>Basic PC Literacy</td>
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<td>&amp; WBL 111</td>
<td>and Work-Based Learning I</td>
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<td><strong>Total Credits</strong></td>
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<td>COM 110</td>
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<td>or COM 231</td>
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<td>BUS 137</td>
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<td>BUS 139</td>
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<td><strong>Total Credits</strong></td>
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<td>HUM 130</td>
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<td>World Religions</td>
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<td>ECO 251</td>
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<td>HIS 132</td>
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<td>PSY 150</td>
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<td>SOC 210</td>
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<td>WLD 110</td>
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212
WLD 115 SMAW (Stick) Plate 5.0
WLD 121 GMAW (MIG) FCAW/Plate 4.0
WLD 131 GTAW (TIG) Plate 4.0
WLD 141 Symbols and Specifications 3.0

Other Major Requirements
ELC 111 Introduction to Electricity 3.0
MAC 121 Introduction to CNC 2.0
WLD 132 GTAW (TIG) Plate/Pipe 3.0
WLD 143 Welding Metallurgy 2.0
WLD 151 Fabrication I 4.0
WLD 251 Fabrication II 3.0
WLD 265 Automated Welding/Cutting 4.0
WOL 110 Basic Construction Skills 3.0
WLD 262 Inspection & Testing 3.0
or NDE 110 Intro to Nondestructive Examination
Select 4 credits from the following: 4.0
  CIS 110 Introduction to Computers
  CIS 111 Basic PC Literacy
& WBL 111 and Work-Based Learning I

Total Credits 67

Welding Technology - Construction Pipe-Fitting and Installation (A50420P)

General Education Requirements
ENG 111 Writing and Inquiry 3.0
MAT 121 Algebra/Trigonometry I 3.0
COM 110 Introduction to Communication 3.0
or COM 231 Public Speaking
Take 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
  ECO 251 Principles of Microeconomics
  ECO 252 Principles of Macroeconomics
  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
Select 3 credits of the following: 3.0
  ART 111 Art Appreciation
  ART 114 Art History Survey I
  ART 115 Art History Survey II
  DRA 111 Theatre Appreciation
  HUM 120 Cultural Studies
  HUM 130 Myth in Human Culture
  MUS 110 Music Appreciation
  MUS 112 Introduction to Jazz
  PHI 215 Philosophical Issues

Welding Technology Diploma (D50420)

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 the Welding Technology program Chair at 704.330.4429 or the Applied Technologies Division at 704.330.4445.

General Education Requirements
ENG 111 Writing and Inquiry 3.0
MAT 110 Mathematical Measurement and Literacy 3.0

Major Requirements
WLD 110 Cutting Processes 2.0
WLD 115 SMAW (Stick) Plate 5.0
WLD 121 GMAW (MIG) FCAW/Plate 4.0
WLD 131 GTAW (TIG) Plate 4.0
WLD 141 Symbols and Specifications 3.0
WLD 116 SMAW (stick) Plate/Plane 4.0
Programs of Study

WLD 122  GMAW (MIG) Plate/Pipe  3.0
WLD 132  GTAW (TIG) Plate/Pipe  3.0
WLD 221  GMAW (MIG) Pipe  3.0
WLD 231  GTAW (TIG) Pipe  3.0
WLD 151  Fabrication I  4.0
CIS 111  Basic PC Literacy  2.0
  or CIS 110  Introduction to Computers  
Total Credits  46

Welding Technology Certificates (C50420)

The following certificates can be earned in the Welding Technology Program (A50420).

• Welding Technology Certificate with a Specialization in S.M.A.W. of Pipe Welding (C50420-C1) (p. 214)
• Welding Technology Certificate with a Specialization in Entry-Level Welding (C50420-C2) (p. 214)
• Welding Technology Certificate with a Specialization in Inert Gas Welding (C50420-C4) (p. 214)
• Welding Technology Certificate with a Specialization in Advanced Level Welding (C50420-C5) (p. 214)
• Welding Technology Certificate with a Specialization in Expert Level Welding (C50420-C6) (p. 214)
• Welding Technology Certificate with a Specialization in Robotic Welding and Cutting (C50420-C8) (p. 215)
• Welding Technology Certificate with a Specialization in Orbital GTAW Welding (C50420-C9) (p. 215)
• Welding Technology Certificate Specialization in G.M.A.W. of Pipe Welding (C50420-10) (p. 215)
• Welding Technology Certificate Specialization in S.M.A.W. Structure Steel Welding (C50420-11) (p. 215)
• Welding Technology Certificate Specialization in Steel Fabrication (C50420-12) (p. 215)
• Welding Technology Certificate Specialization in Advanced Welding Automation for Manufacturing (C50420-13) (p. 215)
• Welding Technology Certificate Specialization in Wrought Metals (C50420-14) (p. 215)
• Welding Technology Certificate Specialization in Entry Level Pipe-Fitting (C50420-30) (p. 215)
• Welding Technology Certificate Specialization in Pipe-Fitting (C50420-31) (p. 213)
• Welding Technology Certificate Specialization in Advanced Pipe-Fitting (C50420-32) (p. 215)

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 the Welding Technology Program Chair at 704.330.4429 or the Applied Technologies Division at 704.330.4445.
### Welding Technology Certificate with a Specialization in Robotic Welding and Cutting (C50420-C8)

**Major Requirements**
- WLD 141: Symbols and Specifications 3.0
- WLD 121: GMAW (MIG) FCAW/Plate 4.0
- WLD 110: Cutting Processes 2.0
- ELC 111: Introduction to Electricity 3.0
- WLD 265: Automated Welding/Cutting 4.0

**Total Credits:** 16

### Welding Technology Certificate with a Specialization in Orbital GTAW Welding (C50420-C9)

**Major Requirements**
- WLD 141: Symbols and Specifications 3.0
- WLD 110: Cutting Processes 2.0
- WLD 131: GTAW (TIG) Plate 4.0
- ELC 111: Introduction to Electricity 3.0
- WLD 270: Orbital Welding TIG/Pipe 4.0

**Total Credits:** 16

### Welding Technology Certificate Specialization in G.M.A.W. of Pipe Welding (C50420-10)

**Major Requirements**
- WLD 110: Cutting Processes 2.0
- WLD 121: GMAW (MIG) FCAW/Plate 4.0
- WLD 141: Symbols and Specifications 3.0
- WLD 122: GMAW (MIG) Plate/Pipe 3.0
- WLD 221: GMAW (MIG) Pipe 3.0

**Total Credits:** 15

### Welding Technology Certificate Specialization in S.M.A.W. Structure Steel Welding (C50420-11)

**Major Requirements**
- WLD 110: Cutting Processes 2.0
- WLD 115: SMAW (Stick) Plate 5.0
- WLD 121: GMAW (MIG) FCAW/Plate 4.0
- WLD 141: Symbols and Specifications 3.0

**Total Credits:** 14

### Welding Technology Certificate Specialization in Steel Fabrication (C50420-12)

**Major Requirements**
- WLD 110: Cutting Processes 2.0
- WLD 115: SMAW (Stick) Plate 5.0
- WLD 121: GMAW (MIG) FCAW/Plate 4.0
- WLD 122: GMAW (MIG) Plate/Pipe 3.0

**Total Credits:** 17

### Welding Technology Certificate Specialization in Advanced Welding Automation for Manufacturing (C50420-13)

This program is also available to high school students through Career and College Promise.

**Major Requirements**
- WLD 110: Cutting Processes 2.0
- WLD 121: GMAW (MIG) FCAW/Plate 4.0
- WLD 131: GTAW (TIG) Plate 4.0
- WLD 141: Symbols and Specifications 3.0
- WLD 265: Automated Welding/Cutting 4.0

**Total Credits:** 17

### Welding Technology Certificate Specialization in Wrought Metals (C50420-14)

**Major Requirements**
- WLD 110: Cutting Processes 2.0
- WLD 112: Basic Welding Processes 2.0
- WLD 152: Wrought Metals I 4.0
- WLD 252: Wrought Metals II 4.0
- WLD 141: Symbols and Specifications 3.0

**Total Credits:** 15

### Welding Technology Certificate Specialization in Entry Level Pipe-Fitting (C50420-30)

**Major Requirements**
- PFT 110: Introduction to Pipe Fitting 4.0
- MAT 121: Algebra/Trigonometry I 3.0
- WLD 112: Basic Welding Processes 2.0
- WLD 141: Symbols and Specifications 3.0
- WOL 110: Basic Construction Skills 3.0

**Total Credits:** 15

### Welding Technology Certificate Specialization in Advanced Pipe-Fitting (C50420-32)

**Major Requirements**
- PFT 210: Advanced Pipe Fitting 4.0
- MAC 118: Course MAC 118 Not Found 3.0

**Total Credits:** 11

Students must complete Welding Technology Certificate Specialization in Entry Level Pipe-Fitting (C50420-30) before being admitted.
November. Most continuing education courses and programs are open and new classes typically announced in late April, early July and late November. Registration is ongoing throughout each semester with registration dates during the term to fit student needs.

Central Piedmont's Course Search and Registration provides a one-stop resource that leverages the strengths of the entire college in management and processes, such as project management, computer training or engineering and manufacturing. The Corporate and Continuing Education responds with flexible, focused programming that covers many aspects of a business – from office and team skills to leadership and project management. Fee-based public classes are offered for employees, as well as custom engagements, to meet unique learning needs.

For custom engagements, professionals in the Corporate and Continuing Education help companies assess organizational and training needs and design courses to meet their objectives. Custom design and delivery mean training can fit any work cycle, maybe held onsite and may be designed to effectively target employees' skill levels. For recognized industry standards in management and processes, such as project management, computer training or engineering and manufacturing, the Corporate and Continuing Education provides a one-stop resource that leverages the strengths of the entire college.

Corporate and Continuing Education

Whether the goal is to gain new job skills, prepare for changing careers, earn credentials or launch a business, Corporate and Continuing Education can help make it happen. Individuals and employers meet ongoing learning and workforce development needs through courses and short-term programs on campuses, in the community, at workplaces and online. Continuing education courses are non-credit, meaning they do not lead to a degree or college academic credit. Many courses, however, earn skill and knowledge-based certificates and certifications through industry-based content for professional and trade careers. In-person courses are offered on flexible schedules, including nights and weekends.

For detailed information, visit the Corporate and Continuing Education website.

Individuals may choose from hundreds of courses and programs - from beginner to more advanced - to acquire the job skills and knowledge to meet career goals or to start or grow a small business. Industry-specific and professional certifications or exam prep validate job skills to launch or advance a career. Many programs also offer continuing education units (CEU) to keep work credentials up to date. Individuals also may choose personal enrichment courses to pursue a hobby or interest, including art, fitness, cooking and more.

Employers need a ready, talented and knowledgeable workforce to stay competitive. Corporate and Continuing Education responds with flexible, focused programming that covers many aspects of a business – from office and team skills to leadership and project management. Fee-based public classes are offered for employees, as well as custom engagements, to meet unique learning needs.

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Course Search and Registration

Central Piedmont's Program Finder or online Schedule Builder permits searches by topic to explore course descriptions, along with days, times and locations of current courses and programs. Courses may be added during the term to fit student needs.

Registration 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, applications or transcripts. Register for classes from the Corporate and Continuing Education website or contact customer service for any assistance you need by calling 704.330.4223.

Business and Industry

Job and career training are aligned with the learning demands of individuals and employers who hire them. Content and delivery formats are results-oriented, designed for adaptability, and to be relevant and timely for success in developing talent and in growing the economy.

Companies and organizations may inquire about custom or group training needs by contacting the Corporate Learning Center at 704.330.4660.

Career Services

Corporate Learning Center (p. 216)
Small Business Center (p. 216)
Workplace Learning and Apprenticeship
Charlotte (p. 217)

Corporate Learning Center

The Corporate Learning Center brings together the entire college to focus on meeting the learning and development needs of businesses and organizations in Mecklenburg County. The span of relevant learning topics, along with the real-world experience and expertise of instructors enable powerful collaboration with employers. Engagements address job and skills training, leadership, performance, and organizational needs. The Corporate Learning Center also coordinates with state, local, and regional economic development entities for assisting in new and expanding operations and employee hiring.

Customized Business Solutions for Advanced Manufacturing

Through collaboration with Engineering Technology instructors, the Corporate Learning Center works one-on-one with employers to assess timely needs and to recommend customized solutions in a comprehensive approach with Integrated Systems Technology (IST) and machining labs. Examples of customized training to client specifications include metrology, manual machining technology, CNC programming, and blueprint reading for technicians.

Group Training

Consulting, custom, and small group training is available by contacting the Corporate Learning Center at 704.330.4660 or visit the Corporate Learning Center website.

Small Business Center

The Small Business Center at Central Piedmont exists to cultivate the entrepreneurial community and stimulate local jobs by assisting individuals launch and expand their business. The Small Business Center accomplishes this by providing affordable, accessible, high-quality training and knowledge-sharing opportunities to help clients achieve their business goals.

Part of the statewide Small Business Center Network (SBCN), The Small Business Center uses state community college funding to provide many of the resources, including counseling, at no cost to the client or student.

Programs of Study

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>WLD 115</td>
<td>SMAW (Stick) Plate</td>
<td>5.0</td>
</tr>
<tr>
<td>WLD 131</td>
<td>GTAW (Tig) Plate</td>
<td>4.0</td>
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<tr>
<td>WLD 143</td>
<td>Welding Metallurgy</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 262</td>
<td>Inspection &amp; Testing</td>
<td>3.0</td>
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<tr>
<td>or NDE 110</td>
<td>Intro to Nondestructive Examination</td>
<td></td>
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<tr>
<td>Total Credits</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

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Part of the statewide Small Business Center Network (SBCN), The Small Business Center uses state community college funding to provide many of the resources, including counseling, at no cost to the client or student.
Resources and Services include:

- business counseling, including partner referrals for expanded and professional services
- forums and networking events
- a Business Resource Center located on Central Campus, including touch-down computers with specialized software and research capabilities
- seminars and webinars
- continuing education short courses and programming for start-up needs and expanding businesses, including the popular QuickBooks and food business classes

For details, visit the website for the Central Piedmont Small Business Center or call 704.330.6736.

Customer service and registration for Corporate and Continuing Education are available by calling 704.330.4223.

**Workplace Learning and Apprenticeship Charlotte**

Instructional areas across the college, both curriculum (credit-based) and continuing education (non-credit) provide training and customized services to employers. Collaboration and training may also extend beyond Mecklenburg County to serve national and global clients.

**Workplace Learning**

Workplace Learning covers three main learning opportunities:

1. Work-based Learning (formerly Cooperative Education or Co-op)
2. Internships
3. Apprenticeship Charlotte

For more information:

- Visit the Workplace Learning Office on Central Campus in the Elizabeth Office Building
- Call 704.330.6217
- Email workplace.learning@cpcc.edu
- Visit the Workplace Learning Web page

Locations for Workplace Learning offices on all Central Piedmont campuses are available in the college directory.

**Work-based Learning**

Work-based Learning (formerly Cooperative Education or Co-op) is an academic college 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 employer partnerships, students gain work experience that increases their chances of finding career-related employment upon completion. Employers have the opportunity to connect with students that are given faculty support throughout the experience. Work-based Learning experiences may be paid or unpaid.

Students are accepted from various programs of study, provided they meet the following criteria:

1. They must be enrolled in an approved Central Piedmont 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 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.

Placement is not guaranteed for all eligible students.

**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 an internship that is not for academic credit varies based on the program of study. Contact the Workplace Learning office for details.

**Apprenticeship Charlotte**

Apprenticeship Charlotte is a program that connects 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. 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.

To learn more about participating in an apprenticeship, potential students should visit the Apprenticeship Charlotte website or send an email to workplace.learning@cpcc.edu.

**Continuing Education**

Continuing education courses cover many topics and skills from beginner to advanced levels, including comprehensive certificates and preparation for industry credentials. Accessible with year-round scheduling, these are offered to the public at all campus locations as well as multiple community locations and centers. To find specific site locations, use the Campus Finder webpage.

**Course Selection and Registration**

For details and the latest public offerings in non-credit continuing education, visit the Corporate and Continuing Education website or contact customer service at 704.330.4223. Find courses for registration by entering keywords or topics in the online Schedule Builder on the Corporate and Continuing Education website.
Audio Engineering (p. 218)
Business and Entrepreneurship (p. 82)
Career Readiness Certificate
Computer Technology (p. 218)
Construction (p. 218)
Cosmetology (p. 218) (p. 122)
Financial Services (p. 219)
Graphic Design, Printing and Digital Photography (p. 219)
Healthcare (p. 219)
Hospitality and Food Services (p. 219)
Languages and Culture (p. 219)
Notary Public (p. 220)
Personal Enrichment
Public Safety (p. 220)
Teacher Education (p. 221)
Transportation, Distribution, and Logistics (p. 221)
Welding and Inspection (p. 221)

Audio Engineering

Learn about the recording studio from an artistic and operational view in a progressive series of non-degree continuing education courses. For details, visit the Audio Engineering website.

Audio Engineering Courses

Audio Engineering Level 1 (AAC 8002)
Introduction to the recording studio, including audio consoles, equipment and echo chambers.

Audio Engineering Level 1B (AAC 8102)
Continue study from Level 1 and prepare for Level 2.

Audio Engineering Level 2 (AAC 8003)
Begin to apply recording techniques, including multi-track recording.

Audio Engineering Level 3 Techniques (AAC 8005)
Learn digital workstations and ProTools for multi-track recording with post-production, editing, and more.

Register or check for additional courses by contacting customer service at 704.330.4223. For custom or group training, contact the Corporate Learning Center at 704.330.4660.

Online Courses (including 6 to 12-month certification exam prep)

Visit the Information Technology Web page of the Corporate and Continuing Education website for more detail or call 704.330.4276.

For employers, the Corporate Learning Center offers group training or assists in sponsoring staff in publicly offered sessions. Learn more by calling 704.330.4660.

To earn college credit toward an associate degree, certificate, diploma, or for transfer information, use the Central Piedmont Program Finder to explore program options.

Construction: Non-degree Continuing Education

From construction and sustainability professionals to homeowners looking to improve their own homes, Central Piedmont offers continuing education to meet individual goals. Explore the topics below and find additional courses by contacting Customer Service at 704.330.4223 or by visiting the continuing education Construction Web page.

For custom group skills training or certifications, contact the Corporate Learning Center at 704.330.4660.

Topics and courses include the following:

- Brick Masonry
- Building Contractor
- Carpentry
- Code Qualification and Building Codes
- Electrical
- Home Improvement
- Home Inspection Licensing
- Plumbing

NCCER Core Curriculum (National Center for Construction Education and Research)

NCCER - Core (CIX 7017)

Cosmetology

Natural Hair Care Certification

A two-part series prepares students for success on the Natural Hair Care Braiding License exam by the North Carolina Board of Cosmetic Art.

Natural Hair Care Certification Part 1

Beginner level covers general sciences and practices specific to infection control, sanitation, bacteriology, first-aid, shampooing, draping, anatomy, disorders of the hair and client consultation.

Natural Hair Care Certification Part 2

This course covers advanced level applications 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.

For complete details about certification, visit the Corporate and Continuing Education website for Cosmetology.
Entrepreneurship and Small Business

Central Piedmont offers entrepreneurs and small businesses non-credit courses, certification, exam prep, and services. Course topics include business planning, accounting, office productivity, marketing, financing, computer technology, business analysis, project management, and human resources. Find more information and offerings on the Business and Entrepreneurship Web page.

In addition to programming, the Small Business Center at Central Piedmont has free resources, including events, seminars, and one-on-one counseling. Current activities and courses include popular topics, such as QuickBooks, starting a food truck, and bidding on government contracts. Find a schedule and more details on the Small Business Center website. Visit the Small Business Center on the second floor of the Hall Professional Development Building on Central Campus or contact by email at mary.brown@cpcc.edu.

Find classes and course information by using Program Finder or the online Schedule Builder tool. Register by calling customer service at 704.330.4223 or register online. Group or custom business training is available by calling the Corporate Learning Center at 704.330.4660 or the Small Business Center at 704.330.6736.

Financial Services: Non-degree Continuing Education

The James R. Worrell, Sr. Financial Services Institute
Banking and finance non-degree courses and programs are offered through the James R. Worrell, Sr. Financial Services Institute located at the Harris Campus. Non-degree or continuing education courses cover requirements for licensing, continuing education and professional development for a highly regulated industry. From the entry-level banking services representative course to more advanced analytical courses, individuals may enroll to begin a career, to transition into a new career, or to build professional skills and credentials to get ahead.

Visit the Financial Services Web page to learn about programs and courses, including the following:

- Accounting
- Appraisal
- Banking Services Certificate (customer service positions)
- Certified Financial Planner - CFP® Certification Education Program
- Insurance
- Mortgage Lending
- Notary Public
- Property Management
- Real Estate

Scholarships
Scholarship opportunities are available for careers in financial services. For questions and assistance, contact customer service at 704.330.4223.

Graphic Design, Printing and Digital Photography

For complete listings and course details, visit the Graphic Design, Printing and Digital Photography Web page of the Corporate and Continuing Education website.

New or updated courses may be added, along with online courses which may be made available by request. For the latest offerings, check with customer service at 704.330.4223, or search by topic through Schedule Builder from the Corporate and Continuing Education website.

Course topics include:

- Adobe Creative Suite
- Digital Photography
- Printing

Healthcare

For details about course offerings, visit the Healthcare Web page of the Continuing Education website.

Topics of study include:

- Assisted Living
- Medical Billing and Coding
- Medical Professional Certifications

Hospitality and Food Services

The hospitality industry covers a range of fields with career opportunities in restaurants, institutions, travel and event planning, and floral design. Central Piedmont offers non-degree, continuing education programs and courses to help you prepare for and advance your career in this growing industry.

For complete details about course offerings in Hospitality and Food Services, contact Customer Service at 704.330.4223.

Courses and topics include:

- Cake Decorating and Design
- Catering and Event Management
- Culinary Apprentice Certificate
- ServSafe®
- ServSafe Manager

Programs, including the popular team building event, known as the Culinary Team Experience, are available for exclusive or group training by calling 704.330.4660.

Languages and Culture: Non-degree Continuing Education

Connect and learn to better communicate with individuals from near and far with non-credit continuing education 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 community sites. For
more details about course offerings, visit the Languages and Culture Web page. To register for classes, contact customer service at 704.330.4223.

Language courses include:

French
German
Italian
Spanish

International Learning
Test of English as a Foreign Language® (TOEFL) Preparation I (EFL 8050)
Test of English as a Foreign Language® (TOEFL) Preparation II (EFL 8051)

Languages for Business and Industry
Central Piedmont offers customized language training for businesses and various professions tailored to the business communication need. For information, call the Corporate Learning Center at 704.330.4660.

ESL Instructor Fast-Track Training (TSL 8500)
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.

Study Abroad
Gain a global perspective through travel and learning in selected programs open to community members. Programs may 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 or visit the Global Learning Web page for complete details.

Notary Public

Notary Public for New or Renewal Applicants

Notary Public classes provide an introduction to the statutes that regulate the acts of North Carolina notaries public. Find additional information at the Secretary of State website. 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. A current edition of the Notary Public Guidebook must be purchased prior to participating in class.

Course: Notary Public I (BUS 7116)

Electronic Notary Certification

This course instructs 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. To qualify to become a certified electronic notary, participants must hold a valid commission as a notary public in the state of North Carolina.

Course: Electronic Notary Certification (BUS 7117)

Find Notary Public on the Financial Services Web page of the Corporate and Continuing Education website.

To register for classes, contact customer service at 704.330.4223.

Law and Public Safety

American Academy of Applied Sciences
Emergency Medical Technician
Fire Protection Technology
Law Enforcement

Central Piedmont offers continuing education and in-service training for law and public safety professionals. Classes are typically offered at the Claudia Watkins Belk Center for Justice on the Merancas Campus in Huntersville. For details on these programs and courses, visit the Law and Public Safety Web page of the Corporate and Continuing Education website.

Courses include:

American Academy of Applied Forensics
Forensic Computer Examiner (online) (ETG 8047)

Emergency Medical Technician
Fire Service Training
Law Enforcement

Basic Law Enforcement Training (BLET)
Spanish for Law Enforcement (SPA 7000)

Public Safety for Healthcare Providers

For complete details about continuing education Public Safety courses, call Customer Service at 704.330.4223 or visit the Public Safety (non-credit) website and scroll to Emergency Medical Technician.

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.

The following courses are designed as continuing education for healthcare professionals:

Advanced Cardiac Life Support Renewal
EMT Methodology of Teaching
EMT Renewal
Paramedic Training
Pediatric Advanced Life Support Renewal

Continuing Education Units (CEU) are provided for all participants.
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. Central Piedmont 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 the Corporate Learning Center at 704.330.4660.

Transportation, Distribution and Logistics

For complete details about non-credit or continuing education programs and course offerings, visit the Transportation, Distribution, and Logistics web page of the Corporate and Continuing Education website. Central Piedmont also offers an Associate in Applied Science degree along with certificates in Supply Chain Management and Logistics, now available through generous grant support from JPMorgan Chase. Visit the Supply Chain Management Web page for more details.

Certified Supply Chain Professional (CSCP)

APICS Certified in Logistics, Transportation, and Distribution Exam Preparation (APX 8001)

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.

Certified in Production and Inventory Management (CPIM)

Exam preparation review courses are designed for professionals in operations and inventory management who would like to earn the APICS 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 Basics of Supply Chain Management
APICS Execution and Control of Operations
APICS Detailed Scheduling and Planning
APICS Strategic Management of Resources

Certified in Logistics, Transportation and Distribution (CLTD)

Certified in Logistics, Transportation and Distribution (CLTD) Exam Prep (APX 8001) is a 32-hour course for professionals who want to increase or validate their knowledge and expertise in the field.

Global Logistics

Employers may work directly with the college for start up or growth to expand operations in global trade. Employers and organizations also may request custom design and delivery of training to employees. Programs range in level of difficulty, length and format while providing either skills and competencies alone or in conjunction with credit-based degrees and certificates.

Teacher Education: Non-degree Continuing Education

Central Piedmont helps to prepare North Carolina educators in various stages of their careers. For teachers who need to renew their teaching license, courses provide Continuing Education Units (CEUs). See the Corporate and Continuing Education Teacher Education webpage for details.

ESL Instructor Fast-Track Training

English as a Second Language (ESL) Instructor Fast-Track Training (TSL 8500) is a five-module, 30-hour online course for prospective adult literacy instructors on the fundamentals of adult ESL literacy instruction.

Lateral Entry

Lateral entry teachers are assisted in pursuing their initial teaching licenses. Complete information about these curriculum courses is available on the Teacher Education - Lateral Entry webpage.

Lateral Entry Courses
Classroom Management and Instruction (EDU 163)
Human Growth and Development (EDU 244)
Learning Theory (EDU 243)

Renewal Credit

To learn about teacher renewal courses or to register for a class, call customer service at 704.330.4223. Online classes with flexible starting dates offer various teaching and education topics, including classroom computing, languages, mathematics, reading and writing, and test preparation.

Please note: Non-credit continuing education courses do not meet the requirements for an initial license. Students taking these courses to renew a teaching license should get verification that courses meet state requirements. Contact the North Carolina Department of Public Instruction at 800.577.7994 (toll-free in-state). Licensure information also is available at the North Carolina DPI website.

Substitute Training

Substitute Training: Becoming an Effective Substitute Teacher (EDU 7001) is offered several times a year.

Welding and Inspection: Non-degree Continuing Education

AWS Welding Certification

Practice welding skills for an American Welding Society (AWS) certification test, interview or work under the supervision of an experienced instructor in the welding lab. Students must provide all personal protection equipment. Standard testing materials are provided. AWS testing facilities...
Programs of Study

at Central Piedmont are located at the Harper Campus on Hebron Street in southwest Charlotte.

For details about this program, find Welding on the Construction Web page of the Corporate Continuing Education website.

AWS Welding Certification - Single Position Plate Test (WLX 7121)
AWS Welding Certification - Multiple Position Plate Test (WLX 7122)
AWS Welding Certification - Single Position Pipe Test (WLX7123)
Skills Practice for Experienced Welders (WLX 7076) Practice only; no classroom instruction

Nondestructive examination (NDE)
NDE is a way of examining material without damaging it to find hidden indications of potential flaws. With aging bridges, roadways, power plants and other infrastructure, job opportunities exist for those trained to perform inspections.

Introduction to NDE (NDX 8012)
Learn more about nondestructive examination through this introductory online course. Modules are self-paced, with vivid graphics and videos describing the six different NDE methods.

NDE Visual Testing Level 1, 2 (NDX 8005)
Online course offering self-paced modules, introducing the Visual Testing method

NDE Visual Testing Level 1,2 Practicum (NDX 7005)

Ultrasonic Testing
Ultrasonic Testing - Level I (WLX 7013)
Ultrasonic Testing - Level II (WLX 7014)
Level I & II Magnetic Particle Testing (NDX 7011)
Courses / Course Registration

Regardless of where students are on their academic path, Central Piedmont has the resources needed to help them find success.

Career & College Promise Courses During High School

Qualified students of high school age in North Carolina have the opportunity to complete college-level credits, tuition-free, while they are in high school, allowing them to get a jump-start on their workplace and college preparation.

College and Career Readiness Courses

The College and Career Readiness department at Central Piedmont takes a student-focused approach to help students develop vital academic and work readiness skills needed to transition to college-level coursework or seek employment. Classes range from English as a Second Language to High School Equivalency Preparation, Adult High School and Pathways to Careers.

Developmental Courses

Developmental courses are for students who have not reached college-level in the areas of English, reading, mathematics, biology or chemistry. Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by their placement test.

College-Level Curriculum Courses

Central Piedmont has developed a variety of affordable, two-year degrees 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 Courses

Students can choose from hundreds of non-degree courses and programs at Central Piedmont. Whether someone wants to learn new job skills, enhance workforce competitiveness in the marketplace or explore a new hobby in a personal enrichment class, Corporate and Continuing Education courses are the solution.

Career and College Promise Courses

Approved Academic Pathways for Dual Enrollment during High School

High school students in the Career & College Promise Programs may follow two types of academic plans:

1. College Transfer Pathways, and/or
2. Career and Technical Pathways.

Students may only take courses in their selected pathway(s). If Career & College Promise students register for classes outside of their chosen pathway(s), the college will drop registration of those classes.

Students may choose to participate in:

- two Career and Technical Pathways at a time, or
- one Career and Technical Pathway and one Transfer Pathway at a time.

See which courses may be taken for each academic pathway on the Career & College Promise website under Program Options. From here, each pathway and its available courses may be viewed. Course descriptions and any required prerequisites may be seen by entering any course code (example: ABC 123) in the Search Catalog field above the left menu.

Developmental Courses

RISE Transition & Corequisite Courses

ENG 001. English Skills Support. 1.0 Credit. Class-0.0, Clinical-0.0, Lab-2.0, Work-0.0

This course is designed to supplement the skills introduced in ENG-111 with emphasis placed on the editing and revision components of the writing process. Topics include concepts, skills, writing in a variety of genres and formats using a recursive process, and effective use of rhetorical strategies, with emphasis placed on the editing and revision components of the writing process. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English.
ENG 002. Transition English. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides an opportunity to customize foundational English content in specific areas and will include developing a growth mindset. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in college-level English. Upon completion, students should be able to build a stronger foundation for success in their gateway level English courses by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

ENG 011. Writing and Inquiry Support. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to support students in the development of skills necessary for success in ENG 111 by complementing, supporting, and reinforcing ENG 111 Student Learning Outcomes. Emphasis is placed on developing a growth mindset, expanding skills for use in active reading and writing processes, recognizing organizational relationships within texts from a variety of genres and formats, and employing appropriate technology when reading and composing texts. Upon completion, students should be able to apply active reading strategies to college-level texts and produce unified, well-developed writing using standard written English.

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 003. Transition Math. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides an opportunity to customize foundational math content in specific math areas and will include developing a growth mindset. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in their gateway level math courses by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

MAT 010. Math Measurement & Literacy Su. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to customize foundational math content specific to Math Measurement & Literacy. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Math Measurement & Literacy by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

MAT 021. Algebra/Trigonometry I Support. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to customize foundational math content specific to Algebra and Trigonometry I. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Algebra/Trigonometry I by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

MAT 043. Quantitative Literacy Support Class. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to customize foundational math content specific to Quantitative Literacy. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Quantitative Literacy by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

MAT 052. Statistical Methods I Support. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to customize foundational math content specific to Statistical Methods I. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Statistical Methods I by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

MAT 071. 071 Precalculus Algebra Support. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides an opportunity to customize foundational math content specific to Precalculus Algebra. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Precalculus Algebra by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

Developmental ACA Academic Related Courses

ACA 090. Student Success Strategies. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is intended to provide students with skills and strategies to promote success in college, career, and life. Topics include the College’s physical, academic, and social environment, promotes personal development, and cultivates learning strategies essential for student success. Upon completion, students should be able to manage their learning experiences to meet educational and life goals.

Developmental Chemistry Course

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.
Developmental Computer Information Technology Course

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.

Developmental English as a Foreign Language 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 skills 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 help those literacy skills achieve reading fluency in English at the beginning 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.

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 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 063. Listening/Speaking III. 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 Minimum grade C

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 Minimum grade C

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.

EFL 073. Reading 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 071 Minimum grade C

EFL 074. Reading 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 072 Minimum grade C

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.
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 Minimum grade C

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 Minimum grade C

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 Minimum grade C

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.

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 Minimum grade C

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 Minimum grade C

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 Minimum grade C

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

College-Level Curriculum Courses

- Academic Related (ACA) Courses (p. 229)
- Accounting (ACC) Courses (p. 229)
- Agriculture (AGR) (p. 231)
- Air Cond, Heating, and Refrig (AHR) Courses (p. 231)
- Alternative Energy Technology (ALT) Courses (p. 232)
- American Sign Language (ASL) Courses (p. 233)
- Anthropology (ANT) Courses (p. 234)
- Architecture (ARC) Courses (p. 235)
- Art (ART) Courses (p. 237)
- Astronomy (AST) Courses (p. 240)
- Automation and Robotics (ATR) Courses (p. 240)
- Automotive (AUT) Courses (p. 241)
- Automotive Body Repair (AUB) Courses (p. 242)
- Baking and Pastry Arts (BPA) Courses (p. 243)
- Banking and Finance (BAF) Courses (p. 244)
- Biology (BIO) Courses (p. 244)
- Biomedical Equipment Technology (BMT) Courses (p. 246)
- Blueprint Reading (BPR) Courses (p. 246)
- Broadcasting and Production Technology (BPT) (p. 246)
- Business (BUS) Courses (p. 247)
- Cardiovascular Technology (Invasive) (ICT) Courses (p. 250)
- Cardiovascular Technology Non-Invasive (NCT) Courses (p. 250)
- Carpentry (CAR) Courses (p. 251)
- Chemistry (CHM) Courses (p. 251)
- Chemistry Concepts (CHM) (p. 253)
- Civil Engineering (CIV) Courses (p. 253)
- Civil Engineering and Geomatic (CEG) Courses (p. 253)
- Communication (COM) Courses (p. 254)
- Computer Information Technology (CTS) Courses (p. 255)
- Computer Science (CSC) Courses (p. 256)
- Computer Technology Integration (CTI) (p. 258)
- Drama/Theatre (DRA) Courses (p. 259)
- Construction (CST) Courses (p. 259)
- Construction Management (CMT) Courses (p. 259)
- Cosmetology (COS) Courses (p. 260)
- Criminal Justice (CJC) Courses (p. 262)
- Culinary (CUL) Courses (p. 264)
- Cyber Crime Technology (CCT) Courses (p. 267)
- Cybertechnology (CYT) Courses (p. 268)
- Dance (DAN) Courses (p. 269)
- Database Management Technology (DBA) Courses (p. 271)
- Dental (DEN) Courses (p. 271)
- Design: Creative (DES) Courses (p. 274)
- Developmental Disabilities (DDT) Courses (p. 276)
- Digital Media Technology (DME) Courses (p. 276)
- Drafting (DFT) Courses (p. 276)
- Drama/Theatre (DRA) Courses (p. 277)
- Economics (ECO) Courses (p. 278)
- Education (EDU) Courses (p. 279)
- Electric Utility Substation (EUS) Courses (p. 283)
- Electrical (ELC) Courses (p. 283)
- Electronic Commerce (ECM) Courses (p. 286)
- Electronics (ELN) Courses (p. 286)
- Emergency Medical Science (EMS) (p. 286)
- Engineering (EGR) Courses (p. 288)
- English (ENG) Courses (p. 289)
- English As a Foreign Language (EFL) Courses (p. 291)
- Entertainment Technologies (ENT) Courses (p. 291)
- Environmental Science (ENV) Courses (p. 291)
- Fire Protection (FIP) Courses (p. 292)
- French (FRE) Courses (p. 294)
- Geographic Information Systems (GIS) Courses (p. 295)
- Geographic (GEO) Courses (p. 296)
- Geology (GEL) Courses (p. 296)
- German (GER) Courses (p. 297)
- Gerontology (GRO) Courses (p. 297)
- Graphic Arts (GRA) Courses (p. 298)
- Graphic Design (GRD) Courses (p. 299)
- Health (HEA) Courses (p. 301)
- Health Information Technology (HIT) Courses (p. 301)
- Heavy Equipment Maintenance (HEM) Courses (p. 302)
- History (HIS) Courses (p. 303)
- Horticulture (HOR) Courses (p. 305)
- Hotel & Restaurant Management (HRM) Courses (p. 308)
- Human Services (HSE) Courses (p. 309)
- Humanities (HUM) Courses (p. 310)
- Industrial Science (ISC) (p. 310)
- Information Systems (CIS) Courses (p. 311)
- Information Systems Security (SEC) Courses (p. 311)
- International Business (INT) Courses (p. 311)
- Interpreter Preparation (IPP) Courses (p. 312)
- Journalism (JOU) Courses (p. 313)
- Landscape Architecture Technol (LAR) Courses (p. 313)
- Legal Education (LEX) Courses (p. 313)
- Logistics Management (LOG) Courses (p. 316)
- Low Impact Development (LID) Courses (p. 317)
- Machining (MAC) Courses (p. 317)
- Marketing and Retailing (MKT) Courses (p. 318)
- Mathematics (MAT) Courses (p. 320)
- Math Skills Support (MAT) Courses (p. 322)
- Mechanical (MEC) Courses (p. 326)
- Medical Assisting (MED) Courses (p. 327)
- Medical Laboratory Technology (MLT) Courses (p. 328)
- Music (MUS) Courses (p. 329)
- Network Operating Systems (NOS) Courses (p. 336)
- Networking Technology (NET) Courses (p. 337)
- Nondestructive Examination (NDE) Courses (p. 337)
- Nursing (NUR) Courses (p. 339)
- Nursing Assistant (NAS) Courses (p. 340)
- Nutrition (NUT) (p. 341)
- Occupational Therapy Assistant (OTA) Courses (p. 341)
- Office Systems Technology (OST) Courses (p. 343)
- Operations Management (OMT) Courses (p. 345)
- Opticianry (OPH) Courses (p. 345)
- Pharmacy (PHM) Courses (p. 346)
- Philosophy (PHI) Courses (p. 348)
- Physical Education (PED) Courses (p. 348)
- Physical Science (PHS) Courses (p. 349)
- Physical Therapy (PTA) Courses (p. 349)
- Physics (PHY) Courses (p. 351)
- Political Science (POL) Courses (p. 351)
- Polysomnography (PSG) Courses (p. 352)
- Printing (PRN) Courses (p. 353)
- Process Control Instrumentatio (PCI) Courses (p. 354)
- Psychology (PSY) Courses (p. 354)
- Race Car Technology (RCT) Courses (p. 355)
- Religion (REL) Courses (p. 355)
- Respiratory Care (RCP) Courses (p. 356)
- Simulation and Game Development (SGD) Courses (p. 357)
- Sociology (SOC) Courses (p. 360)
- Spanish (SPA) Courses (p. 361)
- Substance Abuse (SAB) Courses (p. 362)
- Surgery (SUR) Courses (p. 363)
- Surveying (SRV) Courses (p. 364)
- Sustainability Technologies (SST) Courses (p. 365)
- Transportation Technology (TRN) Courses (p. 365)
- Turfgrass Management (TRF) Courses (p. 366)
- Web Technologies (WEB) Courses (p. 367)
- Welding (WLD) Courses (p. 368)
- Wheels of Learning (WOL) Courses (p. 370)
- Work-Based Learning (WBL) (p. 370)
**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.

**ACA 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.

**ACA 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.

**ACA 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.
Prerequisites: Complete one of the following options: DMA 010 DMA 020 and DMA 030 MAT 121 MAT 122 MAT 143 MAT 152 MAT 171 MAT 172 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 with a minimum grade of C Take MAT 003 Complete one of the following options:
Take DRE 097
Take ENG 112 ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

**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. This course is intended for students who have not received credit for ACC 115.
Prerequisites: Complete one of the following options:
Take DRE 097
Take ENG 111 with a minimum grade of C
Take ENG 002 Complete one of the following options:
Take DMA 010 DMA 020 and DMA 030
Take MAT 121 MAT 122 MAT 143 MAT 152 MAT 171 MAT 172 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 Minimum grade C
Take MAT 003

**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.
Prerequisites: Take ACC 120 Minimum grade C

**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.
Prerequisites: Take ACC 120 Minimum grade C

**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 Minimum grade C
ACC 140. Payroll Accounting. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. 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 ACC 115 or ACC 120

ACC 149. Introduction to Accounting Spreadsheets. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. 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 ACC 115 or ACC 120
Take CIS 110

ACC 150. Accounting Software Applications. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces microcomputer applications related to accounting systems. Topics include general ledger, accounts receivable, accounts payable, inventory, payroll, and journalizing/adjusting, and closing entries. Upon completion, students should be able to use a computer accounting package to accurately solve accounting problems.
Prerequisites: Take ACC 115 or ACC 120

ACC 210. Enterprise Risk Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces enterprise risk management as it applies to accounting and finance. Topics include risk recognition, assessment, risk analysis, internal controls, and risk management plans. Upon completion, students should be able to demonstrate the daily managerial and organizational requirements of enterprise risk management in written and oral format.
Prerequisites: Take 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 and ACC 121

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 Minimum grade C

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 Minimum grade C

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 Minimum grade C

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 Minimum grade C

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 Minimum grade C

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 is a unique concentration requirement in the international business concentration in the business administration program.
Prerequisites: Take ACC 120
Agriculture (AGR)

AGR 121. Biological Pest Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course will emphasize the building and maintaining of healthy soil, plant and insect biological cycles as the key to pest and disease management. Course content includes study of major pests and diseases, including structure, life cycle, and favored hosts; and biological and least toxic methods of chemical control. Upon completion, students will be able to identify and recommend methods of prevention and control of selected insects and diseases.

AGR 140. Agricultural Chemicals. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers all aspects of agricultural chemicals. Topics include safety, environmental effects, federal and state laws, pesticide classification, sprayer calibration, and licensing. Upon completion, students should be able to calibrate a sprayer, give proper pesticide recommendations (using integrated pest management), and demonstrate safe handling of pesticides.

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 110 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 HVAC systems. Emphasis is placed on identifying electronic components and their functions in HVAC 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. 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 151. HVAC Duct Systems I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the techniques used to lay out and fabricate duct work commonly found in HVAC systems. Emphasis is placed on the skills required to fabricate duct work. Upon completion, students should be able to lay out and fabricate simple duct work.
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.

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 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 psychrometrics, airflow 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.

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 255. Indoor Air Quality. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the techniques of assessing and maintaining the quality of the indoor environment in residential and commercial structures. Topics include handling and investigating complaints, filter selection, humidity control, testing for sources of carbon monoxide, impact of mechanical ventilation, and building and duct pressures. Upon completion, students should be able to assist in investigating and solving common indoor air quality problems.

AHR 263. Energy Management. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers building automation computer programming as currently used in energy management. Topics include night setback, duty cycling, synchronization, schedule optimization, and anticipatory temperature control. Upon completion, students should be able to write programs utilizing the above topics and connect computer systems to HVAC systems.
Prerequisites: Take One: AHR 125 or AHR 215

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 250. Thermal Systems. 3.0 Credits. 
Clinical-0.0. Lab-0.0. 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 110. Visual Gestural Communication. 3.0 Credits. 
Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the comprehension and expression of visual-gestural aspects of non-verbal communication in American Sign Language. Emphasis is placed on hand shapes, facial expression, pantomime and body language with activities that create visual, motor and cognitive readiness for signed languages. Upon completion, students will be able to understand and express gestural aspects of non-verbal communication.
Corequisites: Take ASL 111

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 111

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 basic expressive and receptive skills. Upon completion, students should be able to comprehend and respond with increasing accuracy to expressive American Sign Language and demonstrate cultural awareness.
Prerequisites: Take ASL 111
Corequisites: Take ASL 112

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. Upon completion, students should be able to accurately express and receive numbers and fingerspelling.
Prerequisites: Take ASL 111 Minimum grade C

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 Minimum grade C
Corequisites: Take ASL 112

ASL 210. 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 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 Minimum grade C
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 spontaneously and accurately with increasing complexity and sophistication.
Prerequisites: Take ASL 211 Minimum grade C
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 Minimum grade C
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, storytelling, 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 Minimum grade C

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.

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 212 and IPP 111 with a minimum grade of C Passing ASLPI score

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 Minimum grade C

ASL 253. American Sign Language Non-Manual Signals. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. 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 211 Minimum grade C

ASL 260. American Sign Language Semantics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to build upon students’ knowledge of ASL semantic skills in an effort to enhance students’ use of ASL with semantic clarity and accuracy. Emphasis is placed on analyzing, practicing, and demonstrating skills in using appropriate semantic meaning in ASL discourse with focus on various levels of ASL register. Upon completion, students should be able to demonstrate an understanding of the importance of the role of ASL semantics in the linguistic function of ASL and improvement in conveying accurate meaning in ASL.
Prerequisites: Take ASL 250

ASL 281. ASL 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 American Sign Language. Emphasis is placed on the progressive development of expressive and receptive skills through 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 ASL 182 Minimum grade C
Corequisites: Take ASL 211

ASL 282. ASL 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 American Sign Language. Emphasis is placed on the continuing development of expressive and receptive skills and 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 ASL 281 Minimum grade C
Corequisites: Take ASL 212

Anthropology (ANT)

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 097 and DRE 098
Take EFL 111 and EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

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 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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002
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-0.0. Lab-2.0. 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.
Prerequisites: Take ARC 111
Corequisites: Take ARC 112

ARC 114. Architectural CAD. 2.0 Credits. Class-1.0. Clinical-0.0.
Lab-3.0. Work-0.0
This course introduces basic architectural CAD techniques. Topics include basic commands and system hardware and software. Upon completion, students should be able to prepare and plot architectural drawings to scale within accepted architectural standards.

ARC 120. Interior Design-Residential. 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 ARC 111 or ARC 112

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: Take ARC 111 and MAT 121
Take 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 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 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 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 and ARC 225
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. This course will also introduce plumbing, mechanical (HVAC), and electrical systems for the architectural environment.
Prerequisites: Take ARC 111, ARC 112, ARC 114, and ARC 225

ARC 214. Architectural Statics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the concepts of elementary statics as applied to architecture. Topics include forces, resultants, and types of force system; equations of equilibrium; reactions of simple architectural structures; internal forces in architectural roof trusses; frames and beams; centroids and moments of inertia as applied to architecture. Upon completion, students should be able to solve problems which require the ability to analyze systems of forces in static equilibrium as applied to architectural forms.
Prerequisites: Take All: ARC 111, ARC 112, and MAT 121

ARC 215. Architectural Strength of Materials. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the concepts of elementary strength of materials within architecture. Topics include structural form, architectural strength of materials, structural behavior, and the relationship between structures and architectural form. Upon completion, students should be able to size simple structural elements to specific architectural forms.
Prerequisites: Take All: ARC 111, ARC 112, and MAT 121

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. Civil3D and Microstation CAD applications will be used in this course.
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. SketchUp, Inventor, and Rhino3D are the primary applications used in this course.
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: AutoDesk Revit Architecture.

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.
Prerequisites: Take ARC 111 and ARC 114

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 251. Advanced Survey of Architecture. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course builds on prior knowledge of historical trends in architectural form, and explores those topics in greater depth. Topics could include historic preservation, the social and political contexts of architectural design, and design theory. Upon completion, students should be able to demonstrate a deeper understanding of significant historical and current architectural styles and theories.
Prerequisites: Take ARC 250
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. This course will focus on Autodesk 3DS software.
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 Minimum grade 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-0.0. Clinical-0.0. Lab-6.0. 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).
Prerequisites: Complete one of the following options: Take DRE 097 DRE 098
Take ENG 002

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-115 (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 117. 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. Students must be 18 years old at the start of the semester. Students will be drawing from live undraped models and should be of legal age to take the class.
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. In addition to Photoshop, students will use Illustrator to create 2D computer generated art.

ART 212. Gallery Assistantship I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. 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. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. 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 214. Portfolio and Resume. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers resume writing, interview skills, and the preparation and presentation of an art portfolio. Emphasis is placed on the preparation of a portfolio of original artwork, the preparation of a photographic portfolio, approaches to resume writing, and interview techniques. Upon completion, students should be able to photograph and present a digital portfolio and write an effective resume.

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 Minimum grade C

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.
Prerequisites: Take ART 121 Minimum grade C

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 plique-a-jour. Upon completion, students should be able to create jewelry which demonstrates originality.
Prerequisites: Take ART 247

ART 250. Photography 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 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 digital cameras, students will receive instruction and practice in basic camera techniques and will produce a digital portfolio.

ART 251. Photography I. 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 250 Minimum grade C

ART 252. Photography II. 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 251

ART 254. Digital Photography I. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. 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 250

ART 255. Digital Photography II. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. 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 254

ART 256. 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 257. 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 256

ART 258. 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 261. 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 262. 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 261. 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 261

ART 263. 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 overview 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. Clinical-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 151A. General Astronomy I Lab. 1.0 Credit. Class-0.0. Clinical-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

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.

Automation and 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

ATR 214. Advanced PLCs. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the study of high-level programming languages and advanced I/O modules. Topics include advanced programming languages; system networking; computer interfacing; analog and other intelligent I/O modules; and system troubleshooting. Upon completion, students should be able to write and troubleshoot systems using high-level languages and complex I/O modules. Prerequisites: Take ELC 228 with a minimum grade of C

ATR 218. Work Cell Integration. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces high technology systems which are currently being used in new automated manufacturing facilities. Topics include integration of robots and work cell components, switches, proxes, vision and photoelectric sensors, with the automated control and data gathering systems. Upon completion, students should be able to install, program, and troubleshoot an automated manufacturing cell and its associated data communications systems. Prerequisites: Take ELC 228 Minimum grade C
ATR 219. Automation Troubleshooting. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces troubleshooting procedures used in automated systems. Topics include logical fault isolation, diagnostic software usage, component replacement techniques, and calibration; safety of equipment; and protection of equipment while troubleshooting. Upon completion, students should be able to analyze and troubleshoot an automated system.
Prerequisites: Take ATR 219 Minimum grade C

Automotive (AUT)

AUT 113. Automotive Servicing I. 2.0 Credits. Class-0.0. 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 and AUT 151 Minimum grade 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. Clinical-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 electronics, 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/service information.
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/repairing/replacing of body panels to accepted 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/repairing/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-4.0. 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 shop safety, structural analysis and maintenance, 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 120. Petit Fours and Pastries. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the basic principles of the preparation and plating of a variety of petit fours and individual dessert pastries. Emphasis is placed on traditional and contemporary petit fours and pastries utilizing updated production methods. Upon completion, students should be able to produce individual pastries and petit fours for buffet and special event settings.

Prerequisites: Take All: CUL 110 and CUL 160

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 Sacher.

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 CUL 110 CUL 160 CUL 160A Minimum grade C

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, souffles, cobblers, crisps, and strudel dough products. Topics include bombs, parfaits, baked Alaska, ice cream, sorbets, sherbets and granitas; hand-stretched strudel products, crepes, and hot/cold souffles. Upon completion, student 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 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 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 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: Complete one of the following options: Take DRE 097 DRE 098
Take EFL 112 ENG 111 ENG 112 ENG 113 or ENG 114 Minimum grade C

BAF 143. Financial Planning. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the perspectives, principles, and practices of financial planning. Topics include investment, retirement, tax, and estate planning. Upon completion, students should be able to understand the process that looks at a customer's financial picture and recommend strategies to achieve the customer's objectives.

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. This course has been approved to satisfy the comprehensive articulation agreement general education core requirement in natural sciences/Mathematics.

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 Minimum grade C
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<td>BIO 120</td>
<td>Introductory Botany</td>
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<td>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</td>
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<td>BIO 130</td>
<td>Introductory Zoology</td>
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<td>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</td>
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<td>BIO 140A</td>
<td>Environmental Biology Lab.</td>
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<td>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 an understanding of environmental interrelationships and of contemporary environmental issues. Corequisites: Take BIO 140</td>
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<td>BIO 140</td>
<td>Environmental Biology</td>
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<td>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.</td>
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<td>BIO 150</td>
<td>Genetics in Human Affairs</td>
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<td>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</td>
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<td>BIO 155</td>
<td>Nutrition</td>
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<td>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.</td>
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<td>BIO 161</td>
<td>Introduction to Human Biology</td>
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<td>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.</td>
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<td>BIO 163</td>
<td>Basic Anatomy &amp; Physiology</td>
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<td>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.</td>
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<td>BIO 165</td>
<td>Anatomy and Physiology I.</td>
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<td>This course is the first of a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.</td>
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<td>BIO 166</td>
<td>Anatomy and Physiology II.</td>
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<td>This course is the second in a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and the interrelationships of all body systems. Prerequisites: Take BIO 165</td>
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<td>BIO 168</td>
<td>Anatomy and Physiology I.</td>
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<td>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.</td>
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<td>BIO 169</td>
<td>Anatomy and Physiology II.</td>
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<td>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 Minimum grade C</td>
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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

Biomedical Equipment Technology (BMT)

BMT 111. Introduction to Biomedical Field. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the fundamental concepts of the health care delivery system. Topics include hospital organization and structure, BMET duties and responsibilities, and the professional and social interrelationships between services. Upon completion, students should be able to demonstrate an understanding of hospital organization as related to BMET duties.

BMT 112. Hospital Safety Standards. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers national, state, and local standards pertaining to hospital safety. Topics include electrical safety, gas safety, SMDA reporting, and JCAHO and FPA compliance. Upon completion, students should be able to conduct PM and safety inspections in compliance with safety regulations.

BMT 120. Biomedical Anatomy & Physiology. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a basic study of human anatomy and physiology with emphasis on biomonitoring of body systems. Topics include homeostasis; cells and tissues; and the structure, function, and monitoring of body systems. Upon completion, students should be able to demonstrate a basic understanding of the structure, function, and biomedical monitoring of human body systems.

BMT 212. BMET Instrumentation I. 6.0 Credits. Class-3.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers theory of operation, circuit analysis, troubleshooting techniques, and medical applications for a variety of instruments and devices. Topics include electrodes, transducers, instrumentation amplifiers, electrocardiographs, monitors, recorders, defibrillators, ESU units, and related equipment used in clinical laboratories, intensive care units, and research facilities. Upon completion, students should be able to calibrate, troubleshoot, repair, and certify that instrumentation meets manufacturer's original specifications.
Prerequisites: Take ELC 131

BMT 213. BMET Instrumentation II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides continued study of theory of operation, circuit analysis, troubleshooting techniques, and medical applications for a variety of instruments and devices. Topics include instruments found in clinical laboratories, intensive care units, and research facilities. Upon completion, students should be able to repair, calibrate, and certify that instrumentation meets manufacturers' original specifications.
Prerequisites: Take BMT 212

BMT 223. Imaging Techniques/Laser Fundamentals. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers techniques associated with X-Ray, CT Scan, Magnetic Resonance Imaging and ultrasound, along with fundamental concepts and applications of medical lasers. Topics include radiation interaction with matter, X-Ray emissions, beam restricting devices, laser energy generation, and laser usage in surgery and other related medical procedures. Upon completion, students should be able to understand the operation of imaging devices, evaluate, calibrate, align, and provide safety instruction in usage of medical lasers.

BMT 225. Biomedical Trouble Shooting. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is designed to provide students with basic problem solving skills, and to track down and identify problems frequently encountered with medical instrumentation. Emphasis is placed on developing logical troubleshooting techniques using technical manuals, flowcharts, and schematics, to diagnose equipment faults. Upon completion, students should be able to logically diagnose and isolate faults, and perform repairs to meet manufacturer specifications.
Prerequisites: Take BMT 212

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.
Prerequisites: Complete one of the following options:# Take DMA 010 DMA 020 and DMA 030 # Take MAT 003

Broadcasting and Production Technology (BPT)

BPT 110. Introduction to Broadcasting. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the field of broadcasting and other electronic media. Emphasis is placed on the history, development, and current status of radio, television, and related industries. Upon completion, students should be able to demonstrate knowledge of regulations, organizational structure, revenue sources, historical development, and ongoing operation of broadcasting and related industries.
BPT 111. Broadcast Law & Ethics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers judicial, legislative, and administrative policies pertinent to the ethical and legal operation of broadcast and other electronic media organizations. Emphasis is placed on legal and ethical issues including First Amendment protection, FCC regulations, copyright, and libel laws. Upon completion, students should be able to demonstrate an understanding of the historical significance and modern-day application of important broadcast laws and policies.
Prerequisites: Take ENG 111 Minimum grade C

BPT 112. Broadcast Writing. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces proper copy and script writing techniques and formats for radio, television, and other electronic media. Emphasis is placed on creating effective scripts for programs and promotional materials, including commercial and public radio service announcements for a specific target audience. Upon completion, students should be able to understand and write copy and scripts according to standard industry formats.
Prerequisites: Take ENG 111 Minimum grade C

BPT 113. Broadcast Sales. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers sales principles applicable to radio, television, cable, and other electronic media. Emphasis is placed on prospecting and servicing accounts, developing clients, and preparing sales presentations. Upon completion, students should be able to create a sales presentation based upon standard ratings reports, prospect for new customers, and understand account management.

BPT 121. Broadcast Speech I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers basic preparation and performance of on-air talents' speaking quality. Emphasis is placed on developing a pleasant and efficient voice with techniques applied to taped news, features, commercial copy, and announcing. Upon completion, students should be able to show improvement and aptitude in proper articulation, pronunciation, rate of delivery, pitch, breathing techniques, inflection, projection, and phrasing.
Prerequisites: Take ENG 111 Minimum grade C

BPT 231. Video/TV Production I. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers the language of film/video, shot composition, set design, lighting, production planning, scripting, editing, and operation of video and television production equipment. Emphasis is placed on mastering the body of knowledge and techniques followed in producing all forms of video and television production. Upon completion, students should be able to produce basic video and television productions in a team environment.
Prerequisites: Take BPT 112 Minimum grade C

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 097 DRE 098
# Take EFL 111 EFL 112 with a minimum grade of C
# Take ENG 111 with a minimum grade of C
# Take ENG 002

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 student to the legal and ethical framework of business. Contracts, negotiable instruments, the law of sales, torts, crimes, constitutional law, the Uniform Commercial Code, and the court systems are examined. Upon completion the student should be able to identify legal and ethical issues that arise in business decisions and the laws that apply to them.
Prerequisites: Complete one of the following options: Take DRE 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

BUS 116. Business Law II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course includes the study of the legal and ethical framework of business. Business Organizations, property law, intellectual property law, agency and employment law, consumer law, secured transactions, and bankruptcy are examined. Upon completion, the student should be able to identify legal and ethical issues that arise in business decisions and the laws that apply to them.
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: Complete one of the following options: Take DRE 097 DRE 098
Take ENG 111 with a minimum grade of C
Take ENG 002
Complete one of the following options:
Take DMA 010 DMA 020 and DMA 030
Take Mat 003
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 097 DRE 098
Take ENG 111 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 entrepreneurship 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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 097 DRE 098
# Take EFL 111 EFL 112 with a minimum grade of C
# Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
# Take ENG 002

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 evaluate organization policy for compliance and assure that decisions are not contrary to law.
Prerequisites: Complete one of the following options: Take DRE 097 DRE 098
# Take EFL 111 EFL 112 with a minimum grade of C
# Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
# Take ENG 002

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 Minimum grade C

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: Take BUS 110

Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 097 DRE 098
# Take EFL 111 EFL 112 with a minimum grade of C
# Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
# Take ENG 002

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
Complete one of the following options:
# Take DRE 097 DRE 098
# Take ENG 111 with a minimum grade of C
# Take ENG 002

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.
Prerequisites: Complete one of the following options: # DRE 098 or ENG 111
# Take EFL 111 or EFL 112
# Take ENG 002 From rule RMINP2

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.
Prerequisites: Complete one of the following options: Take DRE 097 DRE 098
# Take EFL 111 EFL 112 with a minimum grade of C
# Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
# Take ENG 002

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.
Prerequisites: Complete one of the following options: # Take DRE 097 DRE 098
# Take EFL 111 EFL 112 with a minimum grade of C
# Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
# Take ENG 002

BUS 259. Human Resource Management 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.
Prerequisites: Take All: BUS 217, BUS 234, BUS 256, and BUS 258

BUS 260. Business Communication. 3.0 Credits.  Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to develop skills in writing business communications. Emphasis is placed on business reports, correspondence, and professional presentations. Upon completion, students should be able to communicate effectively in the work place. This course is designed to develop skills in writing business communications. Emphasis is placed on business reports, correspondence, and professional presentations. Upon completion, students should be able to communicate effectively in the work place.
Prerequisites: Take One: ENG 110 or ENG 111
**Cardiovascular Technology (Invasive) (ICT)**

**ICT 110. Invasive Fundamentals. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides information related to the profession and practice of invasive cardiovascular technology. Emphasis is placed on medical-legal and ethical aspects of healthcare, patient safety principles, basic invasive principles and cardiovascular imaging modalities. Upon completion, students should be able to demonstrate an understanding of basic invasive principles, cardiovascular imaging modalities, medical-legal and ethical aspects and safety practices.
Corequisites: Take All: ICT 110 and NCT 134

**ICT 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 rhythm strip and 12-lead analysis, identification of conduction abnormalities, and pharmacologic and electrical treatment methods. Upon completion, students should be able to describe electrical function, detect a variety of arrhythmias and describe their treatment methods and analyze 12-lead electrocardiograms.
Corequisites: Take One: ICT 110, NCT 110, or NCT 134

**ICT 136. Cardiac and Peripheral Vascular Invasive I. 6.0 Credits.** Class-3.0. Clinical-6.0. Lab-2.0. Work-0.0
This course provides an introduction to diagnostic techniques and equipment utilized in the invasive labs. Emphasis is placed on diagnostic cardiac and peripheral vascular catheterization principles, instrumentation, patient care techniques and the development of basic invasive lab skills. Upon completion, students should be able to identify cardiovascular anatomy through angiographic assessment, provide basic patient care and demonstrate basic invasive lab skills.
Prerequisites: Take All: ICT 110, ICT 113, and NCT 134
Corequisites: Take ICT 140

**ICT 140. Cardiovascular (CV) Hemodynamics I. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an introduction to the hemodynamic principles of the cardiac catheterization lab. Emphasis is placed on pressure acquisition, basic waveform analysis and hemodynamic calculations. Upon completion, students should be able to discuss the pressure acquisition process, identify cardiac pressures, determine valve conditions, and perform basic hemodynamic calculations.
Prerequisites: Take All: ICT 110, ICT 113, and NCT 134
Corequisites: Take ICT 136

**ICT 214. Cardiac and Peripheral Vascular Invasive II. 9.0 Credits.** Class-3.0. Clinical-15.0. Lab-2.0. Work-0.0
This course introduces the student to advanced diagnostic and interventional techniques and instrumentation used in invasive labs. Emphasis is placed on functional assessment, coronary interventional instrumentation, emergency treatments, and increasing clinical skills in clinical rotations. Upon completion, students should be able to describe peripheral vascular and coronary interventional techniques and demonstrate clinical skills with increased competency in the clinical setting.
Prerequisites: Take ICT 136 ICT 140 Minimum grade C
Corequisites: Take ICT 218

**ICT 234. Cardiac and Peripheral Vascular Invasive III. 13.0 Credits.** Class-3.0. Clinical-30.0. Lab-0.0. Work-0.0
This course introduces the student to advanced cardiac interventional techniques, peripheral vascular intervention techniques and increased clinical rotations. Emphasis is placed on identification of advanced disease states, structural heart and peripheral vascular interventional techniques, and increasing clinical skills in clinical rotations. Upon completion, students should be able to identify advanced diseased states, interventional techniques, and instrumentation and demonstrate entry level skills in the clinical setting.
Prerequisites: Take ICT 214
Corequisites: Take ICT 214 with a minimum grade of C

**ICT 236. Cardiovascular (CV) Hemodynamics II. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces students to advanced cardiac conditions and disease states found in the invasive lab environment. Emphasis is placed on identifying advanced cardiovascular conditions, performing advanced hemodynamic calculations, and identifying congenital malformations through hemodynamic pressures. Upon completion, students should be able to identify advanced cardiovascular conditions, perform hemodynamic calculations and identify congenital malformations through hemodynamic pressures.
Prerequisites: Take All: ICT 214 and ICT 218
Corequisites: Take ICT 234

**Cardiovascular Technology Non-Invasive (NCT)**

**NCT 110. Echo Fundamentals. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides information related to the profession and practice of echocardiography. Emphasis is placed on medical-legal and ethical aspects of healthcare, patient centered care, understanding basic echocardiography imaging views and cardiovascular imaging modalities. Upon completion, students should be able to demonstrate an understanding of basic echocardiography imaging views, cardiovascular imaging modalities, medical-ethical issues and patient care practices.
Corequisites: Take All: ICT 113 and NCT 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 113, NCT 110, and NCT 134
Corequisites: Take NCT 143

NCT 134. Cardiovascular Anatomy and 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 pathophysiological 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: Complete one of the following options:
   • ICT 113 and ICT 110
   • ICT 113 and NCT 110

NCT 143. Echocardiography I. 6.0 Credits.
Class-3.0. Clinical-6.0.
Lab-3.0. Work-0.0
This course introduces echocardiography procedures, cardiovascular imaging modalities and their applications in the diagnosis of cardiovascular diseases. Emphasis is placed on the diagnostic capabilities of echocardiography related to clinical presentations of cardiovascular diseases and development of basic imaging skills. Upon completion, students should be able to perform basic echocardiography/Doppler examinations and describe the diagnostic information obtained by noninvasive procedures.
Prerequisites: Take All: ICT 114 and ICT 134
Corequisites: Take NCT 133

NCT 251. Echocardiography II. 8.0 Credits.
Class-2.0. Clinical-15.0.
Lab-2.0. Work-0.0
This course introduces advanced echocardiography/Doppler techniques, modalities, and hemodynamic assessments utilized for the diagnosis of acquired and congenital cardiovascular diseases. Emphasis is placed on protocols, interpretation of echocardiography/Doppler data with correlation to the clinical presentation of disease states in the clinical setting. Upon completion, students should be able to identify abnormal heart diseases through analysis and correlation of imaging data and demonstrate increasing clinical skill development.
Prerequisites: Take NCT 133 NCT 143 Minimum grade C
Corequisites: Take NCT 253

NCT 253. Hemodynamic Echocardiographic 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 NCT 133 NCT 143 Minimum grade C
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 applications required for a comprehensive echocardiography procedure. Emphasis is placed on interpretation of advanced qualitative and quantitative calculations of various heart diseases with increasing skill development in the clinical setting. Upon completion, students should be able to independently perform a comprehensive diagnostic echocardiography examination with relative quantitative calculations with entry level skill competency.
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 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 140. Basic Carpentry. 4.0 Credits.
Class-2.0. Clinical-0.0. Lab-6.0.
Work-0.0
This course covers the basic construction of wood structures, and installation, maintenance, and repair of the many components within these structures. Topics include safe use of tools, implementation of standard practices, appropriate use of materials, and installation/repair of components such as doors, windows, roofing, and siding. Upon completion, students should be able to construct, install/repair wooden structures and components using appropriate tools, materials and standard practices from the carpentry trade.

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-2.0. 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 121A. Foundations of Chemistry Lab. 1.0 Credit. Clinical-0.0. Lab-2.0. 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 121. Foundations of Chemistry. 3.0 Credits. 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: Complete one of the following options: Take DMA 010 DMA 020 DMA 030 DMA 040 and DMA 050
Take MAT 003 from rule RMINP2M
Corequisites: Take CHM 121A

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 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: Complete one of the following options: Take DMA 010 DMA 020 DMA 030 DMA 040 and DMA 050
Take MAT 003 from rule RMINP2M
Corequisites: Take CHM 130A

CHM 131A. Introduction to Chemistry Lab. 1.0 Credit. 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 utilize basic laboratory procedures and apply them to chemical principles presented in CHM 131.
Corequisites: Take CHM 131

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 and DMA 050
Take CHM 121
Take MAT 003 from rule RMINP2M
Corequisites: Take CHM 131A

CHM 132. Organic and Biochemistry. 4.0 Credits. Class-3.0.
Clinical-0.0. Lab-3.0. 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. This course has been approved to satisfy the comprehensive articulation agreement general education core requirement in natural sciences/Mathematics.
Prerequisites: Complete one of the following options: Take CHM 131 CHM 131A with a minimum grade of C
Take 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, thermodynamics, 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: DMA 010 DMA 020 DMA 030 DMA 040 and DMA 050 Take MAT 161 MAT 171 or MAT 175 with a minimum grade of C
Take CHM 121
Take MAT 003 from rule RMINP2M

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, ionic 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 to pursue further study in chemistry and related professional fields.
Prerequisites: Take CHM 151 Minimum grade C

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 Minimum grade C
Chemistry Concepts (CHM)

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.

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. 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 basis soil tests and analyze engineering properties of soil. Prerequisites: # Take EGR 250 or MEC 210 with a minimum grade of C

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 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 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). Prerequisites: Take One: EGR 250 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, OR CIS 111

Civil Engineering and Geomatic (CEG)

CEG 111. Introduction to Gis and Gnsn. 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. Corequisites: Take MAT 121 or MAT 171

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 CEG 115 and CEG 151

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:
  • DMA 060, DMA 070, and DMA 080
  • DMA 065
  • MAT 121
  • MAT 171
  • MAT 003
  • BSP 4003

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 CEG 211
# Take 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 Each Group: Take CEG 151, DFT 151, or EGR 120
Take CEG 211 Take SRV 111

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 CEG 115 and CEG 151

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 explain and illustrate the forms and purposes of human communication in a variety of contexts. Students may be required to prepare and deliver oral reports in public contexts.
Prerequisites: Complete one of the following options: Take DRE 097 and DRE 098
Take EFL 111 and EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 097 and DRE 098
Take EFL 111 and EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 COM 110 or COM 120 Minimum grade C
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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

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 Minimum grade C

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 097 and DRE 098
Take EFL 111 and EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

Computer Information Technolog (CTS)

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.

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.
Prerequisites: Take EFL 112 ENG 111 ENG 112 ENG 113 or ENG 114
Minimum grade C

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 CIS 110 Minimum grade C

CTS 225. Spreadsheet Data Analysis. 3.0 Credits. Class-2.0.
Clinical-0.0. Lab-2.0. Work-0.0
This course presents basic and advanced techniques for data analysis and management using electronic spreadsheets. Topics include an overview of spreadsheet analytics, terminology, model preparation, and analytical techniques. Upon completion, students should be able to develop reliable and effective quantitative data models and reports to support analysis and decision-making for common business systems.
Prerequisites: Take CTS 130 CTS 230 Minimum grade C

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 Minimum grade C

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 CIS 110 Minimum grade C
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: Take DMA 010, DMA 020, DMA 030, DMA 040, and DMA 050
Take MAT 121 with a minimum grade of C
Take MAT 171 with a minimum grade of C

**CSC 121. Python Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces computer programming using the Python programming language. Emphasis is placed on common algorithms and programming principles utilizing the standard library distributed with Python. Upon completion, students should be able to design, code, test, and debug Python language programs. Prerequisites: Take CIS 115 Minimum grade C

**CSC 122. Python Application Development. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the use of frameworks to build web-enabled applications. Emphasis is placed on URL routing, output format templating, database manipulation and security. Upon completion, students should be able to create simple web-enabled applications with a graphical user interface using the Python language. Prerequisites: Take CSC 121 Minimum grade C

**CSC 124. Introduction to Data Science Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the key technologies used to manipulate, store and analyze big data. Topics include scripting languages, noSQL databases, database scalability, performance metrics and tuning. Upon completion, students should be able to use programming techniques to investigate data sets and algorithms. Prerequisites: Take CSC 119 or CSC 115 Minimum grade B

**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: Complete one of the following options: Take DRE 097 and DRE 098
Take ENG 111 with a minimum grade of C
Take ENG 002

**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, debug, and implement objects using the appropriate environment 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.

**CSC 143. Object-Oriented Programming. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the concepts of object-oriented programming. 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 at the application level using the appropriate environment. Prerequisites: Take EFL 112 ENG 111 ENG 112 ENG 113 or ENG 114 Minimum grade 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 CSC 120 or CSC 143 with a minimum grade of B
Complete one of the following options: Take DRE 097 and DRE 098
Take ENG 111 with a minimum grade of C
Take ENG 002
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 CIS 115 CSC 119 CSC 120 or CSC 143 Minimum grade 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: Complete one of the following options:# Take DRE 097 and DRE 098
# Take ENG 111 with a minimum grade of C
# Take ENG 002
# Take CSC 143 with a minimum grade of C

CSC 154. Software Development. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the fundamentals of software development. Emphasis is placed on the full spectrum of team software development methodologies, software development project management, version control, issue tracking, regression testing, automated build and deployment. Upon completion, students should be able to work in a team environment and apply software development methodologies and software quality assurance principles.

CSC 174. Server-Side Javascript. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the use of JavaScript in the server environment to build server-side applications. Topics include asynchronous programming, connecting to other machines, testing, and connecting to different databases. Upon completion, students should be able to create server-side applications using JavaScript applications.
Prerequisites: Take CSC 143 WEB 110 Minimum grade C

CSC 193. Selected Topics in Information Systems. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0

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 134

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 141

CSC 249. Data Structure & Algorithms. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the data structures and algorithms frequently used in programming applications. Topics include lists, stacks, queues, deques, heaps, sorting, searching, mathematical operations, recursion, encryption, random numbers, algorithm testing, and standards. Upon completion, students should be able to design data structures and implement algorithms to solve various problems.
Prerequisites: Take CSC 151 Minimum grade B

CSC 251. Advanced JAVA Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is a continuation of CSC 151 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, and implement objects using the appropriate environment.
Prerequisites: Take CSC 151 Minimum grade B

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 153

CSC 256. Software Quality Assurance. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the principles, concepts and processes of software testing. Topics include testing technologies, static techniques, test design techniques, and test management. Upon completion, students should be able to design and implement software testing plans and procedures throughout the software life cycle.
Prerequisites: Take CSC 151 Minimum grade B

CSC 284. Emerging Computer Prog Technologies. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides students with the latest technologies and strategies in the field of Computer Programming. Emphasis is placed on the evaluation of developing Computer Programming Technologies and presenting those findings to the class. Upon completion, students should be able to critically analyze emerging Computer Programming Technologies and establish informed opinions.
Prerequisites: Take CSC 151 Minimum grade B
Computer Tech Integration (CTI)

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.

CTI 120. Network and Security Foundation. 3.0 Credits.
Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces students to the Network concepts, including networking terminology and protocols, local and wide area networks, and network standards. Emphasis is placed on securing information systems and the various implementation policies. Upon completion, students should be able to perform basic tasks related to networking mathematics, terminology, media and protocols.

CTI 130. Operating Systems and Device Foundation. 6.0 Credits.
Class-4.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers the basic hardware and software of a personal computer, including installation, operations and interaction with popular microcomputer operating systems. Topics include components 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.

CTI 140. Virtualization Concepts. 3.0 Credits.
Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces operating system virtualization. Emphasis is placed on virtualization terminology, virtual machine storage, virtual networking and access control. Upon completion, students should be able to perform tasks related to installation, configuration and management of virtual machines.

CTI 141. 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 CTI 140 Minimum grade C

CTI 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 CTI 141 Minimum grade C

CTI 241. Virtualization Administration II. 3.0 Credits.
Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers administration of datacenter virtualization infrastructure. Topics include access control, fault tolerance, scalability, resource management, virtual machine migration and troubleshooting. Upon completion, students should be able to perform tasks related to virtualization security, data protection and resource monitoring.

CTI 260. Data Center Troubleshooting. 3.0 Credits.
Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers troubleshooting in a highly available, high performance, storage and computing system. Topics include provisioning, monitoring, diagnosing, and taking corrective actions in storage environments relating to Storage Area Network (SAN), Network Attached Storage (NAS), data protection and recovery. Upon completion, students should be able to demonstrate an understanding of SAN and NAS technologies, topologies, configuration, data protection, and fault triage and remediation.

Prerequisites: Take CTI 241 Minimum grade C

CTI 270. Data Center Design and Problem Resolution. 3.0 Credits.
Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides students an opportunity to complete a significant data center hardware and software design and configuration project, including disaster recovery planning. Emphasis is placed on adhering to optimal practices that can provide a highly available, stable, manageable, secure and scalable environment and maintaining it using a variety of utilities and system tools. Upon completion, students should be able to design, deploy and administer the hardware and software components of a highly available data center.

Prerequisites: Take CTI 260 Minimum grade C

CTI 289. Computer Technology Integration Capstone Project. 3.0 Credits.
Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides students an opportunity to complete a significant integrated technology project from the design phase through implementation with minimal instructor support. Emphasis is placed on technology policy, process planning, procedure definition, systems architecture, and security issues to create projects for the many areas in which computer technology is integrated. Upon completion, students should be able to create, implement, and support a comprehensive technology integration project from the planning and design phase through implementation.

Prerequisites: Take CTI 110 CTI 120 CTS 115 DBA 120 WEB 115 WEB 210 with a minimum grade of C
Construction (CST)

CST 110. Intro to Construction. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces construction terminology, materials, and practices found at a construction worksite. Emphasis is placed on common and innovative practices, methods, materials, and other related topics of the construction industry. Upon completion, students should be able to successfully identify various practices, methods, and materials used in the construction industry.

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.
Prerequisites: Take WOL 110 Minimum grade C

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 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: Take 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 job site and qualify for OSHA Training Certification.
Prerequisites: 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

CMT 226. Applications Project. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an individual and/or integrated team approach to a practical construction management project. Topics include project selection, research and planning, implementation, and a final presentation. Upon completion, students should be able to plan and implement an applications-oriented construction management project.
Cosmetology (COS)

COS 111AB. Cosmetology Concepts I. 2.0 Credits. Class-2.0.
Corequisites: Take COS 112AB
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 cosmetology concepts in the salon setting.
Prerequisites: Take All: COS 111 and COS 112

COS 111BB. Cosmetology Concepts I. 2.0 Credits. Class-2.0.
Corequisites: Take COS 111AB
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 cosmetology concepts in the salon setting.
Prerequisites: Take All: COS 111 and COS 112

COS 111. Cosmetology Concepts I. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
Corequisites: Take COS 111AB
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 cosmetology concepts in the salon setting.

COS 112AB. Salon I. 4.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-0.0
Corequisites: Take COS 112AB
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.

COS 112BB. Salon I. 4.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-0.0
Corequisites: Take COS 112BB
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.

COS 112. Salon I. 8.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-0.0
Corequisites: Take COS 112AB
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.

COS 113AB. Cosmetology Concepts II. 2.0 Credits. Class-2.0.
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.
Prerequisites: Take All: COS 111 and COS 112

COS 113BB. Cosmetology Concepts II. 2.0 Credits. Class-2.0.
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.
Prerequisites: Take All: COS 111 and COS 112

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.
Prerequisites: Take All: COS 111 and COS 112

COS 114AB. Salon II. 4.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. 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.
Prerequisites: Take All: COS 111 and COS 112

COS 114BB. Salon II. 4.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. 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.
Prerequisites: Take All: COS 111 and COS 112

COS 114. Salon II. 8.0 Credits. Class-0.0. Clinical-0.0. Lab-4.0. 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.
Prerequisites: Take All: COS 111 and COS 112

COS 115AB. Cosmetology Concepts III. 2.0 Credits. Class-2.0.
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.
Prerequisites: Take All: COS 111 and COS 112

COS 115BB. Cosmetology Concepts III. 2.0 Credits. Class-2.0.
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.
Prerequisites: Take All: COS 111 and COS 112
COS 115AB. Cosmetology Concepts III. 2.0 Credits. Class-2.0. Lab-0.0. Work-0.0
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, salon management, supervisory techniques, and assess student performance in a classroom 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 apply these cosmetology concepts in the salon setting.
Prerequisites: Take All: COS 111 and COS 112

COS 116BB. Salon III. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. 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.
Prerequisites: Take All: COS 111 and COS 112
Corequisites: Take COS 116AB

COS 117AB. Cosmetology Concepts IV. 1.0 Credit. Class-1.0. 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.
Prerequisites: Take All: COS 111 and COS 112
Corequisites: Take COS 117AB

COS 117BB. Cosmetology Concepts IV. 1.0 Credit. Class-1.0. 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.
Prerequisites: Take All: COS 111 and COS 112

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.
Prerequisites: Take All: COS 111 and COS 112

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 client's 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

Central Piedmont Community College
Discussion of various theories of crime causation and societal response. Upon completion, students should be able to explain and discuss various theories of crime causation and societal response.

**Courses / Course Registration**

**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. 20.0 Credits.** Class-10.0. 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 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/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-politicization-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 193J. Selected Topics in 21st Century Policing. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
Examines the innovative approaches of policing in the 21st Century. Topics include innovative policing, community policing, ethical decision making as well as practical exercises and real-world scenarios in police tactics. Upon completion, students should be able to exhibit leadership abilities, demonstrate the importance of verbal and non-verbal communication, and display the professionalism and decorum required in public safety.

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 identify 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: Complete one of the following options: # DMA 010 DMA 020 DMA 030 # MAT 003
Corequisites: Take CUL 111 and CUL 112

CUL 110A. Sanitation and Safety 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 basic principles of sanitation and safety. Emphasis is placed on 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 practical applications of sanitation and safety procedures in the hospitality industry.
Corequisites: Take CUL 110

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.
Prerequisites: Complete one of the following options: # DMA 010 DMA 020 DMA 030 # MAT 003
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 competency 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.
Corequisites: Take CUL 135

CUL 140A. Culinary Skills 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 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 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 cookery, and moist, dry and combination heat. Emphasis is placed on 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 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 171 MAT 172 MAT 223 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 Minimum grade C
Corequisites: Take CUL 140A

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.
Prerequisites: Take CUL 110 Minimum grade C

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/dough, 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/dough, 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 230. Global Cuisines. 5.0 Credits. Class-1.0. Clinical-0.0. Lab-8.0. Work-0.0
This course provides practical experience in the planning, preparation, and presentation of representative foods from a variety of world cuisines. Emphasis is placed on indigenous ingredients and customs, nutritional concerns, and cooking techniques. Upon completion, students should be able to research and execute a variety of international and domestic menus.
Prerequisites: Take CUL 110, CUL 140, and CUL 240 Minimum grade C
Corequisites: Take CUL 230A

CUL 230A. Global 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 cuisines from around the world. Emphasis is placed on production of global cuisines based on historical and geographical influences, ingredients, customs, and cooking techniques. Upon completion, students should be able to exhibit an understanding of the culinary practices and techniques of specific countries.
Prerequisites: Take CUL 110 and CUL 140 Minimum grade C
Corequisites: Take CUL 230

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 CUL 110 CUL 140 Minimum grade C
Corequisites: Take CUL 240

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 1 group CUL 110 CUL 140 with a minimum grade of C
Take CUL 110 CUL 142 CUL 170 with a minimum grade of C
Corequisites: Take CUL 240A

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 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 CUL 110 CUL 140 Minimum grade C
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 CUL 110 CUL 140 CUL 240 CUL 240A Minimum grade C
Corequisites: Take CUL 245

CUL 250. Classical Cuisine. 5.0 Credits. Class-1.0. Clinical-0.0. Lab-8.0. Work-0.0
This course is designed to reinforce the classical culinary kitchen. Topics include the working Grand Brigade of the kitchen, signature dishes and classical banquets. Upon completion, students should be able to demonstrate competence in food preparation in a classical/upscale restaurant or banquet setting.
Prerequisites: Take All: CUL 110, CUL 140, and CUL 240

CUL 250A. Classical Cuisine 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 the classical kitchen. Emphasis is placed on practical experiences with the Grand Brigade of the kitchen, signature dishes and classical banquets. Upon completion, students should be able to exhibit culinary skills and techniques as they pertain to a classical/upscale restaurant or banquet settings.
Prerequisites: Take All: CUL 110, CUL 140, and CUL 240
Corequisites: Take CUL 250

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 demonstrate pastry preparation, plating, and dessert buffet production skills.
Prerequisites: Take CUL 110 Minimum grade C
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 CUL 110 Minimum grade C
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 pates, terrines, galantines, decorative garnishing skills, carving, charcuterie, smoking, canapes, 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. This course is a continuation of CUL 170. Topics include pates, terrines, galantines, ice and tallow carving, chaudfroid/Aspic work, charcuterie, smoking canapes, hors d'oeuvres, and related food items. Upon completion, students should be able to design, set up, and evaluate a catering function to include a classical cold buffet with appropriate showpieces.
Prerequisites: Take CUL 110 CUL 140 Minimum grade C
Corequisites: Take CUL 270
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 pates, terrines, galantines, decorative garnishing skills, carving, charcuterie, smoking, canapes, 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 CUL 110 CUL 140 Minimum grade C
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 resume 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.
CUL 275. Catering Cuisine. 5.0 Credits. Class-1.0. Clinical-0.0. Lab-8.0. Work-0.0
This course covers the sequential steps to successful catering that include sales, client needs, menu planning, purchasing, costing, event pricing, staffing and sanitation concerns. Emphasis is placed on new culinary competencies and skills specific to catering preparation, presentation, and customer service. Upon completion, students should be able to demonstrate proficiency in the successful design and execution of various types of catering events.
Prerequisites: Take All: CUL 110, CUL 140, and CUL 240
CUL 283. Farm-To-Table. 5.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces students to the cooperation between sustainable farmers and foodservice operations. Emphasis is placed on environmental relationships, including how foods are grown, processed, and distributed, as well as related implications on quality and sustainability. Upon completion, students should be able to demonstrate an understanding of environmental stewardship and its impact on cuisine.
Prerequisites: Take All: CUL 110 and CUL 140
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
CUL 287. Cultural Experience. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to provide the background cultural information necessary for students to maximize a cultural experience. Emphasis is placed on language skills, culture, culinary traditions and cuisines, and an appreciation of the local history. Upon completion, students should exhibit an understanding of the unique character of the studied culture, specifically those relating to culinary arts.
Prerequisites: Take All: CUL 110, CUL 140, and CUL 240

Cyber Crime Technology (CCT)

CCT 110. Introduction to Cyber Crime. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces and explains the various types of offenses that qualify as cyber crime activity. Emphasis is placed on identifying cyber crime activity and the response to these problems from both the private and public domains. Upon completion, students should be able to accurately describe and define cyber crime activities and select an appropriate response to deal with the problem.
CCT 121. Computer Crime Investigation. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the fundamental principles of computer crime investigation processes. Topics include crime scene/incident processing, information gathering techniques, data retrieval, collection and preservation of evidence, preparation of reports and court presentations. Upon completion, students should be able to identify cyber crime activity and demonstrate proper investigative techniques to process the scene and assist in case prosecution.
Prerequisites: Take CTI 130 Minimum grade C
CCT 231. Technology Crimes & Law. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the applicable technological laws dealing with the regulation of cyber security and criminal activity. Topics include an examination of state, federal and international laws regarding cyber crime with an emphasis on both general and North Carolina statutes. Upon completion, students should be able to identify the elements of cyber crime activity and discuss the trends of evolving laws.
CCT 240. Data Recovery Techniques. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the unique skills and methodologies necessary to assist in the investigation and prosecution of cyber crimes. Topics include hardware and software issues, recovering erased files, overcoming encryption, advanced imaging, transient data, Internet issues and testimony considerations. Upon completion, students should be able to recover digital evidence, extract information for criminal investigation and legally seize criminal evidence.
Prerequisites: Take CCT 121 Minimum grade C
CCT 241. Advanced Data Recovery. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course further explores the methodologies necessary to assist in the investigation and analysis of cyber crimes. Topics include commercial and open-source software tools for working with evidence acquisition, data recovery, and encryption. Upon completion, students should be able to perform the data recovery and analysis for a complete criminal or corporate investigation.
Prerequisites: Take CCT 240 Minimum grade C

CCT 260. Mobile Phone Examination. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course introduces the unique skills and methodologies necessary to assist in the investigation and prosecution of cyber crimes involving mobile phones. Topics include the basics of the cellular networks as well as data extraction from GSM, iDEN and CDMA handsets. Upon completion, students should be able to use the course processes and methodologies to obtain forensic evidence from GSM, iDEN and CDMA handsets.

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 All: CCT 231 and CCT 241

Cytotechnology (CYT)

CYT 210. Introduction to Clinical Cytology. 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, immunology, and laboratory operations and management as they relate to clinical cytology. Topics include the cell and cell division, histology, inflammatory processes, the immune response, CLIA, professional cytology organizations, workload limits, quality control, quality assurance, billing and coding in cytopathology, LIS systems and ethics. Upon completion, students should be able to understand basic cell biology, histology, immunologic processes, informatics, and the ethical role and responsibilities of the cytotechnologist in healthcare.
Prerequisites: 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 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 gynecologic cytology, including, normal cytology, pre-malignancies, malignancies, and treatment modalities. Topics include anatomy, physiology, histology, and embryology of the female genital tract and breast; normal cytology, hormonal cytology, microorganisms, precursor lesions, carcinomas, treatment modalities, extraterine and uncommon tumors, and FNA of the gonads and breast. Upon completion, students should be able to microscopically identify and discriminate between normal and pathological processes in the female genital tract or breast.
Corequisites: Take CYT 210, CYT 212, CYT 216 and CYT 222

CYT 216. Clinical and Diagnostic Interpretation I. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers cytologic criteria and clinical correlations for representative cytologic and histologic specimens from the female genital tract. Emphasis is placed on the cytology and histology of the female genital system through unknown cases and image exercises. Upon completion, students should be able to detect, diagnose, and appropriately mark cells representative of any normal or pathological process from the female genital tract.
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-gynecologic cytology and fine needle aspiration biopsy of all body sites. Topics include the anatomy, histology, pathology, and cytopathology of the respiratory tract, body cavities, urinary tract, gastrointestinal tract, head and neck, and central nervous system. Upon completion, students should be able to microscopically identify and discriminate between normal and pathological processes in non-gynecologic cytology.
Prerequisites: Take ALL: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222

CYT 222. Cytopreparation Techniques. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the fundamental principles of cytopreparation for 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-12.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides supervised clinical experience in gynecologic cytology, including, normal cytology, pre-malignancies, malignancies, and treatment modalities. Topics include anatomy, physiology, histology, and embryology of the female genital tract and breast; normal cytology, hormonal cytology, microorganisms, precursor lesions, carcinomas, treatment modalities, extraterine and uncommon tumors, and FNA of the gonads and breast. Upon completion, students should be able to microscopically identify and discriminate between normal and pathological processes in the female genital tract or breast.
Corequisites: Take CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222

268
CYT 226. Clinical and Diagnostic Interpretation II. 4.0 Credits.  
Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course covers cytologic criteria and clinical correlations for  
representative cytologic and histologic specimens from non-gynecologic  
body sites. Emphasis is placed on the cytology and histology of non-  
gynecologic body sites through unknown cases and image exercises.  
Upon completion, students should be able to detect, diagnose, and  
appropriately mark cells representative of any normal or pathological  
process from non-gynecologic body sites.  
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-gynecologic  
cytology. Emphasis is placed on cytological diagnosis by routine  
screening methods and observation of various procedures relevant to  
non-gynecologic cytology. Upon completion, students should be able to  
demonstrate mastery of all diagnostic skills.  
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 gynecologic  
cytology. Emphasis is placed on cytological diagnosis by routine screening  
methds and observation of various procedures relevant to gynecologic  
cytology. Upon completion, students should be able to demonstrate  
mastery of all diagnostic skills.  
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 review and critique of medical literature with  
emphasis placed on topics in cytopathology. Topics include gynecologic  
and non-gynecologic cytology. Upon completion, students should be able  
to analyze, critique, and present scientific articles.  
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. Ancillary Studies in Cytopathology. 2.0 Credits.  
Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course covers the fundamental principles and applications of  
special and immunohistochemical staining, as well as the principles  
and applications of molecular testing as they relate to the cytopathology  
laboratory. Emphasis is placed on the types of special stains used in  
cytopathology, on identifying positive and negative staining results, and  
on the application of molecular testing in cytopathology. Upon completion,  
students should be able to understand the application and interpretation  
of various special and immunohistochemical stains, and understand the  
various molecular tests available for use in 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 provides the fundamentals of elementary jazz technique.  
Emphasis is placed on body placement, stretching, jazz movements,  
and syncopated rhythms. Upon completion, students should be able to  
demonstrate significant progress in fundamental jazz dance technique and  
simple center combinations.  

DAN 125. Jazz Dance II. 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 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 elementary ballet techniques.  
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 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 kinesthesia (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 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-4.0. Work-0.0
This course is the second in a series of advanced ballet technique. Emphasis is placed on mastery and quality 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.
Prerequisites: Take CIS 110 or CTI 110 Minimum grade C

**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 CIS 110 or CTI 110 Minimum grade C

**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 120. Database Programming I. 3.0 Credits.**
Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to develop SQL programming proficiency. Emphasis is placed on data definition, data manipulation, and data control statements as well as on report generation. Upon completion, students should be able to write programs which create, update, and produce reports.
Prerequisites: Take CTI 110 or DBA 110 Minimum grade C

**DBA 125. Database Reporting. 3.0 Credits.**
Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a survey of the tools used in designing, creating and publishing database reports. Topics include both relational and XML datasets. Upon completion, students should be able to demonstrate an understanding of the different tools and frameworks used for database reporting.
Prerequisites: Take DBA 112 or CTS 130 Minimum grade C

**DBA 210. Database Administration. 3.0 Credits.**
Class-2.0. Clinical-0.0. Lab-3.0. 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.
Prerequisites: Take DBA 110 Minimum grade C

**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 Minimum grade C

**DBA 225. 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 DBA 120

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. Acceptance required into the Dental Assisting program.

**DEN 101AB. Preclinical Procedures. 3.5 Credits.**
Class-2.0. Clinical-0.0. Lab-3.0. 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.

**DEN 101BB. Preclinical Procedures. 3.5 Credits.**
Class-2.0. Clinical-0.0. Lab-3.0. 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.
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. 4.0 Credits. Class-2.0. 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.

DEN 103AB. Dental Sciences. 1.0 Credit. Class-1.0. 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 103BB. Dental Sciences. 1.0 Credit. Class-1.0. 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.
Corequisites: Take DEN 103AB

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-2.0. 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.

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. 6.0 Credits. Class-2.0. 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 101

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. Acceptance required into the Dental Assisting or Dental Hygiene program.

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. Acceptance required into the Dental Assisting or Dental Hygiene program.

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. Acceptance required into the Dental Assisting or Dental Hygiene program.
DEN 120. Dental Hygiene Preclinic 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 Federal Nutritional Guidelines, nutrient functions, Recommended Daily Allowances, Adequate Intake, Tolerable Upper Intake Level, Estimated Average Requirement, 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 with a minimum grade of C
Take BIO 175 or BIO 275 with a minimum grade of C

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 110 DEN 111 DEN 112 DEN 120 DEN 121 with a minimum grade of C
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 introduces principles in treatment modification. Topics include modification of treatment for pain management and advanced radiographic interpretation. Upon completion, students should be able to differentiate necessary treatment modifications and radiographic abnormalities. Introduction to the concept of power driven scalers and modification of treatment for special needs patients. 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 introduces advanced principles of patient care. Topics include advanced periodontal debridement, subgingival irrigation, air polishing, special needs and case presentations. Upon completion, students should be able to demonstrate knowledge of methods of treatment and management of periodontally compromised and special needs 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 development 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 121 Minimum grade C

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, technological advances, and completion of a case study presentation. Upon completion, students should be able to demonstrate knowledge of various disciplines of dentistry, technological advances 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-0.0. Lab-3.0. 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 and 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. Prerequisites: Take DES 110

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

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 110

DES 125. Visual Presentation I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces visual presentation techniques for communicating ideas. Topics include drawing, perspective drawing, rendering and mixed media. Upon completion, students should be able to present a design concept through graphic media.

DES 130. Digital Applications and Interior Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces digital applications using current appropriate software and emerging technologies. Emphasis is placed on the operation of computer software in interior design applications. Upon completion, students should be able to use digital media to prepare a design solution. Focus of this course will be 3D modeling using SketchUP and/or other design software as appropriate.
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 2D and 3D exploration.

DES 210. Professional 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 demonstrate an understanding of basic business practices as they relate to the interior design profession.
Prerequisites: Take DES 220

DES 220. Interior Design Fundamentals. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides an introduction to the application of interior design principles. Emphasis is placed on spatial relationships, material selections, craftsmanship, and visual presentation techniques. Upon completion, students should be able to apply interior design principles and illustrate design solutions through visual communication.
Prerequisites: Take One set:
- DES 135 and ARC 111
- DES 110
- DES 125
- DFT 115

DES 225. Textiles for Interiors. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course includes the study of textiles and their applications for a variety of interiors. Emphasis is placed on history, manufacturing processes, fiber characteristics, and residential and non-residential applications. Upon completion, students should be able to specify appropriate textiles.

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 present scaled floor plans, elevations, specifications, color schemes finishes and furniture selection.
Prerequisites: Take DES 112 DES 120 DES 130 DES 220

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 a detailed floorplan, space planning, furniture plan, specifications, program schedules, finishes, and detailed window treatments.
Prerequisites: Take DES 230 DES 280

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 products. Topics include floor coverings; wall coverings and finishes; ceilings, moldings, and furniture construction techniques; and other interior components. Upon completion, students should be able to identify and select appropriate materials and furnishings for interior spaces based on application.

DES 240. Commercial and Contract Design I. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0
This course is designed to focus on commercial/contract design including retail, office, institutional, healthcare 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 design and present non-residential projects.
Prerequisites: Take DES 112 DES 120 DES 130 and 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 and DES 280

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 Each Group: Take ARC 111 or DES 110 Take DES 130

DES 243. Advanced Kitchen and Bath Design. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers advanced kitchen and bath design. Emphasis will be placed on universal design solutions, producing professional working documents, and mastery of developing and presenting a design concept and theme. Upon completion, students should be able to execute complex kitchen and bath designs.
Prerequisites: Take DES 242

DES 255. History of Interiors and Furnishings I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces architecture, interiors, and furnishings in a variety of historic styles from Prehistoric to Neoclassical. Emphasis is placed on vocabulary, chronology, and style recognition. Upon completion, students should be able to recognize, classify and describe major styles of furniture, interiors, and architecture.

DES 265. Lighting/Interior Design. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces theory and contemporary concepts in lighting. Topics include light levels, light quality, lamps and fixtures, and their use and application in interior design. Upon completion, students should be able to visually communicate light concepts and requirements based on national standards and select solutions for specific lighting scenarios.
**Services Technology program.**

requirement of the Developmental Disabilities concentration in the Human program planning and the individual roles of team members. DDT 220 is a be able to demonstrate an understanding of effective group process in and group problem-solving methods. Upon completion, students should components and benefits of the process, the effect of values on outcomes, This course covers the individual program planning process used in Clinical-0.0. Lab-0.0. Work-0.0

DDT 210. Teaching Developmental Disabled. 3.0 Credits. Clinical-0.0. Lab-0.0. Work-0.0 This course covers teaching modalities which enhance learning among people with developmental disabilities. Topics include assessment, support strategies, writing behavioral strategies, teaching methods, and documentation. Upon completion, students should be able to demonstrate an understanding of current and historical developmental disability definitions and support systems used throughout the life span.

DDT 110. Developmental Disabilities. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0 This course identifies the characteristics and causes of various disabilities. Topics include history of service provision, human rights, legislation and litigation, advocacy, and accessing support services. Upon completion, students should be able to demonstrate an understanding of current and historical developmental disability definitions and support systems used throughout the life span.

DDT 120. Teaching Developmental Disabled. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0 This course covers teaching modalities which enhance learning among people with developmental disabilities. Topics include assessment, support strategies, writing behavioral strategies, teaching methods, and documentation. Upon completion, students should be able to demonstrate competence in individual program plan development and implementation. DDT 120 is a requirement of the Developmental Disabilities concentration in the Human Services Technology program. Prerequisites: Take DDT 110

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. DDT 220 is a requirement of the Developmental Disabilities concentration in the Human Services Technology program.

**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 identify formal and informal supports and strategies for community inclusion for adults aging with lifelong disabilities. Prerequisites: Take DDT 110

**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.

Prerequisites: Take EGR 150
Corequisites: Take MAT 172 MAT 271 MAT 272 or MAT 273

Drama/Theatre (DRA)

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 132. Stage Movement. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an applied study of selected principles of stage movement for actors. Topics include improvisation, mime, stage combat, clowning, choreography, and masks. Upon completion, students should be able to focus properly on stage, to create characters, and to improvise scenes, perform mimes, fight, clown, juggle, and waltz.

Corequisites: Take DRA 111

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 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 costing 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.

DRA 170. Play 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 a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production.

DRA 171. Play 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 a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production.

DRA 210. Theatre History I. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the development of theatre from its origin to the closing of the British theatre in 1642. Topics include the history, aesthetics, and representative dramatic literature of the period. Upon completion, students should be able to trace the evolution of theatre and recognize the styles and types of world drama.

DRA 212. Theatre History II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the development of theatre from 1660 through the diverse influences which shaped the theatre of the twentieth century. Topics include the history, aesthetics, and representative dramatic literature of the period. Upon completion, students should be able to trace the evolution of theatre and recognize the styles and types of world drama.

DRA 230. Acting III. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course is designed to include an exploration of acting styles. Emphasis is placed on putting the actor's skills to work in a major theatrical form-musical, comedy, or drama. Upon completion, students should be able to explore their creativity in an acting ensemble.

DRA 231. Acting IV. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course is designed to include further exploration of acting styles. Emphasis is placed on putting the actor's skills to work in a major theatrical form-musical, comedy, or drama. Upon completion, students should be able to explore their creativity in an acting ensemble.

DRA 240. Lighting for the Theatre. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is an applied study of theatre lighting and is designed to train theatre technicians. Emphasis is placed on lighting technology including the mechanics of lighting and light control equipment by practical work with lighting equipment. Upon completion, students should be able to demonstrate competence with lighting equipment.

DRA 260. Directing. 3.0 Credits. Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides an analysis and application of the techniques of theatrical directing. Topics include script selection, analysis, casting, rehearsal planning, blocking, stage business, tempo, and technical considerations. Upon completion, students should be able to plan, execute, and critically discuss a student-directed production.

Prerequisites: Take DRA 130
Corequisites: Take DRA 140

DRA 270. Play 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 a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production.

DRA 271. Play 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 a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production.

Prerequisites: Take DRA 270

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: Complete one of the following options: Take DMA 010 DMA 020 and DMA 030
Take MAT 121 MAT 122 MAT 171 MAT 172 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 with a minimum grade of C
Take MAT 003 Complete one of the following options:
Take DRE 097 and DRE 098
Take ENG 111 with a minimum grade of C
Take ENG 002
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: Complete one of the following options:
# Take ENG 097 and DRE 098
# Take ENG 002 with a minimum grade of C
Take DMA 010 DMA 020 DMA 030
Take MAT 121 MAT 122 MAT 171 MAT 172 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 with a minimum grade of C
Take MAT 003

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: Complete one of the following options:
Take ENG 111 with a minimum grade of C
Take DMA 010 DMA 020 DMA 030
Take MAT 121 MAT 122 MAT 171 MAT 172 MAT 263 MAT 271 MAT 272 MAT 273 or MAT 285 with a minimum grade of C
Take MAT 003

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 introduces the foundations of early childhood education, the diverse educational settings for young children, professionalism and planning intentional developmentally appropriate experiences for each child. Topics include theoretical foundations, national early learning standards, NC Foundations for Early Learning and Development, state regulations, program types, career options, professionalism, ethical conduct, quality inclusive environments, and curriculum responsive to the needs of each child/family. Upon completion, students should be able to design a career/professional development plan, appropriate environments, schedules, and activity plans.

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, linguistically and ability diverse families, children, schools and communities through the use of evidence-based strategies. 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 reflective of the NAEYC Code of Ethical Conduct. Upon completion, students should be able to identify appropriate relationship building strategies between diverse families, children, schools, and communities and demonstrate a variety of communication skills including appropriate use of technology to support every child.
Corequisites: Take One: DRE 097, ENG 002, or ENG 111

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, observation and assessment, milestones, and factors that influence development, from conception through approximately 36 months. Emphasis is placed on knowledge, observation and assessment of developmental sequences in approaches to play/learning, emotional/social, health/physical, language/communication and cognitive domains. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain biological and environmental factors that impact development, and identify evidence-based strategies for enhancing development for children that are culturally, linguistically, and ability diverse.
Corequisites: Take One: DRE 097, ENG 002, or ENG 111

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, observation and assessment, milestones, and factors that influence development, from preschool through middle childhood. Emphasis is placed on knowledge, observation and assessment of developmental sequences in approaches to play/learning, emotional/social, health/physical, language/communication and cognitive domains. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain biological and environmental factors that impact development, and identify evidence-based strategies for enhancing development for children that are culturally, linguistically, and ability diverse.
Corequisites: Take One: DRE 097, ENG 002, or ENG 111

EDU 146. Child Guidance. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces evidence-based strategies to build nurturing relationships with each child by applying principles and practical techniques to facilitate developmentally appropriate guidance. Topics include designing responsive/supportive learning environments, cultural, linguistic and socio-economic influences on behavior, appropriate expectations, the importance of communication with children/families including using technology and the use of formative assessments in establishing intentional strategies for children with unique needs. Upon completion, students should be able to demonstrate direct/indirect strategies to encourage social skills, self-regulation, emotional expression and positive behaviors while recognizing the relationship between children's social, emotional and cognitive development.
Corequisites: Take One: DRE 097, ENG 002, or ENG 111
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: Complete one of the following options:
- EDU 151 and DRE 097
- EDU 151 and ENG 002
- EDU 151 and ENG 111

EDU 151. Creative Activities. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces developmentally supportive creative learning environments with attention to divergent thinking, creative problem-solving, evidence-based teaching practices, and open-ended learning materials while applying NC Foundations for Early Learning and Development. Emphasis is placed on observation of process driven learning experiences in art, music, creative movement, dance, and dramatics for every young child age birth through eight, integrated through all domains and academic content. Upon completion, students should be able to examine, create, and adapt developmentally creative learning materials, experiences, and environments for children that are culturally, linguistically, and ability diverse.
Corequisites: Take DRE 097 and EDU 151A

EDU 153. Health, Safety and Nutrition. 3.0 Credits. Class-3.0. Lab-0.0. Work-0.0
This course covers promoting and maintaining the health and well-being of every child. Topics include health and nutritional guidelines, common childhood illnesses, maintaining safe and healthy learning environments, health benefits of active play, recognition and reporting of abuse/neglect, and state regulations. Upon completion, students should be able to apply knowledge of NC Foundations for Early Learning and Development for health, safety, nutritional needs and safe learning environments.
Corequisites: Take One: DRE 097, ENG 002, or ENG 111

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 One: DRE 097, ENG 002, or ENG 111

EDU 157. Active Play. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces physical activities to promote the development of the whole child, birth through middle childhood. Topics include active play, outdoor learning, design of the environment, development of play skills, loose parts play, nature play, risk benefit assessment, advocacy, and family/community connection. Upon completion, students should be able to discuss the stages of play, the role of teachers in play, active play environments, advocate for the child's right to play, and plan and assess appropriate experiences using NC Foundations for Early Learning and Development.
Corequisites: Take One: DRE 097, ENG 002, or ENG 111

EDU 158. Healthy Lifestyles-Youth. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the topics of health, safety, nutrition, physical activities and environments for the school-age child/youth that promote development, fitness and healthy lifestyles. Topics include the use of physical and nutritional/cooking activities (indoor/outdoor, teacher-directed/youth-directed) appropriate for youth developing typically/atypically; safe/healthy menu planning; safe/healthy environmental design, assessment and supervision. Upon completion, students should be able to plan/facilitate safe/healthy physical and nutritional/cooking activities, discuss safety policies/regulations and identify health/safety/nutritional needs of youth.
Corequisites: Take One: DRE 097, ENG 002, or ENG 111

EDU 162. Observation and Assessment in Early Childhood Education. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the research, benefits, goals, and ethical considerations associated with observation and formative assessment in early childhood education. Emphasis is placed on the implementation of multiple observation/assessment strategies including anecdotal records, event samples, rating scales, and portfolios to create appropriate learning experiences. Upon completion, students should be able to practice responsible assessment and effectively use tools to assess the child, teacher practices and indoor and outdoor environments to enhance programming; and explain the importance of assessment partnerships with families and other professionals.
Corequisites: Take One: DRE 097, ENG 002, or ENG 111

EDU 163. Classroom Management and Instruction. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course examines classroom management and evidence-based instructional strategies that create supportive learning environments to provide developmentally appropriate guidance for school-age populations. Topics include classroom management and organization, teaching strategies, individual student differences and learning styles, ongoing systematic observation, and developmentally appropriate classroom guidance techniques. Upon completion, students should be able to utilize developmentally appropriate behavior management and high quality instructional strategies that enhance the teaching/learning process and promote students' academic success.
Corequisites: Take One: DRE 097, ENG 002, or ENG 111
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
Corequisites: Take One: DRE 097, ENG 002, or ENG 111

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 one: DRE 097, ENG 002, or ENG 111

EDU 216. Foundations of Education. 3.0 Credits. Class-3.0. 
Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the examination of the American educational systems and the teaching profession. Topics include the historical and philosophical influences on education, various perspectives on educational issues, and experiences in birth through grade 12 classrooms. Upon completion, students should be able to reflect on classroom observations, analyze the different educational approaches, including classical/traditional and progressive, and have knowledge of the various roles of educational systems at the federal, state and local level.
Corequisites: Take One: DRE 098, ENG 002, or ENG 111

EDU 221. Children With Exceptionalities. 3.0 Credits. Class-3.0. 
Clinical-0.0. Lab-0.0. Work-0.0
This course covers atypical patterns of child development, inclusive/diverse settings, evidenced-based educational/family plans, differentiated instruction, adaptive materials, and assistive technology. Emphasis is placed on the characteristics of exceptionalities and delays, early intervention/special education, transitions, observation, developmental screening, formative assessment of children, and collaborating with families and community partners. Upon completion, students should be able to recognize diverse abilities, describe the referral process, identify community resources, explain the importance of collaboration with families/professionals, and develop appropriate strategies/adaptations to support children in all environments with best practices as defined by laws, policies and the NC Foundations for Early Learning and Development.
Prerequisites: Complete one of the following options: Take EDU 119, EDU 144, and EDU 145
Take EDU 119, PSY 244, and PSY 245
Corequisites: Take One: DRE 098, ENG 002, or ENG 111

EDU 234. Infants, Toddlers, and Twos. 3.0 Credits. Class-3.0. 
Clinical-0.0. Lab-0.0. Work-0.0
This course covers the development of high-quality, individualized, responsive/engaging relationships and experiences for infants, toddlers, and twos. Emphasis is placed on typical and atypical child development, working with diverse families to provide positive, supportive, and engaging early learning activities and interactions through field experiences and the application of the NC Foundations for Early Learning and Development.
Upon completion, students should be able to demonstrate responsive curriculum planning, respectful relationships and exposure to a variety of developmentally appropriate experiences/materials that support a foundation for healthy development and growth of culturally, linguistically and ability diverse children birth to 36 months.
Prerequisites: Take EDU 119 AND EDU 144
Corequisites: Take One: DRE 098, ENG 002, or ENG 111

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 and program development. Upon completion, students should be able to discuss developmental principles for culturally, linguistically, and ability diverse children ages five to twelve and plan and implement developmentally appropriate programs and activities.
Corequisites: Take One: DRE 098, ENG 002, or ENG 111

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 One: DRE 098, ENG 002, or ENG 111

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 One: DRE 098, ENG 002, or ENG 111

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 One: DRE 098, ENG 002, or ENG 111
EDU 250. Teacher Licensure Preparation. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides information and strategies necessary for transfer to a teacher licensure program at a senior institution. Topics include entry level teacher licensure exam preparation, performance based assessment systems, requirements for entry into teacher education programs, the process to become a licensed teacher in North Carolina, and professionalism including expectations within the field of education. Upon completion, students should be able to utilize educational terminology and demonstrate knowledge of teacher licensure processes including exam preparation, technology based portfolio assessment, and secondary admissions processes to the school of education at a senior institution.
Prerequisites: Complete one of the following options:
• ENG 111 and MAT 143
• ENG 111 and MAT 152
• ENG 111 and MAT 171

EDU 251. Exploration Activities. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers fundamental concepts in the content areas of science, technology, engineering, math and social studies through investigative experiences. Emphasis is placed on exploring fundamental concepts, developmentally appropriate scope and sequence, and teaching strategies to engage each child in the discovery approach. Upon completion, students should be able to understand major concepts in each content area and implement appropriate experiences for young children.
Prerequisites: Take EDU 119, EDU 144, EDU 151, and EDU 151A
Corequisites: Take DRE 098 and 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 practice content knowledge gained from EDU 251. Emphasis is placed on practical experience that enhances the fundamental concepts. Upon completion, students should be able to demonstrate the discovery approach to teaching and plan appropriate science, technology, engineering, math, and social studies experiences for each child.
Prerequisites: Take EDU 119, EDU 144, EDU 151, and EDU 151A
Corequisites: Take one set:
• EDU 251 and DRE 098
• EDU 251 and ENG 002
• EDU 251 and ENG 111

EDU 254. Music and Movement for Children. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the use of music and creative movement for children. Topics include a general survey of the basic elements of music and planning, designing, and implementing music and movement experiences for creative learning. Upon completion, students should be able to use voice and various musical instruments to provide musical and movement activities for children.

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 using content knowledge to build developmentally effective approaches for culturally/linguistically/ability diverse young children. Topics include components of curriculum, a variety of curriculum models, authentic observation and assessment, and planning developmentally appropriate experiences aligned with the NC Foundations for Early Learning and Development. Upon completion, students should be able to understand, evaluate, and use curriculum to plan for individual/group needs.
Prerequisites: Take EDU 119, EDU 145, EDU 151, EDU 151A, and EDU 184
Corequisites: Take One: DRE 098, ENG 002, or ENG 111

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 and practices essential to preparing and supporting child care administrators. Topics include program philosophy, policies and procedures, NC Child Care Law and Rules, business planning, personnel and fiscal management, and NAEYC Code of Ethical Conduct Supplement for Early Childhood Program Administration. Upon completion, students should be able to articulate a developmentally appropriate program philosophy, locate current state licensing regulations, analyze a business plan and examine comprehensive program policies and procedures.
Corequisites: Take one set:
• EDU 119 and DRE 098
• EDU 119 and ENG 002
• EDU 119 and ENG 111

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.
Corequisites: Take one set:
• DRE 098, EDU 119 and EDU 261
• ENG 002, EDU 119 and EDU 261
• ENG 111, EDU 119 and EDU 261

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 One: DRE 098, ENG 002, or ENG 111
EDU 271. Educational Technology. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the ethical use of technology to enhance teaching and learning in all educational settings. Emphasis is placed on technology concepts, ethical issues, digital citizenship, instructional strategies, assistive technology, and the use of technology for professional development and communication. Upon completion, students should be able to discuss technology concepts, ethically use a variety of technology resources, demonstrate appropriate technology skills in educational environments, and identify assistive technology.
Prerequisites: Take EDU 221
Corequisites: Take One: DRE 098, ENG 002, or ENG 111

EDU 280. Language and Literacy Experiences. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides evidence-based strategies for enhancing language and literacy experiences that align with NC Foundations for Early Learning and Development. Topics include developmental sequences for children's emergent receptive and expressive language, print concepts, appropriate observations/assessments, literacy enriched environments, quality selection of diverse literature, interactive media, and inclusive practices. Upon completion, students should be able to select, plan, implement and evaluate developmentally appropriate language and literacy experiences for children who are culturally, linguistically and ability diverse.
Prerequisites: Take EDU 119 EDU 144 EDU 151 EDU 151A
Corequisites: Complete one of the following options:
• EDU 280 and DRE 098
• EDU 280 and ENG 002
• EDU 280 and ENG 111

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 demonstrate acquired skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on designing, implementing and evaluating developmentally appropriate activities and environments for all children; supporting/engaging families; and modeling reflective and professional practices based on national and state guidelines. Upon completion, students should be able to apply NC Foundations for Early Learning and Development to demonstrate developmentally appropriate plans/assessments, appropriate guidance techniques and ethical/professional behaviors, including the use of appropriate technology, as indicated by assignments and onsite faculty assessments.
Prerequisites: Complete one of the following options: Take EDU 119, EDU 144, EDU 145, EDU 146, and EDU 151
Take EDU 119, EDU 145, EDU 146, EDU 151, and PSY 244
Take EDU 119, EDU 144, EDU 146, EDU 151, and PSY 245
Take EDU 119, EDU 146, EDU 151, PSY 244, and PSY 245
Corequisites: Take One: DRE 098, ENG 002, or ENG 111

EDU 288. Advanced Issues in Early Childhood Education. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers advanced topics and issues in early childhood. 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 advanced current topics and issues in early childhood education.
Corequisites: Take One: DRE 098, ENG 002, or ENG 111

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; 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 covers the interpretation of electrical diagrams, schematics, and drawings common to electrical applications. Emphasis is placed on reading and interpreting electrical diagrams and schematics. Upon completion, students should be able to read and interpret electrical diagrams and schematics.

ELC 127. Software for Technicians. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. 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 128. Introduction to Programmable Logic Controller. 3.0 Credits. Class-2.0. 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 130. Advanced Motors and Controls. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers motors concepts, construction and characteristics and provides a foundation in motor controls. Topics include motor control ladder logic, starters, timers, overload protection, braking, reduced voltage starting, SCR control, AC/DC drives, system and component level troubleshooting. Upon completion, students should be able to specify, connect, control, troubleshoot, and maintain motors and motor control systems.
Prerequisites: Take One: ELC 111, ELC 112, ELC 131, or ELC 138

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.
Corequisites: Take MAT 121 or MAT 171

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.
Prerequisites: Take ELC 131 Minimum grade C

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 Minimum grade C

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 Minimum grade C

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 213. Instrumentation. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the fundamentals of instrumentation used in industry. Emphasis is placed on electric, electronic, and other instruments. Upon completion, students should be able to install, maintain, and calibrate instrumentation. Prerequisites: Take ELC 131 Minimum grade C

ELC 215. Electrical Maintenance. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the theory of maintenance and the skills necessary to maintain electrical equipment found in industrial and commercial facilities. Topics include maintenance theory, predictive and preventive maintenance, electrical equipment operation and maintenance, and maintenance documentation. Upon completion, students should be able to perform maintenance on electrical equipment in industrial and commercial facilities.

ELC 220. Photovoltaic System Technology. 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 228. 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-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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

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.
Prerequisites: Take ELC 131 Minimum grade C

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 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 133 Minimum grade C

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 133

ELN 260. Prog Logic Controllers. 4.0 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 ELC 213 or ELN 133 with a minimum grade C

Emergency Medical Science (EMS)

EMS 110AB. EMT. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces basic emergency medical care. Topics include preparatory, airway, patient assessment, medical emergencies, trauma, infants and children, and operations. Upon completion, students should be able to demonstrate the knowledge and skills necessary to achieve North Carolina State or National Registry EMT certification.
Corequisites: Take EMS 110AB

EMS 110BB. EMT. 5.0 Credits. Class-3.0. Clinical-3.0. Lab-3.0. Work-0.0
This course introduces basic emergency medical care. Topics include preparatory, airway, patient assessment, medical emergencies, trauma, infants and children, and operations. Upon completion, students should be able to demonstrate the knowledge and skills necessary to achieve North Carolina State or National Registry EMT certification.
Corequisites: Take EMS 110AB

EMS 110. EMT. 8.0 Credits. Class-6.0. Clinical-0.0. Lab-6.0. Work-0.0
This course introduces basic emergency medical care. Topics include preparatory, airway, patient assessment, medical emergencies, trauma, infants and children, and operations. Upon completion, students should be able to demonstrate the knowledge and skills necessary to achieve North Carolina State or National Registry EMT certification.
EMS 120. Advanced EMT. 6.0 Credits. Class-4.0. Clinical-0.0. Lab-6.0. Work-0.0
This course is designed to provide the essential information on interventions/treatments appropriate to the Advanced EMT and is required for Advanced EMT certification. Topics include airway management, automatic external defibrillation, cardiac electrophysiology, vascular access, acid-base balance, pharmacology, medical emergencies, traumatic injuries, and fluids and electrolytes. Upon completion, students should be able to properly obtain vascular access, manage medical and trauma patients, utilize simple and advanced airways, and correctly interpret arterial blood gases.
Prerequisites: Take EMS 110
Corequisites: Take EMS 121

EMS 121. AEMT Clinical Practicum. 2.0 Credits. Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0
This course provides the hospital and field internship/clinical experiences required in preparation for the Advanced EMT certification. Emphasis is placed on performing patient assessments, treatments, and interactions appropriate at the Advanced EMT level of care. Upon completion, students should be able to demonstrate competence at the Advanced EMT skill level.
Prerequisites: Take EMS 110
Corequisites: Take EMS 120

EMS 122. EMS Clinical Practicum I. 1.0 Credit. Class-0.0. Clinical-3.0. Lab-0.0. Work-0.0
This course provides the introductory hospital clinical experience for the paramedic student. Emphasis is placed on mastering fundamental paramedic skills. Upon completion, students should be able to demonstrate competence with fundamental paramedic level skills.
Prerequisites: Take EMS 110
Corequisites: Take EMS 130

EMS 125. EMS Instructor Methodology. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the information needed to develop and instruct EMS courses. Topics include instructional methods, lesson plan development, time management skills, and theories of adult learning. Upon completion, students should be able to teach EMS courses and meet the North Carolina EMS requirements for instructor methodology.

EMS 130. Pharmacology. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the fundamental principles of pharmacology and medication administration and is required for paramedic certification. Topics include medical terminology, pharmacological concepts, weights, measures, drug calculations, vascular access for fluids and medication administration and legislation. Upon completion, students should be able to accurately calculate drug dosages, properly administer medications, and demonstrate general knowledge of pharmacology.
Prerequisites: Take EMS 110
Corequisites: Take EMS 122

EMS 131. Advanced Airway Management. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to provide advanced airway management techniques and is required for paramedic certification. Topics include respiratory anatomy and physiology, airway/ventilation, adjuncts, surgical intervention, and rapid sequence intubation. Upon completion, students should be able to properly utilize all airway adjuncts and pharmacology associated with airway control and maintenance.
Prerequisites: Take EMS 110

EMS 140. Rescue Scene Management. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces rescue scene management. Topics include response to hazardous material conditions, incident command, and extrication of patients from a variety of situations. Upon completion, students should be able to recognize and manage rescue operations based upon initial and follow-up scene assessment.

EMS 150. Emergency Vehicles and EMS Communication. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the principles governing emergency vehicles, maintenance of emergency vehicles, and EMS communication equipment. Topics include applicable motor vehicle laws affecting emergency vehicle operation, defensive driving, collision avoidance techniques, communication systems, and information management systems. Upon completion, students should have a basic knowledge of emergency vehicles, maintenance, and communication needs.

EMS 160. Cardiology I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the study of cardiovascular emergencies and is required for paramedic certification. Topics include anatomy and physiology, pathophysiology, electrophysiology, and basic rhythm interpretation in the monitoring leads. Upon completion, students should be able to recognize and interpret basic rhythms.
Prerequisites: Take EMS 110

EMS 220. Cardiology II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides an in-depth study of cardiovascular emergencies and is required for paramedic certification. Topics include assessment and treatment of cardiac emergencies, application and interpretation of advanced electrocardiography utilizing the twelve-lead ECG, cardiac pharmacology, and patient care. Upon completion, students should be able to assess and treat patients utilizing American Heart Association guidelines.

EMS 221. EMS Clinical Practicum II. 2.0 Credits. Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0
This course provides clinical experiences in the hospital and/or field. Emphasis is placed on increasing the proficiency of students' skills and abilities in patient assessments and the delivery of care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care.
Prerequisites: Take All: EMS 122, EMS 130, and EMS 160

EMS 231AB. EMS Clinical Practicum III. 1.5 Credit. Class-0.0. Clinical-4.5. Lab-0.0. Work-0.0
This course provides clinical experiences in the hospital and/or field. Emphasis is placed on enhancing the students' skills and abilities in providing advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care.
Prerequisites: Take All: EMS 122 and EMS 130

EMS 231BB. EMS Clinical Practicum III. 1.5 Credit. Class-0.0. Clinical-4.5. Lab-0.0. Work-0.0
This course provides clinical experiences in the hospital and/or field. Emphasis is placed on enhancing the students' skills and abilities in providing advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care.
Prerequisites: Take EMS 221
Corequisites: Take EMS 231AB
**EMS 231. EMS Clinical Practicum III. 3.0 Credits.** Class-0.0. Clinical-9.0. Lab-0.0. Work-0.0
This course provides clinical experiences in the hospital and/or field. Emphasis is placed on enhancing the students' skills and abilities in providing advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care. Prerequisites: Take All: EMS 130 and EMS 221

**EMS 235. EMS Management. 2.0 Credits.** Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course stresses the principles of managing a modern emergency medical service system. Topics include structure and function of municipal governments, EMS grantsmanship, finance, regulatory agencies, system management, legal issues, and other topics relevant to the EMS manager. Upon completion, students should be able to understand the principles of managing emergency medical service delivery systems.

**EMS 240. Patients With Special Challenges. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course includes concepts of crisis intervention and techniques of interacting with patients with special challenges and is required for paramedic certification. Topics include appropriate intervention and interaction for neglected, abused, terminally ill, chronically ill, technology assisted, bariatric, physically challenged, mentally challenged, or assaulted patients as well as behavioral emergencies. Upon completion, students should be able to recognize and manage the care of patients with special challenges. Prerequisites: Take All: EMS 122 and EMS 130

**EMS 241. EMS Clinical Practicum IV. 4.0 Credits.** Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0
This course provides clinical experiences in the hospital and/or field. Emphasis is placed on mastering the skills/competencies required of the paramedic providing advanced-level care. Upon completion, students should be able to provide advanced-level patient care as an entry-level paramedic. Prerequisites: Take All: EMS 130 and EMS 231

**EMS 250. Medical Emergencies. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides an in-depth study of medical conditions frequently encountered in the prehospital setting and is required for paramedic certification. Topics include appropriate interventions/treatments for disorders/diseases/injuries affecting the following systems: respiratory, neurological, abdominal/gastrointestinal, endocrine, genitourinary, musculoskeletal, and immunological as well as toxicology, infectious diseases and diseases of the eyes, ears, nose and throat. Upon completion, students should be able to recognize, assess and manage the care of frequently encountered medical conditions based upon initial patient assessment. Prerequisites: Take All: EMS 122 and EMS 130

**EMS 260. Trauma Emergencies. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides in-depth study of trauma including pharmacological interventions for conditions frequently encountered in the prehospital setting and is required for paramedic certification. Topics include an overview of thoracic, abdominal, genitourinary, orthopedic, neurological, and multi-system trauma, soft tissue trauma of the head, neck, and face as well as environmental emergencies. Upon completion, students should be able to recognize and manage trauma situations based upon patient assessment and should adhere to standards of care. Prerequisites: Take All: EMS 122 and EMS 130

**EMS 270. Life Span Emergencies. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers medical/ethical/legal issues and the spectrum of age-specific emergencies from conception through death required for paramedic certification. Topics include gynecological, obstetrical, neonatal, pediatric, and geriatric emergencies and pharmaceutical therapeutics. Upon completion, students should be able to recognize and treat age-specific emergencies. Prerequisites: Take All: EMS 122 and EMS 130

**EMS 280. EMS Bridging Course. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to bridge the knowledge gained in a continuing education paramedic program with the knowledge gained in an EMS curriculum program. Emphasis is placed on patient assessment, advanced electrocardiography utilizing the twelve-lead ECG, advanced pharmacology, the appropriate intervention and treatment of multi-system injuries/disorders, ethics, and NC laws and rules. Upon completion, students should be able to perform advanced patient assessment and practice skills.

**EMS 285. EMS Capstone. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides an opportunity to demonstrate problem-solving skills as a team leader in simulated patient scenarios and is required for paramedic certification. Emphasis is placed on critical thinking, integration of didactic and psychomotor skills, and effective performance in simulated emergency situations. Upon completion, students should be able to recognize and appropriately respond to a variety of EMS-related events. Prerequisites: Take All: EMS 220, EMS 250, and EMS 260

### Engineering (EGR)

**EGR 110. Introduction to Engineering Technology. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces general topics relevant to engineering technology. Topics include career assessment, professional ethics, critical thinking and problem solving, usage of college resources for study and research, and using tools for engineering computations. Upon completion, students should be able to choose a career option in engineering technology and utilize college resources to meet their educational goals.

**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.
Corequisites: Take ACA 122 Take MAT 171 MAT 172 or MAT 271

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 EGR 150, 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, distributive 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 EGR 150, and PHY 251
Corequisites: Take MAT 272

EGR 228. Intro to Solid Mechanics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an introduction to engineering theory of deformable solids and applications. Topics include stress and deformation resulting from axial, torsion, and bending loads; shear and moment diagrams; Mohr's circle of stress; and strain and buckling of columns. Upon completion, students should be able to analyze solids subject to various forces and design systems using a variety of materials.
Prerequisites: Take EGR 220

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 MAT 121 or MAT 171 Minimum grade C

EGR 251. Statics. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the concepts and principles of statics. Topics include systems of forces and moments on structures in two- and three-dimensions in equilibrium. Upon completion, students should be able to analyze forces and moments on structures. This course covers the concepts and principles of statics. Topics include systems of forces and moments on structures in two- and three-dimensions in equilibrium. Upon completion, students should be able to analyze forces and moments on structures.

EGR 252. Strength of Materials. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the principles and concepts of stress analysis. Topics include centroids, moments of inertia, shear/moment diagrams, and stress and strain. Upon completion, students should be able to perform a stress and strain analysis on structural components. This course covers the principles and concepts of stress analysis. Topics include centroids, moments of inertia, shear/moment diagrams, and stress and strain. Upon completion, students should be able to perform a stress analysis and strain analysis on structural components.
Prerequisites: Take EGR 251

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: Take One: DRE 098 ENG 002 BSP 4002

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. English Composition.
Prerequisites: Take ENG 111 with a minimum grade of C

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; Writing Intensive Elective for UNCC.
Prerequisites: Take ENG 111 Minimum grade C

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 is on poetry and fiction; some attention will be devoted to creative non-fiction; This course is a Writing Intensive Elective for UNCC.
Prerequisites: Take ENG 125

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. ENG 231 is an introduction to traditional and nontraditional writers, significant literary trends and movements, literary terminology, and a variety of critical approaches; Students seeking to take this course to meet the college transfer humanities requirement may also take ENG 232 (no ENG prerequisites).
Prerequisites: Take ENG 112 ENG 113 or ENG 114 Minimum grade C

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. ENG 232 is an introduction to traditional and nontraditional writers, significant literary trends and movements, literary terminology, and a variety of critical approaches; Students seeking to take this course to meet the college transfer humanities requirement may also take ENG 231 (no ENG 231 prerequisite).
Prerequisites: Take ENG 112 ENG 113 or ENG 114 Minimum grade C

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 ENG 112 ENG 113 or ENG 114 Minimum grade C

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 ENG 112 ENG 113 or ENG 114 Minimum grade C

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 ENG 112 ENG 113 or ENG 114 Minimum grade C

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 ENG 112 ENG 113 or ENG 114 Minimum grade C

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 ENG 112 ENG 113 or ENG 114 Minimum grade C
**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 EFL 084 EFL 094 Minimum grade C Corequisites: Take EFL 181

**EFL 112. English for Internations 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 EFL 064 EFL 074 Minimum grade C 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 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 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 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 110 and ENV 110
• 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 completions, students should be able to develop conservation plans for sustainable use of major land resources.
Prerequisites: Complete one of the following options: Take ENV 110 with a minimum grade of C
Take BIO 140 BIO 140A with a minimum grade of C
Take ENV 120 with a minimum grade of C
Take GEL 120 with a minimum grade of C
Take PHS 130 with a minimum grade of C

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

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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 reference 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 introduces local governmental financial principles and practices. Topics include budget preparation and justification, revenue policies, statutory requirements, audits, and the economic climate. Upon completion, students should be able to comprehend the importance of finance as it applies to the operations of a department.

FIP 229. Fire Dynamics and Combustion. 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 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 operational 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 concepts 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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002
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 FRE 181 Minimum grade C
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.
Prerequisites: Take FRE 111 FRE 181 Minimum grade C
Corequisites: Take FRE 112

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**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 FRE 182 Minimum grade C
Corequisites: Take FRE 281

**FRE 212. Intermediate French II. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a continuation of FRE 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 FRE 211 FRE 281 Minimum grade C
Corequisites: Take FRE 282

**FRE 281. French 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 French language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of 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 FRE 112 FRE 182 with a minimum grade of C
Corequisites: Take FRE 211
FRE 282. French 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 French language. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.
Prerequisites: Take FRE 211 and FRE 281 with a minimum grade of C

Geographic Information Systems (GIS)

GIS 111. Introduction to GIS. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the hardware and software components of a Geographic Information System and reviews GIS applications. Topics include data structures and basic functions, methods of data capture and sources of data, and the nature and characteristics of spatial data and objects. Upon completion, students should be able to identify GIS hardware components, typical operations, products/applications, and differences between database models and between raster and vector systems.

GIS 112. Introduction to GPS. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an overview of Global Positioning Systems (GPS). Topics include the theory, implementation, and operations of GPS, as well as alternate data source remote sensing. Upon completion, students should be able to demonstrate an understanding of the fundamentals of GPS.

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.

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 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-0.0. 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
GEO 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.
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:Take GIS 111 and GIS 240
Take GIS 111 and 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. GEO 111 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.

Geology (GEL)

GEL 111. Geology. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces basic landforms and geological processes. Topics include rocks, minerals, volcanoes, fluvial processes, geological history, plate tectonics, glaciers, and coastal dynamics. Upon completion, students should be able to describe basic geological processes that shape the earth. This course introduces basic landforms and geological processes. Topics include rocks, minerals, volcanoes, fluvial processes, geological history, plate tectonics, glaciers, and coastal dynamics. Upon completion, students should be able to describe basic geological processes that shape the earth. This course has been approved to satisfy the comprehensive articulation agreement general education core requirement in natural sciences/Mathematics.
GEL 113. Historical Geology. 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: GEL 111 or GEL 120
GEL 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.
GEL 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 GEL 111, GEL 120, or PHS 130 Minimum grade C

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 097 DRE 098 Take EFL 111 EFL 112 with a minimum grade of C Take ENG 111 with a minimum grade of C Take ENG 002
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 and GER 181 Minimum grade C
Corequisites: Take GER 182

GER 161. Cultural Immersion. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course explores German culture through intensive study on campus and field experience in a host country or area. Topics include an overview of linguistic, historical, geographical, sociopolitical, economic and/or artistic concerns of the area visited. Upon completion, students should be able to exhibit first-hand knowledge of issues pertinent to the host area and demonstrate an understanding of cultural differences.
Prerequisites: Take GER 111 Minimum grade C

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.
Prerequisites: Take GER 111 and GER 181 Minimum grade C

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 and GER 182 Minimum grade C
Corequisites: Take GER 281

GER 212. Intermediate German II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a continuation of GER 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 GER 211 and GER 281 Minimum grade C
Corequisites: Take GER 282

GER 281. German 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 German language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of 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 GER 112 and GER 182 Minimum grade C

GER 282. German 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 German language. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.
Prerequisites: Take GER 211 and GER 281 Minimum grade C

Gerontology (GRO)

GRO 120. Gerontology. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the psychological, social, and physical aspects of aging. Emphasis is placed on the factors that promote mental and physical well-being. Upon completion, students should be able to recognize the aging process and its psychological, social, and physical aspects.
Graphic Arts (GRA)

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 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 140. Graphic Arts Imaging. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the use of photographic and electronic imaging techniques in the printing industry. Topics include exposure control and manipulation for a variety of process photography procedures and emerging electronic imaging techniques. Upon completion, students should be able to create line, special effect, and halftone images by both conventional and computer imaging methods.

GRA 151. Computer Graphics I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the use of hardware and software for production and design in graphic arts. Topics include graphical user interface and current industry uses such as design, layout, typography, illustration, and imaging for production. Upon completion, students should be able to understand and use the computer as a fundamental design and production tool.

GRA 152. Computer Graphics II. 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 select and utilize appropriate software for design and layout solutions.
Prerequisites: Take GRA 151

GRA 153. Computer Graphics III. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is a continuation of GRA 152. Emphasis is placed on advanced computer graphics hardware and software applications. Upon completion, students should be able to demonstrate competence in selection and utilization of appropriate software for specialized applications.
Prerequisites: Take GRA 152

GRA 154. Computer Graphics IV. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is a continuation of GRA 153. Emphasis is placed on 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.
Prerequisites: Take GRA 153

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 intermediate 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.
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.

**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 142 GRD 152

**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 on the manipulation and organization of elements. Upon completion, students should be able to apply design principles and visual elements to projects.
Corequisites: Take GRD 151 or GRA 151

**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.
Corequisites: Take GRD 151

**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.
Corequisites: Take GRD 141

**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 141
Corequisites: Take GRD 142
GRD 167. 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 GRD 151, or GRA 151
Take GRD 152

GRD 188. Graphic Design for Web I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the application of graphic design principles to web sites and graphics for web/mobile device delivery. Emphasis is placed on visual communication and presentation principles applied to web sites, including page layout, typography, color theory, navigation, responsive design, and image optimization. Upon completion, students should be able to apply the principles of design in the creation of full and mobile websites.
Prerequisites: Take GRD 141

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 GRD 110 GRD 152
Corequisites: Take GRD 265

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. The course emphasizes the business of design and design for business.
Prerequisites: Take GRD 111 GRD 241
Corequisites: Take GRD 265

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 GRD 152
Corequisites: Take GRD 241

GRD 271. Multimedia Design I. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the fundamentals of multimedia design and production for computer-related presentations. Topics include interface design, typography, storyboarding, scripting, simple animation, graphics, digital audiovideo, and copyright issues. Upon completion, students should be able to design and produce multimedia presentations.
Prerequisites: Take One: GRD 151 or GRA 151

GRD 273. New Media Design Communication. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course is designed to cover new media visual design communication, as well as computer-related interactivity production for implementation and presentation. Topics include graphic design for user interactivity, data visualization and motion graphics, social media, digital imaging for user content, mobile devices, and global information services, and creative direction for imaging, 2D and 3D modeling media design solutions. Upon completion, students should be able to design and produce various complex media with computer software imaging technologies that enable digital interactivity as well as motion graphics for global information services.
Prerequisites: Complete one of the following options: Take DES 135 and GRD 271
Take GRD 142 and GRD 271

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/advertising or graphic 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: Take GRD 242 GRD 282 GRD 288 GRD 131
Take ENG 111 COM 231 ART 115 MAT 110

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 GRD 241 GRD 265
Corequisites: Take GRD 242
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: Take GRD 142 and GRA 152
Take GRD 142 and GRA 152
Take GRD 241

GRA 121
Take GRD 142 and GRA 152
Take GRD 241

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.

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 concepts and techniques for managing and maintaining manual and electronic health records (EHR). Topics include structure and use of health information including data collection and analysis, data sources/sets, archival systems, and quality and integrity of healthcare data. Upon completion, students should be able to monitor and apply system-wide clinical documentation guidelines and comply with regulatory standards.

HIT 122. Professional Practice Experience I. 1.0 Credit. Class-0.0. Clinical-3.0. 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.
Corequisites: Take HIT 220

HIT 124. Professional Practice Experience II. 1.0 Credit. Class-0.0. Clinical-3.0. 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 MAT 110 Minimum grade C
Corequisites: Take HIT 220

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 Minimum grade C

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, charagemaster 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 214 Minimum grade 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: Complete one of the following options: Take HIT 114 CIS 110 with a minimum grade of C
Take HIT 114 CIS 111 with a minimum grade of C

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 227. Informatics Project Management. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. 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 Minimum grade C

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 Minimum grade C
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 laced 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 manufacturers’ 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 the operation and design of air 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 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 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 097 DRE 098 Take EFL 111 EFL 112 with a minimum grade of C Take ENG 111 with a minimum grade of C Take ENG 002

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 097 DRE 098 Take EFL 111 EFL 112 with a minimum grade of C Take ENG 111 with a minimum grade of C Take ENG 002
Courses / Course Registration

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

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 EFL 111 EFL 112 with a minimum grade of C
# Take ENG 111 with a minimum grade of C
# Take ENG 002 From rule RMINP2

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

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 165. Twentieth-Century World. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course includes the major developments, issues, and ideas in twentieth-century world history. Emphasis is placed on contrasting political systems, the impact of science and technology, and the philosophical temperament of twentieth-century people. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the twentieth century.
Prerequisites: Complete one of the following options:Take DRE 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

HIS 220. 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 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.

HIS 221. 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 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 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 from the Colonial period to the present. 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 Colonial period to the present. 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 226. 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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

HIS 227. Native American History. 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.

304
HIS 228. History of the South. 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 229. History of the Old South. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a study of the development of 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 ante bellum South.

HIS 230. 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 the Civil War era to the present. Topics include Reconstruction, the emergence of the New South, segregation, the Civil Rights movement, and current issues and challenges facing the South. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the New South.

HIS 231. Recent American History. 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 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, ante bellum, 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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

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 161 Minimum grade 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, cultural 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.

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 pest and disease problems 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 231. 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 read landscape design blueprints, develop cost estimates, and implement the design.
Prerequisites: Take HOR 112

HOR 213. Advanced Equipment Operations and Maintenance. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the culture and maintenance of trees and shrubs. 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 and develop a management plan, and price and present that plan.
Prerequisites: Take One: HOR 110 or HOR 116

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 219. Insects & Diseases. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers 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 211. Landscaping Fundamentals. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers insect and disease identification and control, and design and management requirements for interior plants. Upon completion, students should be able to review, design, install, and manage plants in interior settings.

HOR 255. Arboriculture Practices. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers insect and disease identification and control, and design and management requirements for interior plants. Upon completion, students should be able to properly prune trees and shrubs and perform arboricultural practices.

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.

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.  
Corequisites: Take CUL 110 CUL 111

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

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 alcohol service 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/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 275. Leadership-Hospitality. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces leadership traits, styles, and the roles and responsibilities of successful hospitality leaders while developing the student's personal leadership skills. Topics include formal and informal hospitality leadership; defining effective and ineffective leadership behavior; and leadership organizational change and planning within the hospitality industry. Upon completion, students will be able to apply appropriate leadership actions in real-world situations ranging from local to global hospitality environments.

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 Minimum grade C

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-2.0. 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 Minimum grade C

HSE 225. Crisis Intervention. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers 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 ENG 111

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. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-Major and/or elective course requirement.
Prerequisites: Complete one of the following options: Take DRE 097 or DRE 098
Take ENG 111 with a minimum grade of C
Take ENG 002

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 ancient through early modern times. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied. This course has been approved to satisfy figures and cultural contributions of the periods studied.
Prerequisites: Complete one of the following options: Take DRE 097 or DRE 098
Take ENG 111 with a minimum grade of C
Take ENG 002

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: Complete one of the following options: Take DRE 097 or DRE 098
Take ENG 111 with a minimum grade of C
Take ENG 002

Industrial Science (ISC)

ISC 110. Workplace Safety. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the basic concepts of workplace safety. Topics include fire, ladders, lifting, lock-out/tag-out, personal protective devices, and other workplace safety issues related to OSHA compliance. Upon completion, students should be able to demonstrate an understanding of the components of a safe workplace.

ISC 112. Industrial Safety. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the principles of industrial safety. Emphasis is placed on industrial safety and OSHA regulations. Upon completion, students should be able to demonstrate knowledge of a safe working environment and OSHA compliance.

ISC 115. Construction Safety. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the basic concepts of construction site safety. Topics include ladders, lifting, lock-out/tag-out, personal protective devices, scaffolds, and above/below ground work based on OSHA regulations. Upon completion, students should be able to demonstrate knowledge of applicable safety regulations and safely participate in construction projects.
ISC 131. Quality Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a study and analysis of the aspects and implications of quality management that lead to customer satisfaction through continuous quality improvement. Topics include Total Quality Management, ISO 9000, organizing for quality, supplier/vendor relationships, and the role of leadership in quality management. Upon completion, students should be able to demonstrate an understanding of quality management concepts and techniques.

ISC 212. Metrology. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the principles and techniques of modern practical metrology and inspection methods. Topics include precision, accuracy, standards, and calibration. Upon completion, students should be able to perform various roles within a metrology system.

ISC 220. Lean Manufacturing. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces students to the concept of lean manufacturing as a means of waste reduction. Topics include the examination of manufacturing operations and the incorporation of lean techniques to reduce waste, cost, time, and materials in manufacturing processes. Upon completion, students should be able to demonstrate an understanding of lean manufacturing systems and how they benefit the environment and business.

ISC 292. Selected Topics in Manufacturing Engineering Technology. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

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.

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. Introduction to Programming and 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 use top-down algorithm design and implement algorithmic solutions in a programming language.
Prerequisites: Complete one of the following options: Take DMA 010, DMA 020, DMA 030, and DMA 040
Take MAT 121
Take 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

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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.

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 INT 110
Take ECO 151, ECO 251 or ECO 252
Prerequisites: Take ASL 211 Minimum grade C and English.

Consecutively interpret non-technical, interactive messages between ASL and English. Upon completion, students should be able to develop cognitive processes associated with interpreting, listening, short-term memory, semantic equivalence, visual/auditory processing, thought organization, and logic. Emphasis is placed on interpreting texts which serve an informational, hortatory, and/or procedural function. Upon completion, students should be able to apply the principles of the protocol of consecutive interpreting.

Prerequisites: Take IPP 161 Minimum grade C

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 ASL 212 Minimum grade C

 Interpreter Preparation (IPP)

**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 special 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: Complete one of the following options: Take DRE 097 and DRE 098
Take ENG 111 with a minimum grade of C
Take ENG 002

**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 211 Minimum grade 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 Minimum grade C

**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 212 IPP 111 Minimum grade C Passing ASLPI score

**IPP 154. Clinical Interpreting. 5.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides additional experience in interpreting a variety of interview, meeting, and small conference situations. Emphasis is placed on demonstrating ASL discourse features.

Prerequisites: Take IPP 152 IPP 153 Minimum grade C

**IPP 155. Consecutive Interpreting. 5.0 Credits.** Class-1.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides additional experience in interpreting a variety of interview, meeting, and small conference situations. Emphasis is placed on demonstrating ASL discourse features.

Prerequisites: Take IPP 152 IPP 153 Minimum grade C

**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 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 Minimum grade C

Corequisites: Take IPP 240

**IPP 222. Simultaneous Interpreting II. 5.0 Credits.** Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0

This course provides additional experience in interpreting a variety of situations which occur during basic expository presentations. Emphasis is placed on interpreting texts which serve an informational, hortatory, and/or procedural function. Upon completion, students should be able to apply the appropriate linguistic and cultural adjustments necessary to achieve an equivalent register in the interpretation.

Prerequisites: Take IPP 221 IPP 240 Minimum grade C

**IPP 224. ASL to English Interpretation. 2.0 Credits.** Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is designed to improve skills in ASL to English interpretation. Emphasis is placed on receptive skills, equivalent messages, grammatically correct English, and appropriate content, mood, and register. Upon completion, students should be able to generate appropriate English equivalents and apply appropriate linguistic and/or cultural adjustments.

Prerequisites: Take IPP 152
JOU 110. Introduction to Journalism. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course presents a study of journalistic news, feature, and sports writing. Emphasis is placed on basic news writing techniques and on related legal and ethical issues. Upon completion, students should be able to gather, write, and edit news, feature, and sports articles. This course is a Writing Intensive elective for UNCC.
Prerequisites: Take ENG 111 with a minimum grade C

JOU 117. Feature/Editorial Writing. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the basics of persuasive writing for community newspapers and other print media. Emphasis is placed on writing features, reviews, and editorials including audience analysis, appropriate language, effective supporting details, completeness, and accuracy. Upon completion, students should be able to write effective feature stories, reviews, and editorials.
Prerequisites: Complete one of the following options: Take DRE 097 and DRE 098
Take ENG 111 with a minimum grade C
Take JOU 110

LEX 110. Intro to Paralegal Study. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the paralegal profession and the legal system, and an emphasis is placed on the role of professional and legal ethics. Topics include regulations, ethics, case analysis, legal reasoning, career opportunities, professional organizations, terminology and other related topics. Upon completion, students should be able to explain the role of a paralegal and identify the skills, knowledge, and ethics required of paralegals.
Prerequisites: Take ENG 111 with a minimum grade C

LEX 120. Legal Research/Writing I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the techniques of legal research and writing. Emphasis is placed on locating, analyzing, applying, and updating sources of law; effective legal writing, including proper citation; and the use of electronic research methods. Upon completion, students should be able to perform legal research and writing assignments using techniques covered in the course.
Prerequisites: Take ENG 111 with a minimum grade C

LEX 121. Legal Research/Writing II. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers advanced topics in legal research and writing. Topics include more complex legal issues and assignments involving preparation of legal memos, briefs, and other documents and the advanced use of electronic research methods. Upon completion, students should be able to perform legal research and writing assignments using techniques covered in the course.
Prerequisites: Take ENG 111 and LEX 120 with a minimum grade C
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 ENG 111 and LEX 140 with a minimum grade of C

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 151. Commercial Law II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is a continuation of LEX 150 and covers advanced topics in Business and Commercial Law. Topics include agency and employment, insurance, computer law, intellectual property, personal property and bailment, corporate organizations and bankruptcy. Upon completion, students will understand and be able to apply legal principles governing these topics and be able to draft a variety of financial instruments.
Prerequisites: Take LEX 150

LEX 160. Criminal Law & Procedure. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. 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
Corequisites: Take LEX 120

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 with a minimum grade of C

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 with a minimum grade of C

LEX 270. Law Office Management/Technology. 2.0 Credits. Class-1.0. 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 establish and maintain various law office systems, monitor case progress, and supervise non-lawyer personnel.

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 draft letters to clients, opposing counsel, government entities, and insurance companies and prepare the settlement brochure. This course will place emphasis on legal editing, proofreading and the proper use of grammar.
Prerequisites: Take LEX 120 with a minimum grade of C

LEX 273. North Carolina Certified Paralegal Review Course. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an overview of the topics assessed on the North Carolina Certified Paralegal (NCCP) Exam. Topics include Wills, Trusts, and Estates; Family Law; Civil Litigation; Real Property; Commercial Law; Ethics; legal research, grammar and writing. Upon completion, students should be prepared to sit for the NCCP exam.
Prerequisites: Take All: LEX 121 and LEX 141

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 LEX 110, LEX 120, and LEX 140
Take ENG 111 with a minimum grade of C

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 LEX 110, LEX 120, and LEX 140
Take ENG 111 with a minimum grade of C

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, and 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 288. 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 LEX 110, LEX 120, and LEX 140 with a minimum grade of C
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 DRE 097 DRE 098 Take EFL 111 EFL 112 Take ENG 111 Take ENG 002

LOG 120. Global Logistics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course examines logistics operations, processes, and modes of transportation in an interdependent world economy. Emphasis is placed on freight forwarding operations, analyzing and selecting transportation modes, and processing of import/export documentation. Upon completion, students should be able to arrange and coordinate the transportation of products globally.
Prerequisites: Take LOG 110

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 097 DRE 098 Take EFL 111 EFL 112 Take ENG 111 Take ENG 002

LOG 210. Fleet Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the management of transportation, fleet operations, and safety. Emphasis is placed on DOT safety regulations in the hiring, training, and supervision of drivers in transportation. Upon completion, students should be able to write a safety program for drivers involved in interstate commerce following DOT regulations.
Prerequisites: Take LOG 110

LOG 211. Distribution Management. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the functions, techniques, and tools utilized in warehousing and distribution centers and their role in business and logistics. Emphasis is placed on warehouse and distribution center management, operations, productivity, software systems, picking, automation, cross docking, safety, security, material handling, benchmarking, and cost. Upon completion, students should be able to describe the role of warehouses and distribution centers, apply industry principles and terminology, and understand distribution productivity measures.
Prerequisites: Take LOG 110

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 describe the supply chain units and describe the materials management processes.
Prerequisites: Take LOG 110

LOG 220. Logistics Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the management of the movement and storage of goods and analysis of total costs involved. Emphasis is placed on the monitoring of inventory using automated systems, managing the storage function, warehousing, and distribution. Upon completion, students should be able to describe warehousing and facility layouts, identify material handling methods, and apply inventory control procedures. LOG 220 is a unique concentration requirement of the logistics management concentration in the business administration program.
Prerequisites: Take LOG 110

LOG 230. Transportation Management. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the function of shippers, carriers, and citizens in the transportation industry. Emphasis is placed on negotiating price and service requirements in the movement of goods, identifying areas of carrier liability, and the methods for processing claims. Upon completion, students should be able to compare common carriers and company operated transportation for service and cost, interpret pricing structures, and determine carrier liability. LOG 230 is a requirement of the Logistics Management concentration in the Business Administration program.
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-2.0. 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 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 course emphasizes engine lathe setup 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 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. This course 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 118. Machine Shop Basic. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-3.0. Work-0.0
This course will introduce the fundamentals of measuring tools, tolerances and the basic set-up and operations of drill presses, lathes, and milling machines. Emphasis is placed on manufacturing standards and procedures used in welding, automotive, and engineering environments. Upon completion, students should be able to use measuring tools, perform basic machine operations, and apply manufacturing standards.
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 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 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 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 basic principles 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.
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: Complete one of the following options: Take MAC 111AB, MAC 111BB, and MAC 114 with a minimum grade of C
Take MAC 111AB, MAC 111BB, and ISC 212 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 122, MAC 124, and MAC 142 Minimum grade 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 MAT 110 or MAT 121

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 122

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 milling 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 124

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 232

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 122

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 124

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 Minimum grade 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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002
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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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.
Prerequisites: Complete one of the following options: Take DRE 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

MKT 222. Visual Merchandising. 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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

MKT 223. 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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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.
Prerequisites: Complete one of the following options: Take DRE 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002
Take MKT 120 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.
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 DRE 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

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:
- DMA 010, DMA 020, and DMA 030
- DMA 025
- MAT 003
- BSP 4003

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: Complete one of the following options:
- DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DMA 060
- DMA 010, DMA 020, DMA 030, DMA 045 and DMA 060
- DMA 025, DMA 040, DMA 050, and DMA 060
- DMA 025, DMA 045, and DMA 060
- MAT 003
- BSP 4003
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 161 MAT 171 or MAT 175 Minimum grade C

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 045, and DRE 098
- DMA 025, DMA 040, DMA 050, and DRE 098
- DMA 025, DMA 045, and DRE 098
- MAT 003 and ENG 002

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 One Set:
- DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DRE 098
- DMA 010, DMA 020, DMA 030, DMA 045, and DRE 098
- DMA 025, DMA 040, DMA 050, and DRE 098
- DMA 025, DMA 045, and DRE 098
- MAT 003 and ENG 002

MAT 167. Discrete Mathematics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to develop problem-solving and reasoning skills using an algorithmic approach. Topics include sets, number theory, numeration systems, linear programming, traditional and propositional logic, truth tables, Venn diagrams, elementary proofs, and Boolean algebra. Upon completion, students should be able to apply logic and other mathematical concepts to solve a variety of problems. This course is a study of discrete mathematics with emphasis on applications. Topics include number systems, combinations/Permutations, mathematical logic/proofs sets/counting, boolean algebra, mathematical induction, trees/ graphs, and algorithms.
Prerequisites: Take One: MAT 121 or MAT 171

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
- DMA 010, DMA 020, DMA 030, DMA 045, DMA 060, DMA 070, and DMA 080
- DMA 010, DMA 010

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 Minimum grade C

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 172 or MAT 175 Minimum grade C
MAT 263. Brief Calculus. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to introduce concepts of differentiation and integration and their applications to solving problems. Topics include 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 MAT 171 Minimum grade C

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.
Prerequisites: Take MAT 171 Minimum grade C

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 Minimum grade C

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 271 Minimum grade C

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 or MAT 273 Minimum grade C

Math Skills Support (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.

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.

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.
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.

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.

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.

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.

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.

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.

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 003. Transition Math. 3.0 Credits.  
Class-0.0. Clinical-0.0. Lab-6.0. Work-0.0  
This course provides an opportunity to customize foundational math content in specific math areas and will include developing a growth mindset. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in their gateway level math courses by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

MAT 010. Math Measurement & Literacy Su. 1.0 Credit.  
Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course provides an opportunity to customize foundational math content specific to Math Measurement & Literacy. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Math Measurement & Literacy by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.
MAT 021. Algebra/Trigonometry I Support. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to customize foundational math content specific to Algebra and Trigonometry I. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Algebra/Trigonometry I by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

MAT 043. Quantitative Literacy Support Class. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to customize foundational math content specific to Quantitative Literacy. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Quantitative Literacy by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

MAT 052. Statistical Methods I Support. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an opportunity to customize foundational math content specific to Statistical Methods I. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Statistical Methods I by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

MAT 071. Precalculus Algebra Support. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-4.0. Work-0.0
This course provides an opportunity to customize foundational math content specific to Precalculus Algebra. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in mathematics. Upon completion, students should be able to build a stronger foundation for success in Precalculus Algebra by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

MAT 100. 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:
- DMA 010, DMA 020, and DMA 030
- DMA 025
- MAT 003
- BSP 4003

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: Complete one of the following options:
- DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DMA 060
- DMA 010, DMA 020, DMA 030, DMA 045 and DMA 060
- DMA 025, DMA 040, DMA 050, and DMA 060
- DMA 025, DMA 045, and DMA 060
- MAT 003
- BSP 4003

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 161 MAT 171 or MAT 175 Minimum grade C

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 045, and DRE 098
- DMA 025, DMA 040, DMA 050, and DRE 098
- DMA 025, DMA 045, and DRE 098
- MAT 003 and ENG 002
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 One Set:
• DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DRE 098
• DMA 010, DMA 020, DMA 030, DMA 045, and DRE 098
• DMA 025, DMA 040, DMA 050, and DRE 098
• DMA 025, DMA 045, and DRE 098
• MAT 003 and ENG 002

MAT 167. Discrete Mathematics. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course is designed to develop problem-solving and reasoning skills using an algorithmic approach. Topics include sets, number theory, numeration systems, linear programming, traditional and propositional logic, truth tables, Venn diagrams, elementary proofs, and Boolean algebra. Upon completion, students should be able to apply logic and other mathematical concepts to solve a variety of problems. This course is a study of discrete mathematics with emphasis on applications. Topics include number systems, combinations/permutations, mathematical logic/proofs sets/counting, boolean algebra, mathematical induction, trees/graphs, and algorithms.
Prerequisites: Take One: MAT 121 or MAT 171

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
• DMA 010, DMA 020, DMA 030, DMA 045, DMA 060, DMA 070, and DMA 080
• 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
• DMA 010, DMA 020, DMA 030, DMA 045, DMA 060, DMA 070, and DMA 080

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 Minimum grade C

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 172 or MAT 175 Minimum grade C

MAT 263. Brief Calculus. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to introduce concepts of differentiation and integration and their applications to solving problems. Topics include 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 MAT 171 Minimum grade C

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.
Prerequisites: Take MAT 172 or MAT 175 Minimum grade C

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 Minimum grade C

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 Minimum grade C

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 or MAT 273 Minimum grade C

MEC 100. Introduction to CAD/CAM. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces CAD/CAM. Emphasis is placed on transferring part geometry from CAD to CAM for the development of a CNC-ready program. Upon completion, students should be able to use CAD/CAM software to produce a CNC program.
Prerequisites: Take DFT 154

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 cam, cable, gear train, differential, screw, belt, pulley, shaft, lever, lubricant, 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, quenching, 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.
Prerequisites: Take ENG 111 ENG 112 or ENG 113

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 PHY 151 or PHY 251

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 180
Take MEC 210
Take DFT 154 or DFT 170
Corequisites: Take MEC 130

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.
Prerequisites: Take PHY 131 PHY 151 or PHY 251

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.
Prerequisites: Complete one of the following options: Take EGR 250 and EGR 251

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.
Prerequisites: Take PHY 131 or PHY 151 or MAT 122 or MAT 172

MEC 292. Selected Topics in Mechanical Engineering Technology. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0

MEC 293. Selected Topics in Mechanical Engr. Tech Engineering Technology. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0

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.
Prerequisites: Take MED 121 Minimum grade C

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 134. Medical Transcription. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides the basic knowledge, understanding, and skills required to complete medical reports and transcribe medical dictation. Emphasis is placed on correct punctuation, capitalization, and spelling. Upon completion, students should be able to demonstrate competence in medical transcription.
Prerequisites: Take MED 121 MED 116 Minimum grade C

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 183. Electronic Medical Records I. 5.0 Credits. Clinical-3.0. Lab-2.0. Work-0.0
This course introduces students to the design and creation of Electronic Medical Records using a variety of EMR models. Topics include historical background of electronic medical records, legal/ethical principles inherent to healthcare information, patient flow, scheduling, and processing and using the EMR. Upon completion, students should be able to discuss the history of EMR, identify emerging issues, apply ethical principles, and use basic modules of an EMR.
Corequisites: Take One: CIS 110, CIS 111 or OST 131

MED 232. Medical Insurance Coding. 2.0 Credits. 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. Clinical-3.0. Clinical-1.0. 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 procedures. Upon completion, students should be able to demonstrate advanced competence in selected exam room procedures.
Prerequisites: Take MED 140 Minimum grade C
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.
Prerequisites: Take MLT 120 Minimum grade C

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.
Prerequisites: Take MLT 126 Minimum grade C
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.
Prerequisites: Take CHM 130 CHM 130A

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 competence in career entry-level areas and be prepared for the national certification examination.

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.

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. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an introduction to the musical elements of melody, rhythm, and harmony. Emphasis is placed upon the interaction of these elements through fundamental analysis and an introduction to part writing. Upon completion, students should be able to demonstrate understanding of melodic voice leading, rhythmic functions within simple and compound meters, and simple harmonic progressions.
Prerequisites: Take MUS 111

MUS 122. Music Theory II. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a comprehensive study of diatonic harmony. Emphasis is placed on voice leading tasks, part writing, and analysis using various labeling systems. Upon completion, students should be able to demonstrate harmonic principles through four-voice part writing, recognize and label non-harmonic tones, analyze chords using Roman numerals, figured bass, and lead sheet symbols, and classify small-scale phrase structure and cadence types.
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 One: MUS 111 or MUS 121

MUS 125. Aural Skills I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an introduction to the fundamentals in aural skills. Emphasis is placed on the study of basic melodies, harmonies, and rhythms through sight singing and ear training. Upon completion, students should be able to identify diatonic intervals, scales, and chords and perform and dictate simple melodies and rhythmic patterns.

MUS 126. Aural Skills II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides a foundation in aural skills. Emphasis is placed on the development of sight singing and ear training skills in diatonic melody, diatonic harmonic progression, and rhythmic patterns. Upon completion, students should be able to fluently read music in treble and bass clefs; utilize any solmization system while sight singing simple diatonic melodies; identify elementary diatonic chord progressions; perform rhythms in simple and compound meters; and dictate diatonic melodic, diatonic harmonic, and advanced rhythmic patterns.
Prerequisites: Take MUS 125

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.

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 133. Band 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 instrument to gain experience playing in an ensemble. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Audition is required.

MUS 134. Band II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 133. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.
Prerequisites: Take MUS 133

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 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 137. Orchestra 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 orchestral instrument to gain experience playing in an ensemble. Emphasis is placed on orchestral techniques and the study and performance of a variety of styles and periods of orchestral and string ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

MUS 138. Orchestra II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 137. Emphasis is placed on orchestral techniques and the study and performance of a variety of styles and periods of orchestral and string ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.
Prerequisites: Take MUS 137

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.
Corequisites: Take MUS 161
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 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; Audition required.

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 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 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. MUS 142E 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. MUS 142G is Guitar Ensemble II with the prerequisite of MUS 141G.
Prerequisites: Take MUS 141G
Corequisites: Take MUS 162

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 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 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-142B is Baroque Ensemble II.
Prerequisites: Take MUS 141B

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 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 141P

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 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.

MUS 151L. Class Music I Instrumental Rep 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 will focus on preparation and performance presentation.
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 pianist with both vocalist and instrumentalists in a collaborative setting.

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 prepares students for applied private study; Audition required.

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 transportation to selected keys.

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 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. MUS151P is Beginning Piano in which students learn music reading skills required for simple two-hand piano compositions in the keys of C and G major.

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. MUS151T is Theory Ear Training Transfer Prep & Review.

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. MUS151V is Class Vocal I for beginning singers and will focus on correct posture, breathing, support for the resonation vowels, and proper dictation.

MUS 151W. 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 provided an opportunity to learn the International Phonetic Alphabet (IPA) needed to sign vocal music from western classical common practice vocal literature (English & Italian).

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 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 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. MUS 152W focuses on the development of pronunciation techniques for vocalists.

Prerequisites: Take MUS 151W
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 151L

MUS 152I. Class Music II Instrumental Repertoire I. 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. Prerequisites: Take MUS 151I

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 151X

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. Prerequisites: Take MUS 151G

MUS 152. Class Music 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. 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. Prerequisites: Take MUS 161

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 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.

MUS 222. Music Theory IV. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a comprehensive study of chromatic harmony. Emphasis is placed on advanced voice leading tasks, part writing, and analysis of chord progressions, modulations, and large-scale forms. Upon completion, students should be able to identify, notate, and analyze an array of chromatic chords, recognize the function and movement of chromatic harmonies, identify modulatory procedures, analyze formal structures including, but not limited to, binary, ternary, sonata, and rondo. Prerequisites: Take MUS 122
Corequisites: Take MUS 271

MUS 221. Music Theory III. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides an advanced study of chromatic harmony, scale systems, and an introduction to twentieth-century music. Emphasis is placed on advanced part writing and analysis of chromatic harmony and basic twentieth-century compositional and analytical techniques. Upon completion, students should be able to analyze complex chord progressions, advanced modulations, and elemental serial procedures; build an array of synthetic scales; and identify characteristics of twentieth-century topics including, but not limited to, atonality, serialism, minimalism, indeterminacy, and electronic music. Prerequisites: Take MUS 221
Corequisites: Take MUS 272
MUS 225. Aural Skills III. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides advanced aural skills training in diatonicism and basic aural skills training in chromaticism. Emphasis is placed on the development of sight singing and ear training skills in complex rhythmic patterns, diatonic melodies and harmonies, and basic chromaticism. Upon completion, students should be able to utilize any solmization system while sight singing diatonic melodies with functional and non-functional chromaticism, fluently read music in multiple clefs in addition to treble and bass, identify modulations, perform complex rhythmic patterns in various meters, and dictate tonal melodies and harmonies including chromaticism. Prerequisites: Take MUS 224

MUS 226. Aural Skills IV. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides advanced aural skills training in diatonicism and chromaticism. Emphasis is placed on the development of sight singing and ear training skills in chromatic melodies, chromatic harmonies, and complex rhythmic patterns. Upon completion, students should be able to utilize any solmization system while sight singing melodies containing significant chromaticism; fluently read music in multiple clefs, including treble, bass, alto, and tenor; perform and dictate rhythmic patterns in irregular and changing meters; and dictate diatonic and chromatic melodies and harmonic progressions. Prerequisites: Take MUS 225

MUS 231. Chorus III. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
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. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
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 233. Band III. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 134. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Prerequisites: Take MUS 134

MUS 234. Band IV. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 233. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Prerequisites: Take MUS 233

MUS 235. Jazz Ensemble III. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
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. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
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 237. Orchestra III. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 138. Emphasis is placed on orchestral techniques and the study and performance of a variety of styles and periods of orchestral and string ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Prerequisites: Take MUS 138

MUS 238. Orchestra IV. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is a continuation of MUS 237. Emphasis is placed on orchestral techniques and the study and performance of a variety of styles and periods of orchestral and string ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. Prerequisites: Take MUS 237

MUS 241B. Ensemble III (Baroque Ensemble III). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
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 provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Prerequisites: Take MUS 142B

MUS 241D. Ensemble III (Appalachian Dulcimer). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
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. MUS 241D is Appalachian Dulcimer Ensemble III. Prerequisites: Take MUS 142D

MUS 241E. Ensemble III (Early Music Consort III). 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
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 is a continuation of MUS 142E. Prerequisites: Take MUS 142E
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 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 is a continuation of MUS 142P.
Prerequisites: Take MUS 142P

MUS 241. Ensemble III. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0
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

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 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 242P is Piano Ensemble IV with the prerequisite of Mus 241P.
Prerequisites: Take MUS 241P

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 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.
Prerequisites: Take MUS 241G

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.
Prerequisites: Take MUS 241

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.
Prerequisites: Take MUS 152P

MUS 251. 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 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 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.
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.
Prerequisites: Take MUS 152

MUS 251G. 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.
Prerequisites: Take MUS 251P

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, an electronic piano laboratory setting with the prerequisite of Mus 251P.
Prerequisites: Take MUS 251P

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.
Prerequisites: Take MUS 251

MUS 252I. Class Music IV (Instrumental Rep). 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 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 251G 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 251G.
Prerequisites: Take MUS 251
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. Prerequisites: Take MUS 251V

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 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

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

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 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.

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 systems functions at the support level in a single-user environment.

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 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.

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 Minimum grade C

NET 226. Routing & 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 Minimum grade C

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 CTI 110, CTI 120, CTS 115, NET 226, and NOS 231 with a minimum grade of C

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.
Courses / Course Registration

NDE 111. NDE Codes and Specifications. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to instruct the student in the correct reading and interpretation of industrial codes and procedures that are common to the nondestructive examination industry. Topics include American Society of Mechanical Engineers (ASME), American Welding Society (AWS), Naval Air Systems Command (NAVAIR), American Society for Testing and Materials (ASTM) codes and various industry procedures to familiarize the student with wording, structure, and meaning of governing documents that must be followed. Upon completion, students should be able to find relevant sections of the code pertaining to the job, correctly interpret information given, differentiate between required and nonmandatory variables, and apply the information to their job assignment.

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 Examination-UT Level I. 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's SNT-TI-1A Level I, requirements for UT practitioners. Topics include sound 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, select proper equipment, and set-up an instrument for straight beam examinations. Prerequisites: Take one from each set:
• NDE 110
• MAT 121, MAT 171, MAT 172, or MAT 271
Corequisites: Complete one of the following options: Take PHY 110 PHY 110A
Take PHY 121 PHY 122 PHY 131 PHY 132 PHY 133 or PHY 151

NDE 122. Angle Beam Examination. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course introduces the 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 radiation safety and the operating principles of RT. Prerequisites: Take NDE 110, NDE 112, and MAT 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 covers advanced radiographic applications and the ASNT SNT-TI-1A Level II qualification program. Emphasis is placed on darkroom processing, image quality, geometric issues, and exposure calculations. Upon completion, the student 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 132. RT Industrial Applications. 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) 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 141. 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 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. Magnetic Particle 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) 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 testing and their applications.

NDE 152. Eddy Current Testing-1,2. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. 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 NDE 110

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
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 Including Phased Array. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the student to principles of flaw detection and sizing using advanced inspection techniques including phased array. Topics include advanced detection, sizing techniques, and inspection criteria using AWS, ASME API, and FEMA codes. Upon completion, students should be able to select and apply the proper technique to detect and locate length, size, and depth flaws using manual and automated phased array equipment.

Prerequisites: Take NDE 221

NDE 223. 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

NDE 242. Advanced Visual Testing (VT). 3.0 Credits. Class-2.0. 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 153

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/coping, 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 Minimum grade C

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 oxygenation, sexuality, reproduction, grief/loss, mood/affect, behaviors, development, family, health-wellness-illness, communication, 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 Minimum grade C

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/coping, 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 Minimum grade C

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 Minimum grade C

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 Minimum grade C
Corequisites: Take NUR 212AB

NUR 212AB. Health System Concepts. 2.0 Credits. Class-0.0. 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 Minimum grade C

NUR 212BB. Health System Concepts. 2.0 Credits. Class-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 Minimum grade C

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/coping, 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 Minimum grade C
Corequisites: Take NUR 112, NUR 113, NUR 114, NUR 211 and NUR 212

Nursing Assistant (NAS)

NAS 101. Nurse Aide I. 6.0 Credits. Class-3.0. Clinical-3.0. Lab-4.0. Work-0.0
This course includes basic nursing skills required to provide safe, competent personal care for individuals. Emphasis is placed on person-centered care, the aging process, communication, safety/emergencies, infection prevention, legal and ethical issues, vital signs, height and weight measurements, elimination, nutrition, basic restorative care/rehabilitation, dementia, mental health and end-of-life care. Upon completion, students should be able to demonstrate knowledge and skills and be eligible to test for listing on the North Carolina Nurse Aide I Registry.

NAS 102. Nurse Aide II. 6.0 Credits. Class-3.0. Clinical-6.0. Lab-2.0. Work-0.0
This course provides training in Nurse Aide II tasks. Emphasis is placed on the role of the Nurse Aide II, sterile technique and specific tasks such as urinary catheterization, wound care, respiratory procedures, ostomy care, peripheral IV assistive activities, and alternative feeding methods. Upon completion, students should be able to demonstrate knowledge and skills and safe performance of skills necessary to be eligible for listing on the North Carolina Nurse Aide II Registry.
Prerequisites: Take NAS 101
Nutrition (NUT)

**NUT 110. Nutrition. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers basic principles of nutrition and their relationship to human health. Topics include meeting nutritional needs of healthy people, menu modification based on special dietary needs, food habits, and contemporary problems associated with nutrition. Upon completion, students should be able to apply basic nutritional concepts as they relate to health and well being.

**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 (OT) 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 the domain and practice of occupational therapy, practice settings and professional roles, OT terminology, activity analysis, principles, process, philosophies, and frames of reference.
Corequisites: Take BIO 165 or BIO 168 Minimum 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 and use of a wide variety of human occupations including basic activities of daily living, instrumental activities of daily living, rest and sleep, education, work, play, leisure, and social participation. Topics include the understanding of different teaching and learning methods and styles, the language of occupational therapy (OT), OT interventions including preparatory methods and tasks, and restorative and compensatory techniques. Upon completion, students should be able to analyze, design, select, and safely perform occupation related activities that would be therapeutic for various populations across the lifespan.
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 skills related to sensation, movement, vision, perception, cognition, emotions, and performance of basic activities of daily living and instrumental activities of daily living. Topics include physical and psychosocial factors affecting performance; and sensory, range of motion, strength, coordination, cognitive, visual-perceptual, self-care, and work-related assessments. Upon completion, students should be able to gather and share data for the purpose of screening and evaluation, administer selected assessments using appropriate procedures and protocols, and articulate the role of the occupational therapy assistant and occupational therapist in the screening and evaluation process.
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 actions. Upon completion, 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; and apply biomechanical principles to safe and efficient functional mobility activities.
Prerequisites: Take OTA 110
Corequisites: Take One: BIO 165 or 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 the occupational therapy assistant (OTA) and the occupational therapist (OT) in occupational therapy practice and facilitates development of professional behaviors and skills. Topics include professional ethics, supervisory roles, responsibilities, and collaborative professional relationships; credentialing, certification, and licensure; documentation, which communicates the need and rationale for occupational therapy services; therapeutic use of self; and professional identity and professional behaviors; and observation skills. Upon completion, students should be able to demonstrate ethical behavior, discriminate between roles and responsibilities of the OTA and OT, and explain acceptable supervision and documentation.
Corequisites: Take OTA 110

**OTA 150. Pediatric Concepts and Interventions. 3.0 Credits.** Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides knowledge and skills needed for working with children from birth through adolescence. Topics include review of normal growth and development, habitation of healthy habits/routines, the role of occupational therapy with caregivers/providers, understanding of common conditions and developmental delays; and the role of occupation in assessment, intervention planning and implementation with pediatric populations. Upon completion, students should be able to plan, implement, and modify appropriate interventions with children in their context and environment to promote engagement in occupation.
Corequisites: Take PSY 241 and OTA 170

**OTA 161AB. Fieldwork I-Placement 1. 0.5 Credits.** Class-0.0. Clinical-1.5. 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 OTA 140 with a minimum grade of C

**OTA 161BB. Fieldwork I-Placement 1. 0.5 Credits.** Class-0.0. Clinical-1.5. 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 OTA 140 with a minimum grade of C
Corequisites: Take OTA 161AB
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 OTA 140 with a minimum grade of C

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 OTA 140 Minimum grade C
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 OTA 140 Minimum grade C
Corequisites: Take OTA 130

OTA 170. Physical Conditions. 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 various medical conditions to help them achieve participation in life through engagement in occupation. Topics include medical terminology, common conditions, body functions that change with disease processes, applicable theories and principles, assessment and intervention priorities for commonly treated conditions. Upon completion, students should be able to recognize common symptoms, prioritize mental, neuromusculoskeletal and movement related functional problems, while providing for patient safety within the patient's context and environment.
Corequisites: Take OTA 130

OTA 180. Psychosocial Conditions. 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 various psychosocial conditions to help them achieve participation in life through engagement in occupation. Topics include mental health conditions, applicable theories and principles, symptoms of dysfunction, assessment and treatment of individuals, planning and facilitating therapeutic groups, client safety, therapeutic use of self, and psychosocial aspects of practice. Upon completion, students should be able to effectively plan and conduct individual and group interventions for client conditions related to psychosocial dysfunction while recognizing contexts and environments that may also impact occupational performance.
Prerequisites: Take PSY 281 Minimum grade C
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, assistive technology, client mobility, and Americans with Disabilities Act (ADA) issues. Topics include ergonomics seating and positioning, community mobility, use of physical agent modalities, and technology in occupational therapy intervention. Upon completion, students should be able to demonstrate competency fabricating and utilizing orthotic and assistive devices, understanding ADA guidelines, and using technology for engagement in occupation.
Prerequisites: Take OTA 120 OTA 130 Minimum grade C

OTA 240. Professional Skills II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers professional development, supervisory relationships, involvement in the profession, and clinic management skills. Topics include clarification of roles and responsibilities, detailed examination of the supervisory process, participation in professional organizations, and the mechanics of assisting in clinic operations. Upon completion, students should be able to work effectively with a supervisor, plan and implement a professional activity, and perform routine clinic management tasks.
Prerequisites: Take OTA 140 Minimum grade C

OTA 250. Adult Concepts and Interventions. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides knowledge and skills needed for working with adults through the lifespan. Emphasis is placed on identification and discussion of common changes associated with aging, disabilities and chronic diseases affecting this population, assessments and intervention, including developing healthy habits and routines, and the impact on participation in occupation in various settings. Upon completion, students should be able to plan, implement, and modify appropriate interventions with adults in their context and environment to promote engagement in occupations.
Corequisites: Take PSY 241, OTA 170 and OTA 180

OTA 260. Level II Fieldwork 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 occupational therapists or occupational therapy assistant practitioners 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 for entry-level practice established by the curriculum, AOTA guidelines, and regulatory bodies.

OTA 261. Level II Fieldwork Placement 2. 6.0 Credits. Class-0.0. Clinical-18.0. Lab-0.0. Work-0.0
This course provides the final clinical experience under the direct supervision of experienced occupational therapists or occupational therapy assistant practitioners 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 for entry-level practice established by the curriculum, AOTA guidelines, and regulatory bodies.
OT 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 in conjunction with clinical experience. Emphasis is placed on portfolio development and presentation, program evaluation, analysis and synthesis of clinical experiences, and final preparation for the certification examination. Upon completion, students should be able to enter the occupational therapy (OT) workforce with an understanding of themselves as OT professionals, and with supportive documentation demonstrating progress toward meeting competencies set forth by the profession and regulatory bodies. Corequisites: Take One: OTA 260 or OTA 261

Office Systems Technology (OST)

OST 122. Office Computations. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the keypad touch method using the electronic calculator (10-key) and mathematical functions used in office applications. Topics may include budgets, discounts, purchasing, inventory, and petty cash. Upon completion, students should be able to solve a wide variety of numerical problems commonly encountered in an office setting.

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 key 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 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 and Formatting. 3.0 Credits. Class-2.0. 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 with increased speed and accuracy. Upon completion, students should be able to make independent decisions regarding planning, style, and method of presentation. Prerequisites: Take OST 134 Minimum grade C

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 or CIS 110 Minimum grade C

OST 137. Office Applications I. 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. Office Applications II. 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: CIS 110, CIS 111, or OST 137

OST 141. Medical Office Terms I. 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 One: MED 121 or OST 141

OST 142. Medical Office Terms II. 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 One: MED 121 or OST 141

OST 148. Medical Insurance and Billing. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces fundamentals of medical insurance and billing. 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 153. Office Finance Solutions. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces basic bookkeeping concepts. Topics include entering data in accounts payable and receivable, keeping petty cash records, maintaining inventory, reconciling bank statements, running payroll, and generating simple financial reports. Upon completion, students should be able to demonstrate competence in the entry and manipulation of data to provide financial solutions for the office. Prerequisites: Take One: CIS 110, CIS 111 or OST 137
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 including 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. Office Editing. 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 165. Advanced Office Editing. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to develop proficiency in advanced editing skills needed in the office environment. Emphasis is placed on the application of creating effective electronic office documents. Upon completion, students should be able to apply advanced editing skills to compose text. Prerequisites: Take OST 164

OST 168. 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

OST 223. Administrative Office Transcription I. 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 proper 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: Take OST 134, OST 136, or OST 164 with a minimum grade of C

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 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 processing features. 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

OST 238. Office Applications III. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to prepare students to analyze data and prepare advanced documents and reports using office software. Emphasis is placed on in-depth usage of software to create a variety of advanced documents applicable to current business environments. Upon completion, students should be able to master the advanced skills required to design documents that can be customized using the latest software applications. Prerequisites: Take OST 138

OST 241. Medical Office Transcription I. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces current transcription techniques as applied to medical documents. Emphasis is placed on accurate transcription, proofreading, editing and use of reference materials as well as vocabulary building. Upon completion, students should be able to prepare accurate and usable medical documents in the covered specialties. Prerequisites: Take MED 121 or OST 141 with a minimum grade of C

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 with a minimum grade of C

OST 247. Procedure Coding. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides in-depth coverage of procedural coding. Emphasis is placed on CPT and HCPCS coding systems. Upon completion, students should be able to properly code procedures and services performed in a medical facility. Prerequisites: Take MED 121 or OST 141 with a minimum grade of C

OST 248. Diagnostic Coding. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an in-depth study of diagnostic coding. Emphasis is placed on ICD coding system. Upon completion, students should be able to properly code diagnoses in a medical facility. Prerequisites: Take MED 121 or OST 141 with a minimum grade of C

OST 249. Medical Coding Certification Preparation. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides instruction that will prepare students to sit for a national coding certification exam. Topics include diagnostic and procedural coding. Upon completion, students should be able to sit for various medical coding certification exams. Prerequisites: Take OST 247 and OST 248 with a minimum grade of C
OST 250. Long-Term Care Coding. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers diagnostic coding as it applies to long-term care facilities and home care. Topics include diagnostic coding and reimbursement in long-term care facilities and home care. Upon completion, students should be able to properly code conditions for long-term care and home care services.
Prerequisites: Take MED 121 or OST 141 Minimum grade C

OST 289. Office Administration Capstone. 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 administrative office procedures. Emphasis is placed on written and oral communication skills, office software applications, office procedures, ethics, and professional development. Upon completion, students should be able to adapt in an office environment.
Prerequisites: Complete one of the following options: Take OST 134 and OST 164 with a minimum grade of C
Take OST 136 and OST 164 with a minimum grade of C

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 097 DRE 098
Take EFL 111 EFL 112
Take ENG 111
Take ENG 002

Opticianry (OPH)

OPH 113. Introduction to Diseases of the Eye. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces common external and internal diseases of the eye and orbital region. Topics include common patient complaints, ocular emergencies, triage procedures and common ocular 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 144. 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 the use of diagnostic agents and various classes of drugs commonly used in ophthalmic practices. 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 115. 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. Topics include basic procedures commonly used in the preliminary examination of patients. Upon completion, the student should be able to perform basic administrative tasks and perform basic procedures commonly used in patient examinations.
Prerequisites: Take OPH 150 and OPH 151
OPH 116. Ophthalmic Medical Assistant Practicum I. 6.0 Credits.
Class-0.0. Clinical-18.0. 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 demonstrate competence and efficiency in basic clinical skills.
Prerequisites: Take OPH 150 and OPH 151

OPH 117. Ophthalmic Clinical Procedures II. 2.0 Credits. Class-1.0.
Clinical-0.0. Lab-2.0. Work-0.0
This course introduces more intermediate 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 more intermediate clinical procedures.
Prerequisites: Take OPH 115

OPH 118. 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 119. 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 120. Ophthalmic Medical Assistant Practicum II. 6.0 Credits.
Class-0.0. Clinical-18.0. 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 perform basic and intermediate clinical skills, working towards competence and efficiency.
Prerequisites: Take OPH 116

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 and show an understanding of the role of ophthalmic medical personnel in patient care.
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

OPH 217. Ophthalmic Clinical Procedures III. 2.0 Credits. Class-1.0.
Clinical-0.0. Lab-2.0. Work-0.0
This course focuses on advanced clinical procedures for the ophthalmic practice. Topics include an emphasis on more advanced skill development. Upon completion, students should be able to demonstrate increasing speed and accuracy in performing clinical skills.
Prerequisites: Take OPH 117

OPH 218. Advanced Ophthalmic Patient Care. 2.0 Credits. Class-1.0.
Clinical-0.0. Lab-2.0. Work-0.0
This course presents the principles of advanced diagnostic testing and techniques. Topics include advanced imaging and supplemental testing. Upon completion, students should be able to apply these principles in their interaction with patients.
Prerequisites: Take OPH 118

OPH 219. Ophthalmic Optics and Refractometry II. 2.0 Credits.
Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course reviews intermediate theoretical and clinical optics and covers theories of visual perception. Topics include low vision, contact lenses, and advanced principles of retinoscopy and refractometry. Upon completion, the student will demonstrate more advanced proficiency in optical calculations.
Prerequisites: Take OPH 119

OPH 220. Ophthalmic Medical Assistant Practicum III. 8.0 Credits.
Class-0.0. Clinical-24.0. Lab-0.0. Work-0.0
This course introduces more intermediate clinical procedures for the ophthalmic practice. Topics include developing proficiency while performing ophthalmic diagnostic and imaging procedures. Upon completion, the student will be able to perform actual patient examination under supervision while demonstrating increased clinical competence and efficiency.
Prerequisites: Take OPH 120

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, 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 PHM 111 Minimum grade C

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 Minimum grade C

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 133. Pharmacy Clinical. 3.0 Credits. Class-0.0. Clinical-9.0. 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 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 135. Pharmacy Clinical. 5.0 Credits. Class-0.0. Clinical-15.0. 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 136. Pharmacy Clinical. 6.0 Credits. Class-0.0. Clinical-18.0. 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. Prerequisites: Take PHM 110 with a minimum grade of C

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. Corequisites: Take PHM 118 Minimum grade C

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.

PHI 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 Minimum grade C

Philosophy (PHI)

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 Minimum grade C

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 Minimum grade C

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 Minimum grade C

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 Minimum grade C

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 Minimum grade C

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 introduces 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 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 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 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 165 or BIO 168 Minimum grade C
Corequisites: Take PTA 110 Minimum grade C

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: Complete one of the following options: Take BIO 166 PTA 110 PTA 125 with a minimum grade of C
Take BIO 169 PTA 110 PTA 125 with a minimum grade of C
Corequisites: Take PTA 215 Minimum grade C

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: Complete one of the following options: Take BIO 166 PTA 110 PTA 125 with a minimum grade of C
Take BIO 169 PTA 110 PTA 125 with a minimum grade of C
Corequisites: Take PTA 222 Minimum grade C
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Course Details</th>
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<tbody>
<tr>
<td>PTA 165</td>
<td>PTA Clinical I. 3.0 Credits</td>
<td>Class-0.0</td>
<td>Clinical-9.0. Lab-0.0. Work-0.0</td>
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<td>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.</td>
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<td>Prerequisites: Take PTA 135 PTA 145 PTA 215 PTA 222 with a minimum grade of C</td>
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<td>Corequisites: Take PTA 185</td>
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<td>PTA 185</td>
<td>PTA Clinical II. 3.0 Credits</td>
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<td>Corequisites: Take PTA 185</td>
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<td>PTA 212</td>
<td>Health Care/Resources. 2.0 Credits</td>
<td>Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0</td>
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<td>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.</td>
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<td>Prerequisites: Take PTA 225 PTA 235AB PTA 165 PTA 185 with a minimum grade of C</td>
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<td>Corequisites: Take PTA 235BB</td>
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<td>PTA 215</td>
<td>Therapeutic Exercise. 3.0 Credits</td>
<td>Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0</td>
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<td>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.</td>
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<td>Prerequisites: Complete one of the following options: Take BIO 166 PTA 110 PTA 125 with a minimum grade of C</td>
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<td>Take BIO 169 PTA 110 PTA 125 with a minimum grade of C</td>
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<td>Corequisites: Take PTA 135 Minimum grade C</td>
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<td>PTA 222</td>
<td>Professional Interactions. 2.0 Credits</td>
<td>Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0</td>
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<td>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.</td>
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<td>Prerequisites: Take 1 group Take BIO 166 PTA 110 PTA 125 with a minimum grade of C</td>
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<td>Take BIO 169 PTA 110 PTA 125 with a minimum grade of C</td>
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<td>Corequisites: Take PTA 145 Minimum grade C</td>
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**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 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 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.

**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. Credit by exam for PHS 151 can be obtained by request upon completion.
Prerequisites: Take one: MAT 121 or MAT 171 Minimum grade C

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.
Prerequisites: Take PHY 131 Minimum grade C

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, vectors, linear kinematics and dynamics, energy, power, momentum, 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. This course has been approved to satisfy the comprehensive articulation agreement general education core requirement in natural sciences/Mathematics.
Prerequisites: Take MAT 171 or MAT 271 Minimum grade C

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 Minimum grade C

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 Minimum grade C
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 MAT 272 and PHY 251 Minimum grade C

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002
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. This course is intended for all associate degree programs.
Prerequisites: Complete one of the following options: Take DRE 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

Poylsomnography (PSG) Courses

PSG 110. Intro to Polysomnography. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the polysomnography profession. Topics include the history of the profession and role of the polysomnographic technologist, communication, time management, infection control, basic patient assessment, and medical gas therapy. Upon completion, students should be able to demonstrate competence in concepts through written and laboratory evaluations.

PSG 111. Neuro/Cardiopulmonary A&P. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides a concentrated study of anatomy and physiology essential to the practice of polysomnography. Emphasis is placed on the physiology of the nervous, cardiovascular, and pulmonary systems and basic pharmacological principles. Upon completion, students should be able to demonstrate competence in concepts through written evaluation.
Prerequisites: Complete one of the following options:
• Take BIO 163
• Take BIO 165 and BIO 166
• Take BIO 168 and BIO 169

PSG 112. Polysomnoography Fundamentals. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides the knowledge and skills necessary to manage/function in a polysomnographic laboratory. Topics include recordkeeping, scheduling techniques, creation/implementation of departmental policies, reimbursement, the technologist's role as sleep advocate, and case management/patient education. Upon completion, students should be able to demonstrate competence in concepts through written evaluation.

PSG 113. Polysomnography Instrumentation. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the fundamental concepts of sleep technology electrical equipment and recording of bio-electric potentials. Topics include Ohm's Law; common mode rejection; components related to recording bio-electric potentials; function and application of sleep technology equipment; and construct/verify montages. Upon completion, students should be able to demonstrate competence in polysomnography equipment, instrumentation, recording of bioelectric potential concepts, and ancillary electrical signals through written and laboratory evaluations.
Prerequisites: Take PSG 110

PSG 114. Polysomnography Clinical Education I. 3.0 Credits. Class-0.0. Clinical-9.0. Lab-0.0. Work-0.0
This course provides orientation to the polysomnography clinical environment. Emphasis is placed on work flows, reviewing patient charts and orders, patient preparation and hook-ups, and proper time management. Upon completion, students should be able to demonstrate successful completion of polysomnography clinical learning outcomes.
Prerequisites: Take PSG 110

PSG 210. Polysomnography I. 7.0 Credits. Class-3.0. Clinical-9.0. Lab-2.0. Work-0.0
This course provides entry-level didactic, laboratory, and clinical training in polysomnography. Emphasis is placed on medical terminology, instrumentation setup and calibration, recording and monitoring techniques, and patient-technologist interactions. Upon completion, students should be able to demonstrate competence in concepts and procedures through written, laboratory and clinical evaluations.
Prerequisites: Take One: PSG 111 or PSG 189

PSG 211. Polysomnography II. 7.0 Credits. Class-2.0. Clinical-9.0. Lab-6.0. Work-0.0
This course provides advanced-level didactic, laboratory, and clinical training in polysomnography. Emphasis is placed on the knowledge and skills necessary to obtain and evaluate high quality sleep recordings. Upon completion, students should be able to demonstrate competence in concepts and procedures through written, laboratory and clinical evaluations.
Prerequisites: Take PSG 210
PSG 212. Infant/Pediatric Polysomnography. 4.0 Credits.  
Class-3.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course provides the knowledge and skills to perform and score polysomnographic procedures on infants and pediatric patients. Emphasis is placed on infant/pediatric assessment, monitoring, and sleep disorders. Upon completion, students should be able to demonstrate competence in concepts through written and laboratory evaluations.

PSG 213. Case Study/Exam Review. 1.0 Credit.  
Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0  
This course provides an opportunity to review clinical cases and prepare for the polysomnography credentialing exam. Emphasis is placed on case management and review for the Registered Polysomnographic Technologist Exam. Upon completion, students should be able to successfully complete practice exams.

PSG 214. PSG Clinical Applications I. 1.0 Credit.  
Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course provides a practical application of theories covered in previous PSG courses. Emphasis is placed on polysomnography testing and procedures. Upon completion, students should be able to demonstrate competence through laboratory evaluation.

PSG 215. PSG Clinical Applications II. 1.0 Credit.  
Class-0.0. Clinical-0.0. Lab-2.0. Work-0.0  
This course provides a practical application of theories covered in previous PSG courses. Emphasis is placed on polysomnography testing and procedures. Upon completion, students should be able to demonstrate competence through laboratory evaluation.

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 gathering 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 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 171. Introduction to Brand Protection and Anti-Counterfeiting Technology. 2.0 Credits.  
Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0  
This course is designed to address the fundamental aspects of the problem of counterfeiting in the modern printing and packaging industry. Topics include current levels of security, global impact of counterfeiting, identification of counterfeit materials, how products are attacked, technology solutions available for infringement reduction, introducing brand protection to clients, and industry standards related to security printing. Upon completion, students should be able to: identify areas of security risk related to a brand, be able to develop a plan to help protect a brand from infringement, describe available technologies to combat infringement, and reference the standards related to security printing.

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: GRA 152 and PRN 131

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

PRN 271. Graphic Imaging for Brand Protection and Anti-Counterfeiting Technology. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course is designed to address the utilization of specialized software to develop secure packaging and documents that are used in the protection of trademarks and branding. Topics include the utilization of software to develop secure elements to be incorporated in packaging and documentations, development of a plan utilizing overt and covert security elements to prevent duplication, and creation of layouts for various packaging and documentation related to the security printing industry. Upon completion, students should be able to use software to develop secure elements to be utilized in packaging and documentation, create a strategy for a brand that is designed to prevent counterfeiting, create and design various packaging and documentation in relationship to the security printing industry and reference the industry standards as they pertain to pre-press for security printing.
Prerequisites: Take All: PRN 241, PRN 131 and PRN 171

PRN 272. Brand Protection and Anti-Counterfeiting Technology Implementation. 3.0 Credits. Class-1.0. Clinical-0.0. Lab-4.0. Work-0.0
This course is designed to provide students with the knowledge needed to work within a secure facility and produce products that have built in security technology designed to prevent brand infringement. Topics include the handling, transporting, storing, and tracking secure materials, testing print device's limitations to accurately produce secure products, operating a printing device to produce products with security technology built into the product, and understanding the culture of security printing. Upon completion, students should be able to demonstrate appropriate demeanor for a secure facility, track and maintain all secure print materials, operate multiple printing devices to the quality standards of the secure print industry, and be able to produce printed products with security technology built into the product.
Prerequisites: Take All: GRA 121, PRN 131, and PRN 171

Process Control Instrumentation (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 ELC 260

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 ELC 260

PCI 173. Programmable Systems. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This 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 ELC 260 Minimum grade C

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002
PSY 211. Psychology of Adjustment. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the study of the adjustment process focusing on contemporary challenges individuals must deal with in everyday life. Topics include theories of behavior, career choices, self-understanding, coping mechanisms, human relationships, intimacy, sociocultural factors influencing healthy personal adjustment, and other related topics. Upon completion, students should be able to demonstrate an awareness of the processes of adjustment. This course introduces the study of the adjustment process focusing on contemporary challenges individuals must deal with in everyday life. Topics include theories of behavior, career choices, self-understanding, coping mechanisms, human relationships, intimacy, sociocultural factors influencing healthy personal adjustment, and other related topics. Upon completion, students should be able to demonstrate an awareness of the process of adjustment. This course is intended for all associate degree programs.
Prerequisites: Take PSY 150

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 Minimum grade C

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, interperson al 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 PSY 150 or SOC 210 Minimum grade C

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 Minimum grade C

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 Minimum grade C

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.
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 role of the respiratory care practitioner within interprofessional teams and interacting with diverse populations. Topics include medical gas administration, basic patient assessment, infection control, and medical terminology using proper written and oral communication methods to prepare students for clinical practice. Upon completion, students should be able to demonstrate competence in respiratory therapy 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 provides emphasis on therapeutic and diagnostic procedures. Topics include applying problem solving strategies in the patient care setting, applying ethical principles in decision making, and practicing professional responsibilities, which will prepare students for clinical practice. Upon completion, students should be able to demonstrate competence in respiratory therapy concepts and procedures through written and laboratory evaluations.
Prerequisites: Take RCP 110

RCP 112. 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 113. RCP Clinical Practice I. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. 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 110, RCP 111, and RCP 113

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, pathophysiology, clinical signs and symptoms, diagnoses, prognoses, complications, and management of cardiopulmonary diseases. Emphasis is placed on developing, evaluating, and modifying respiratory care plans based on evidence-based medicine protocols and clinical practice guidelines. Upon completion, students should be able to demonstrate competence in cardio-pulmonary disease 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-0.0. 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, RCP 113, and RCP 114 with a minimum grade of C
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 115, and RCP 145 with a minimum grade of C
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 application and management of mechanical ventilation, assessment underlying pathophysiology, and introduction of critical care monitoring. Upon completion, students should be able to demonstrate competence in respiratory therapy concepts and procedures through written, laboratory and/or clinical simulation evaluations.
Prerequisites: Take RCP 111, RCP 115, RCP 145, RCP 152, and MED 120 with a minimum grade of C
Take MAT 143, MAT 152, or MAT 171
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 using evidence-based respiratory care protocols. Topics include advanced cardiac monitoring, special procedures, respiratory care protocols, and disease management. Upon completion, students should be able to assess, recommend, and independently modify respiratory care protocols through written, laboratory and/or clinical simulation evaluations.
Prerequisites: Take RCP 210, RCP 214, RCP 235, and RCP 222 with a minimum grade of C
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 comprehensive coverage of the concepts of neonatal and pediatric respiratory care. Emphasis is placed on pathophysiology, patient assessment and special therapeutic needs of neonates and children based on evidence-based medicine protocols and clinical practice guidelines. Upon completion, students should be able to demonstrate competence in the neonatal and pediatric respiratory care concepts through written, laboratory and/or clinical simulation evaluations.
Prerequisites: Take RCP 111, RCP 115, RCP 145, and RCP 152 with a minimum grade of C

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, and RCP 152 with a minimum grade of C

RCP 223. 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.

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, RCP 115, RCP 145, and RCP 152 with a minimum grade of C
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, RCP 211, RCP 214, RCP 222, and RCP 235 with a minimum grade of C
Corequisites: Take RCP 211

Simulation and 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 students with 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 122. Simulation and Game Database Programming. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers the creation and application of databases for simulation and game development. Emphasis is placed on various database and software development kits. Upon completion, students should be able to apply their knowledge of databases to the creation of simulations and games.

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. 3.0 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 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-2.0. Clinical-0.0. Lab-3.0. 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 167. 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 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. Simulation and Game Development Design I. 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 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. 3.0 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 193S. Selected Topics in Graphic Novel Games. 3.0 Credits. 
Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course provides covers the art of Graphic Novels and how they can be used in creating and developing more fun and engaging Simulation and Video Games. Topics include the genres, history, tools, required skills and technologies in the subject area. Upon completion, students should have a general understanding of the genres, tools, required skills, and technologies to create Graphic Novels.

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 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 further a student's knowledge in creating 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 214

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 288. Simulation and Game Development Portfolio Design. 2.0 Credits. Class-1.0. Clinical-0.0. Lab-2.0. Work-0.0
This course covers the organization and presentation of a simulation and game design 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.
Corequisites: Take SGD 289

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

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 EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002 From rule RMINP2

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002
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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 ENG 112 ENG 113 or ENG 114 with a minimum grade of C
Take ENG 002

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 097 DRE 098
Take EFL 111 EFL 112 with a minimum grade of C
Take ENG 111 with a minimum grade of C
Take ENG 002
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 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 SPA 181 Minimum grade C
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 161. Cultural Immersion. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-3.0. Work-0.0
This course explores Hispanic culture through intensive study on campus and field experience in a host country or comparable area within the United States. Topics include an overview of linguistic, historical, geographical, sociopolitical, economic, and/or artistic concerns of the area visited. Upon completion, students should be able to exhibit firsthand knowledge of issues pertinent to the host area and demonstrate understanding of cultural differences. This course has been approved to satisfy the comprehensive articulation agreement for transferability as a pre-major and/or elective course requirement.
Prerequisites: Take SPA 111 Minimum grade C

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.

SPA 182. Spanish 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 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 increasing proficiency to spoken and written Spanish and demonstrate cultural awareness.

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 SPA 182 Minimum grade C
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 SPA 281 Minimum grade C
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 Minimum grade C
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-0.0. 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 each set: Set 1: HSE 125 with a with a minimum grade of C
• SAB 110

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 each set: Set 1: HSE 112 with a with a minimum grade of C
• SAB 110

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.
Prerequisites: Take SAB 110

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.
Prerequisites: Take SAB 110
SAB 250. Prevention and 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 One: SAB 110 or 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 122AB. Surgical Procedures I. 3.0 Credits. Class-2.5. Clinical-0.0.
Lab-1.5. 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 SUR 123

SUR 122BB. Surgical Procedures I. 3.0 Credits. Class-2.5. Clinical-0.0.
Lab-1.5. 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 SUR 123AB

SUR 122AB. Surgical Procedures I. 3.0 Credits. Class-2.5. Clinical-0.0.
Lab-1.5. 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 SUR 123

SUR 123BB. Sur Clinical Practice I. 3.0 Credits. Class-0.0. Clinical-10.5.
Lab-0.0. Work-0.0
This course provides clinical experience with a variety of perioperative assignments to build upon skills learned in SUR 111. Emphasis is placed on the scrub and circulating roles of the surgical technologist including aseptic technique and basic case preparation for selected surgical procedures. Upon completion, students should be able to prepare, assist with, and dismantle basic surgical cases in both the scrub and circulating roles.
Prerequisites: Take All: SUR 110 and SUR 111
Corequisites: Take SUR 122

SUR 123AB. Sur Clinical Practice I. 3.0 Credits. Class-0.0. Clinical-10.5.
Lab-0.0. Work-0.0
This course provides clinical experience with a variety of perioperative assignments to build upon skills learned in SUR 111. Emphasis is placed on the scrub and circulating roles of the surgical technologist including aseptic technique and basic case preparation for selected surgical procedures. Upon completion, students should be able to prepare, assist with, and dismantle basic surgical cases in both the scrub and circulating roles.
Prerequisites: Take All: SUR 110 and SUR 111
Corequisites: Take SUR 123AB

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 upon skills learned in SUR 111. Emphasis is placed on the scrub and circulating roles of the surgical technologist including aseptic technique and basic case preparation for selected surgical procedures. Upon completion, students should be able to prepare, assist with, and dismantle basic surgical cases in both the scrub and circulating roles.
Prerequisites: Take All: SUR 110 and SUR 111
Corequisites: Take SUR 122
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 SUR 123

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

SUR 137. Professional Success Preparation. 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

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:
- MAT 121
- MAT 171
- DMA 060, DMA 070, and DMA 080
- DMA 065
- MAT 003
- BSP 4003

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

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 210

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 130. Intro to Sustainable Transportation. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an overview of alternative fuels and alternative fuel vehicles. Topics include composition and use of alternative fuels including compressed natural gas, biodiesel, ethanol, hydrogen, and synthetic fuels, hybrid/electric, and vehicles using alternative fuels. Upon completion, students should be able to identify alternative fuel vehicles, explain how each alternative fuel delivery system operates, and perform minor repairs.
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.

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 management 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

TRF 270. Advanced Turfgrass Equipment Management. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-4.0. Work-0.0
This course covers the advanced repair and maintenance of turfgrass equipment. Emphasis is placed on the diagnosis, repair and maintenance of power trains, electrical systems, hydraulics, small air-cooled engines, four-stroke engines, and compact diesel engines. Upon completion, students should be able to diagnose and repair commonly used turfgrass equipment and communicate information concerning the repairs and the necessary maintenance schedule in a professional manner. Prerequisites: Take TRF 210

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. Prerequisites: Take WEB 110 Minimum grade C

WEB 120. Introduction to Internet Multimedia. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course introduces the creation of rich media for the Internet. Topics include the design, production and delivery of interactive content, rich media, digital video, and digital audio. Upon completion, students should be able to create multimedia projects incorporating graphics, text, video, and audio using industry standard authoring software or web standards.

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. Prerequisites: Take WEB 110 Minimum grade C

WEB 140. Web Development Tools. 3.0 Credits. Class-2.0. Clinical-0.0. Lab-2.0. Work-0.0
This course provides an introduction to web development software suites. Topics include the creation of web sites and applets using web development software. Upon completion, students should be able to create entire web sites and supporting applets.

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 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 Minimum grade C
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 Minimum grade C

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 120 Minimum grade C

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 interactively. Upon completion, students should be able to demonstrate effective programming techniques to develop advanced mobile applications.
Prerequisites: Take WEB 151 Minimum grade C

WEB 289. Internet Technologies 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 Web technologies 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 an Internet project from the definition phase through implementation.
Prerequisites: Take CTI 110 CTI 120 CTS 115 Minimum grade C

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.

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
Central Piedmont Community College

WLD 131. GTA (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 GTA fillet and groove welds with various electrodes and filler materials.

WLD 132. GTA (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 GTA 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: Complete one of the following options: Take DMA 010 DMA 020 DMA 030
Take MAT 003

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 121 WLD 131 WLD 141

WLD 152. Wrought Metals I. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides a comprehensive overview of the history and the multifaceted skill sets that are required to join and shape ferrous and non-ferrous metals. Topics include heating methods and fire control, hand hammers, hand tools, forging, manual heating, heat treatment, and shaping functional and decorative metal objects. Upon completion, students should be able to select proper alloys, heat and use a variety of hand tools to create simple tools, and shape basic metal projects to produce functional and decorative metal objects, collars, and mortise and tenon joints.
Corequisites: Take WLD 112

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 WLD 115 and 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 pipe positions.
Prerequisites: Take WLD 122

WLD 231. GTA (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, GTA welding technique, bead application, and joint geometry. Upon completion, students should be able to perform GTA 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 252. Wrought Metals II. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course covers ideas and techniques for designing, heating, shaping, and heat treatment of ferrous and non-ferrous metals, and the technical skills required for producing tools used in the welding studio. Topics include refined hammer control, power tool usage, metal lamination and differential hardening, tool design, alloy selection, hardening and tempering processes, and developing shop tooling. Upon completion, students should be able to identify and select appropriate metals and use traditional and contemporary metal-forming techniques to produce functional and decorative metal objects.
Corequisites: Take WLD 152

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
Corequisites: Take WLD 215 and WLD 231
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 268. Robotic Gas Metal Arc Welding. 4.0 Credits. Class-2.0. Clinical-0.0. Lab-6.0. Work-0.0
This course provides a comprehensive overview of the tasks and responsibilities required of the robotic welding technician. Topics include robotic and welding safety, proper equipment usage and care, robotic welding programming, various automated welding applications, automated Gas Metal Arc Welding (GMAW) processes, equipment controls and settings, and weld quality. Upon completion, students should be able to set up, program, and successfully run robotic gas welding equipment for various welding applications.

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.

Work-Based Learning (WBL)

WBL 110. World of Work. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers basic knowledge necessary for gaining and maintaining employment. Topics include job search skills, work ethic, meeting employer expectations, workplace safety, and human relations. Upon completion, students should be able to successfully make the transition from school to work.

WBL 110D. Work-Based Learning I Experience. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 111M. Work-Based Learning I Experience. 1.0 Credit. Class-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 111Z. Work-Based Learning I - Substance Abuse. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 111N. Work-Based Learning I Experience. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 111E. Work-Based Learning I Experience. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 111I. Work-Based Learning I Experience. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 111U. Work-Based Learning I Experience. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.
WBL 111G. Work-Based Learning I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 111Q. Work-Based Learning I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 111F. Work-Based Learning I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 111S. Work-Based Learning I - Interior Design. 1.0 Credit.
Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 111W. Work-Based Learning I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 111B. Work-Based Learning I - Bus & Acctng. 1.0 Credit.
Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 111Y. Work-Based Learning I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. This course provides a work-based learning in Developmental Disabilities.

WBL 111T. Work-Based Learning I - Graphics Arts. 1.0 Credit.
Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 111N. Work-Based Learning I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 111. Work-Based Learning I. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 112E. Work-Based Learning I Experience. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 112K. Work-Based Learning I Experience. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 112B. Work-Based Learning I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.
WBL 112G. Work-Based Learning I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 112J. Work-Based Learning I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 112S. Work-Based Learning I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 112H. Work-Based Learning I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 112R. Work-Based Learning I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 112T. Work-Based Learning I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 112Q. Work-Based Learning I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 112P. Work-Based Learning I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 112M. Work-Based Learning I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 112W. Work-Based Learning I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 112. Work-Based Learning I. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 114. Work-Based Learning I. 4.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-40.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 115Z. Work-Based Learning Seminar I. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course description may be written by the individual colleges. The seminar class is a forum of proactive learning in which students exchange ideas, share information and discuss mutual issues and problems. The seminar includes opportunities for reflective dialogue, support, relationship development and a variety of new learning experiences. Human Services - Substance Abuse.
Corequisites: Take One: WBL 111, WBL 112, WBL 113 or WBL 114

WBL 115F. Work-Based Learning Seminar I. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course description may be written by the individual colleges.
Corequisites: Take One: WBL 111, WBL 112, WBL 113 or WBL 114
WBL 115I. Work-Based Learning Seminar I. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course description may be written by the individual colleges. Students will use the observation in their Work-Based learning experience to analyze, discourse styles, group dynamics, conversational exchanges, turn taking, cross talking and side talking to determine the function and purpose of each within that setting. Challenging vocabulary and protocol issues will be isolated and discussed in a personal journal. The interpretation will be analyzed identifying patterns, successful and non-successful strategies and miscues. Students will project themselves into the observed situation and discuss how they would manage the situation, and identify issues, which they cannot manage at this point, and discuss how they could resolve the situation by identifying what they would need to be able to handle the interpretation.
Corequisites: Take One: WBL 111, WBL 112, WBL 113 or WBL 114

WBL 115E. Work-Based Learning Seminar I - BioMed. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course description may be written by the individual colleges. Prerequisites: Take WBL 111E WBL 112E
Corequisites: Take One: WBL 111, WBL 112, WBL 113 or WBL 114

WBL 115Y. Work-Based Learning Seminar I. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course description may be written by the individual colleges. This course provides a work-based learning in Developmental Disabilities.
Corequisites: Take One: WBL 111, WBL 112, WBL 113 or WBL 114

WBL 115. Work-Based Learning Seminar I. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course description may be written by the individual colleges. Corequisites: Take One: WBL 111, WBL 112, WBL 113 or WBL 114

WBL 121F. Work-Based Learning II Experience. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 121I. Work-Based Learning II Experience. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. Human Services - Substance Abuse.

WBL 121W. Work-Based Learning II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 121E. Work-Based Learning II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 121M. Work-Based Learning II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 121Q. Work-Based Learning II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 121W. Work-Based Learning II. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.
WBL 122R. Work-Based Learning II. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 122K. Work-Based Learning II - Office Admin. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 122W. Work-Based Learning II. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 122E. Work-Based Learning II. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 122Q. Work-Based Learning II. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 122P. Work-Based Learning II. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 122B. Work-Based Learning II. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 122. Work-Based Learning II. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 125F. Work-Based Learning Seminar II. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course description may be written by the individual colleges. This seminar class is a forum of proactive learning in which students exchange ideas, share information and discuss mutual issues and problems. The seminar includes opportunities for reflective dialogue, support, relationship development and a variety of new learning experiences. Corequisites: Take One: WBL 121, WBL 122, WBL 123 or WBL 124

WBL 125Y. Work-Based Learning Seminar II. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course description may be written by the individual colleges. This seminar class is a forum of proactive learning in which students exchange ideas, share information and discuss mutual issues and problems. The seminar includes opportunities for reflective dialogue, support, relationship development and a variety of new learning experiences. Corequisites: Take One: WBL 121, WBL 122, WBL 123 or WBL 124

WBL 125I. Work-Based Learning Seminar II. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course description may be written by the individual colleges. This seminar class is a forum of proactive learning in which students exchange ideas, share information and discuss mutual issues and problems. The seminar includes opportunities for reflective dialogue, support, relationship development and a variety of new learning experiences. Corequisites: Take One: WBL 121, WBL 122, WBL 123 or WBL 124

WBL 125Z. Work-Based Learning Seminar II - BIOMED. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course description may be written by the individual colleges. Human Services - Substance Abuse. Corequisites: Take One: WBL 121, WBL 122, WBL 123 or WBL 124

WBL 125E. Work-Based Learning Seminar II - BIOMED. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course description may be written by the individual colleges. Human Services - Substance Abuse. Corequisites: Take One: WBL 121, WBL 122, WBL 123 or WBL 124

WBL 125. Work-Based Learning Seminar II. 1.0 Credit. Class-1.0. Clinical-0.0. Lab-0.0. Work-0.0
This course description may be written by the individual colleges. Corequisites: Take One: WBL 121, WBL 122, WBL 123 or WBL 124

WBL 131W. Work-Based Learning III. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course description may be written by the individual colleges. This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 131M. Work-Based Learning III. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course description may be written by the individual colleges. This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 131W. Work-Based Learning III. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course description may be written by the individual colleges. This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.
WBL 131P. Work-Based Learning III. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student’s program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 131. Work-Based Learning III. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 132R. Work-Based Learning III - Automotive. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 132T. Work-Based Learning III. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 132. Work-Based Learning III. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 211. Work-Based Learning IV. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 212R. Work-Based Learning IV. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 212. Work-Based Learning IV. 2.0 Credits. Class-0.0. Clinical-0.0. Lab-0.0. Work-20.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 212T. Work-Based Learning IV. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 221. Work-Based Learning V. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 221E. Work-Based Learning V. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 221T. Work-Based Learning V. 1.0 Credit. Class-0.0. Clinical-0.0. Lab-0.0. Work-10.0
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

Registering for Classes
Approved Academic Pathways for Dual Enrollment during High School
High school students in the Career & College Promise Programs may follow two types of academic plans:

1. College Transfer Pathways, and/or
2. Career and Technical Pathways.

Students may only take courses in their selected pathway(s). If Career & College Promise students register for classes outside of their chosen pathway(s), the college will drop registration of those classes.

Students may choose to participate in:
• two Career and Technical Pathways at a time, or
• one Career and Technical Pathway and one Transfer Pathway at a time.

See which courses may be taken for each academic pathway on the Career & College Promise website under Program Options. From here, each pathway and its available courses may be viewed. Course descriptions and any required pre-requisites may be seen by entering any
course code (example: ABC 123) in the Search Catalog field above the left menu.

**College and Career Readiness Classes**

College and Career Readiness programs offer **classes to develop academic skills**, earn a high school equivalency (GED® or HiSET®) or adult high school diploma, learn English as a second language, develop employability skills or caseworker training, and participate in various work-based learning experiences. The programs include courses for occupational skills training, for students with intellectual disabilities and for refugee education.

Enroll in these classes on the Central Piedmont College and Career Readiness website.

**College Credit Curriculum Classes**

- **Students entering degree, diploma, or certificate programs** must complete the admissions/enrollment process prior to registration. (See Enrollment (p. 47) section of the catalog.)
- **Returning or new Central Piedmont students who have completed the admissions process** may register online using their student User ID and password at MyCollege.

**Non-Credit Corporate and Continuing Education Classes**

Students taking Corporate and Continuing Education, non-credit courses may register without the admissions/enrollment process by calling Customer Service at 704.330.4223 or by registering online at Register Now on the Corporate and Continuing Education website. Registration for Corporate and Continuing Education courses is ongoing throughout the semester.

**Dual Enrollment during High School**

Career & College Promise is a dual enrollment program. Its enrollment steps vary, depending on students’ intended goals and high school locations.

The Career & College Promise website provides all enrollments steps for students:

- in Charlotte-Mecklenburg Schools,
- not in Charlotte-Mecklenburg Schools, or
- taking courses that are not for college credit.

**Register for College Credit Courses**

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 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.

**Registering for College Credit Classes**

Students entering degree, diploma, or certificate programs must complete the admissions/enrollment process before registration. (See Enrollment (p. 47) section of the catalog.)

Returning or new Central Piedmont students who have completed the admissions process may register online using their student User ID and password from MyCollege on the home page of the college website.

**Auditing Courses**

Per the State Board of Community College’s definition (1DSBCCC 700.1), “Audit” means to enroll in a course section without receiving a grade, academic credit, continuing education unit, or certificate of completion. 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 Central Piedmont 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 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, Substitutions and Waivers.

**Course Load Regulation**

Students registered for at least 12 hours of credit during the fall and spring terms and at least 9 hours of credit during the summer term are considered full-time students. Students are advised that overload status may occur 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 appropriate faculty advisor, program or discipline chair, division director, or instructional dean.

Students taking a full load of 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 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 or 16 to 20 hours during the summer term. Students are not allowed to register for more than 28 hours.
during fall or spring terms and 20 hours during the summer term. For more information, go to Policy 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 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. 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 Audits, Substitutions and Waivers.

**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 is used to recalculate the Grade Point Average (GPA). However, all grades are recorded on the student’s academic transcript. In addition, students who received a degree from Central Piedmont are advised that a final student GPA is computed at the time of graduation and that GPA may not be recalculated as courses are repeated. Furthermore, transfer students are advised that receiving institutions do not have consistent policies regarding GPA computation.

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 are counted toward the 150 percent time frame. 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.

**Senior Citizen Course Registration**

Senior citizens, age 65 years or older on the first day of the course, may audit courses with the following guidelines as outlined in 1E SBCCC 1000.2:

- Tuition and registration fees are waived. Local fees associated with course sections may be charged.
- Enrollment in a course is dependent on space availability. A student who audits a course section shall not displace students enrolling or registering to receive a grade, academic credit, continuing education unit, or certificate of completion in the course section.
- Registration must be processed within the schedule adjustment period during a term or session. Schedule adjustment is generally the first two days of a term or session.
- Self-supporting courses are not eligible.

**Procedures:**

1. Print and complete the Audit Form.
2. Meet with the instructor before the course starts to obtain signature permission on the audit form.
3. Submit the completed form, along with a driver’s license or state identification card, to the registration office at any Central Piedmont campus on the first day of the term or course. Registration staff process the Audit form and return the form to the student.
4. Take the processed form to the Cashiering office for processing of the tuition waiver.

**Register for Corporate and Continuing Education Classes**

**Course Search and Registration**

The college’s online Schedule Builder permits searches by topic to explore course descriptions, along with days, times and locations of current courses and programs. Continuing education courses may be added during the semester to fit student needs.

Registration is ongoing throughout each semester with registration dates and new classes typically announced in April, July, and November. Most continuing education courses and programs are open enrollment and do not require prerequisites, applications or transcripts.

Contact customer service at 704.330.4223 for help in finding a course, with individual registration, or with class locations.

To register online, or obtain information about where or how to register in person for Corporate and Continuing Education classes, use Register Today on the Corporate and Continuing Education website.
Student Handbook

The Central Piedmont online student handbook is a comprehensive site including important services, resources and policies that govern academic and campus life. This valuable student information will help students navigate the college experience.

For information, please contact fye@cpcc.edu or call 704.330.6100.

Attendance, Grades and Records

Attendance

- Attendance (p. 386) in courses is critically important and can affect student grades, records, finances and refunds, and the ability to remain in a class.
- Completion of an Enrollment Verification Assignment (EVA) is required in online credit classes. Students must complete the EVA by the 10% point of the term in order to remain in the class.

Grades

- Auditing (p. 376) a course may be possible. 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 Central Piedmont campus by the due date.
- Course substitutions (p. 376) are permitted with final approval by the Division Director of the academic area in which the substitution is sought.
- Grade Appeals are governed by Policies and Procedures. Any student who contests a course grade must attempt first to resolve the matter with the faculty member who assigned the grade before formally appealing the course grade.
- Grade Changes (p. 386) are performed by the instructor of record in the case of a grading error, or in other appropriate circumstances.
- Grade Point Average (GPA) (p. 387) is calculated based on A, B, C, D and F grades, and affects each student’s Standards of Academic Progress (SOP). Note that Financial Aid uses a slightly different method of calculating a student’s Satisfactory Academic Progress standards (SAP)—see the Finances section.
- Incomplete grades (p. 387) may be assigned when a student has persisted through the course and completed at least 90 percent of the requirements for passing the course or when the instructor has determined extenuating circumstances exist.
  - Medical / Compassionate Withdrawals allow students to withdraw from all classes in extraordinary cases when serious illness or injury (medical) or another significant personal situation (compassionate) prevents a student from continuing his or her classes, and incompletes or other arrangements with the instructors are not possible.
  - Repeating a credit course (p. 376) is allowed. Students may not enroll in the same course more than three times without approval of the appropriate division director, discipline chair or program chair. A withdrawal does not count as a repeat. When a course has been repeated, the higher grade is used to recalculate the Grade Point Average (GPA). However, all grades are recorded on the student’s academic transcript.
  - Financial Aid Satisfactory Academic Progress (p. 66) standards (SAP) are used to help 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.
  - Standards of Academic Progress (p. 387) (SOP) measures whether students are maintaining a 2.0 or higher cumulative grade point average
  - The STAR system of academic alerts is used to send students alerts about how they are doing in their classes at two specific points in the semester: within the first three weeks and by mid-term. STAR Student Success Reports are sent to students’ Central Piedmont email accounts.
  - Withdrawing from courses (p. 387) is allowed until the 35% point in the term. Students can withdraw from classes using the Registration and Student Planning link in MyCollege. Students receiving financial aid should contact the financial aid office before withdrawing from a course, to find out how they may be affected in terms of eligibility or even repaying aid.

Records

- Credit by Examination (p. 48) can sometimes be given when students show convincing evidence of special aptitude or knowledge in the course material.
- Credit by examination can be earned through the College-Level Examination Program (CLEP). (p. 53)
- Credit hours (p. 387) are determined according to a formula.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; and 160 contact hours of work experience equals 1 semester credit hour.
- The Maximum credit load (p. 376) a student can take in spring or summer term, without getting overload permission, is 18.
- Medical withdrawals typically involve a student withdrawing from all courses based on a health condition. Requests should be made through the Levine Campus registrar.
- Name and address changes. Students can change their address and contact information in MyCollege, but name changes are handled through Student Records and must be documented by a marriage license, birth certificate or court decree.
- The Transcript Evaluation Process (p. 54) begins automatically when Student Records receives official transcripts. Students are notified by email when their evaluations have been completed. Previous courses completed with a “C” or higher grade from regionally accredited institutions that match Central Piedmont courses are transferred for credit.
• Transcript Requests for Central Piedmont transcripts to be sent to other institutions can be made through MyCollege, including requests for electronic or paper versions.

Coursework Assistance

Help with Coursework

• Academic Advising provides students with professional guidance by recommending appropriate course placement and selection, explaining institutional policies and procedures, identifying strategies for success and developing individualized educational plans.
• There are 12 Career Fields offered at the college. Students can prepare themselves for these career fields through many different degree programs, certificates, and other academic pathways and credentials.
• Course Testing in the Testing Centers or in a proctored setting is required for some courses.
• Free Tutoring is available through the Academic Learning Center in subjects such as math, science, writing and study skills.
• Instructor office hours are held by full-time instructors so that students can meet with them on campus. Online and part-time instructors can be reached through the contact information they have included in their course syllabus.
• The Learning Unit Listing gives contact information for administrators in charge of learning at the college, including the Program and Discipline Chairs, and Division Directors who manage courses and programs offered at the college.
• The Library operates on every campus and online to provide library instruction, interlibrary loan, textbook reserve service, group study facilities, one-on-one research appointments and online research assistance as well as integrated IM/webchat reference service.
• Online tutoring is available for free through the Academic Learning Center.
• Central Piedmont offers a wide variety of Programs of Study (p. 80).
• Programs of Study Contact Information can be found in the Central Piedmont directory.
• S.O.S. Math provides extra help to DMA Math students in Traditional, Emporium, and Online DMA classes. Events are held on Central, Levine, and Cato campuses. Events include Extended Math Labs, a Supplemental Instruction Series, and help connecting to tutoring resources.
• TRIO-Student Support Services offers academic support for first generation, low-income and/or students with disabilities. Services include coaching, tutoring, mentoring, financial literacy and more.

Tips and Information

• The Academic Calendar (p. 8) lists important dates such as holidays, and the the start and end dates for fall, spring and summer terms.
• Online Learning has become one of the most common ways for students to take classes or even complete an entire degree.
• The Online Learning Introduction helps students learn how to be successful taking online classes.
• The Library’s Research Databases are a great resource for students doing research for classes.

Finances

Costs and Payments

• Please email fye@cpcc.edu for cost of attendance estimates of tuition, fees, and textbooks for in-state and out-of-state students taking classes for credit.
• Methods of Payment can be found on the Cashiering web page.
• The Sponsored Programs department handles payments and tuition assistance made on behalf of students by outside agencies.
• The Tuition and Fees (p. 55) catalog page also contains information about refund policies and Sponsored Programs.

Financial Aid and Veterans Benefits

• Emergency Grants are provided for some students experiencing unexpected financial emergencies.
• Financial Aid helps students afford college by providing aid such as grants and scholarships.
• Financial Aid Programs (p. 65) include Pell Grants, Federal Work Study, Scholarships and more.
• Students are selected for FAFSA Verification each year through a random process. Selected students are required to provide additional documents.
• Some students seek Private or Alternative Loans, since the college does not participate in the federal Direct Student Loan program.
• Financial Aid Satisfactory Academic Progress (p. 66) standards (SAP) are used to help 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.
• Veterans Affairs Education Benefits (p. 73) are provided to veterans and eligible family members within a supportive environment.

Insurance

• International students may be able to find health insurance options.
• Central Piedmont students in certain programs may be able to purchase Student Insurance plans for accident, health or travel.

Free or Inexpensive Services

• Bus passes can be purchased in the bookstores by eligible financial aid recipients and are sometimes available through Single Stop.
• Dental screenings and some other Dental Services are available at low cost in the Central Piedmont Dental Hygiene Clinic. Services are performed by students and supervised by faculty. Appointments are scheduled based on student requirements and typically last up to 3 hours.
• Emergency food pantries have been established at several Central Piedmont campuses by Service-Learning in partnership with Loaves & Fishes.
• Free tax preparation and referrals for other community services are available through Single Stop.
• Students may be able to purchase inexpensive haircuts and other services, performed by Central Piedmont Cosmetology students under the supervision of licensed instructors.

Rights, Responsibilities and Safety

Rights

• FERPA (p. 51), the Family Educational Rights and Privacy Act, protects non-directory student information.
• Central Piedmont is committed to supporting freedom of speech.
• Central Piedmont is committed to equal opportunity and non-discrimination (p. 40).
• Title IX prohibits sex discrimination in all college programs and activities, including but not limited to, admissions, recruiting, financial aid, academic programs, student services, counseling and guidance, discipline, class assignment, grading, recreation, athletics, housing and employment.

Responsibilities

• Academic honesty and integrity are expected of every student.
• College Policies and Procedures (p. 40) relating to students can be found in sections 6 and 7.
• Central Piedmont is a drug free college.
• The Grievance Process is governed by student complaint policies.
• The possession of weapons on college premises or during college sponsored events is strictly prohibited, except as required for preparation of food, instruction, maintenance or acting in the discharge of official duties.
• The college maintains important social media guidelines for students.
• Student behavior is regulated by the Student Conduct policies.

Safety

• College Security Services help students stay safe at the college.
• The Critical Alert program notifies students in case of emergencies. Signing up for Critical Alert is one of the most important things students can do to remain safe.
• Vaccinations are not required for most Central Piedmont students. However, students enrolled in selected programs may be required to submit proof of current immunization.

Services and Information

Support Services

• Bookstores (p. 388). Central Piedmont’s Barnes and Noble bookstores sell course textbooks, clothing, gifts and accessories, supplies and electronics.
• Career Services (p. 395) helps students discover and implement career plans and find job opportunities to meet their goals.
• Cashiering offices are located at every campus.
• Military Families and Veterans Services offers Veterans Resources in places where armed forces members (including National Guards/Reservists), veterans and their immediate family members engage in services promoting their personal and professional development.
• College Security Services provides emergency and non-emergency help, assistance with parking and access, and the college’s annual security report.
• Counseling and Advising Services help students with personal counseling, as well as academic and transfer advising on campus and online.
• The Disability Services office helps ensure that students with documented disabilities get equal access to learning, by providing them with academic accommodations and auxiliary aids or assistive technology.
• The Family Resource Center offers a positive, safe and friendly environment to recharge, educate and support students and their families.

• First Year Advising (p. 50) serves the academic and course needs of all first-time, college students.
• First Year Experience (p. 50) supports new and returning students by helping them get started, be comfortable on campus and connect with student services.
• The International Programs and Services office supports the academic and personal growth of international students at Central Piedmont who are on an F-1 student visa. The office assists with admissions, immigration-related issues, resources at the College and information about the Charlotte community.
• The MAN UP Program promotes the personal, academic and social development of male students through mentoring, service learning, workshops, leadership opportunities, motivation, academic coaching, social skills and career development.
• The Positive Community for Women is a female empowerment program sponsored by Counseling Services, with a mission of supporting and uplift college women through workshops, mentoring, community service projects and social/cultural activities.
• Single Stop strives to transform the lives of students with critical needs, helping them overcome financial barriers by connecting students to support systems. Services include free tax preparation, benefits and financial counseling, legal information and referrals to college and community resources.
• Testing and Assessment Centers (p. 53) support the learning process by serving students, faculty and community testing needs, administering a wide variety of tests for instructional placement, certification, licensure and other specialized purposes.
• The Transfer Resource Center offers advising and support services to Central Piedmont students who plan to transfer to a four-year college or university.

Information

• Terms frequently used at the college are found under Central Piedmont Terminology. (p. 37)
• The Directory can help students reach individuals and departments.
• Housing is not offered at Central Piedmont. Students can contact Single Stop for information about local housing options.
• Maps and Parking information is available for Central Piedmont campuses and locations.

Student Involvement

Getting Involved

• Clubs and organizations let students gather and get involved, whether focusing on curriculum programs, or special interests.
• Student Experience can help you connect to resources, meet other students and participate in fun and rewarding activities.
• Central Piedmont Today is the weekly student e-newsletter and blog filled with useful information including important deadlines, policy changes, events at the college and student discounts.
• The Global Learning Office prepares students and faculty for life and work in a global society and facilitates study abroad.
• The Student Government Association represents the interests of all Central Piedmont students and is present on every campus.
• Student Life promotes activities, clubs and organizations which support and enhance learning in the classroom, provide opportunities for student leadership development and honor the rich diversity at Central Piedmont and in the surrounding community.
The Student Life Calendar lists upcoming festivals, lectures, workshops, recreational experiences, conferences, field trips, service projects, educational exhibits, live music and other co-curricular experiences.

Events and Performances

- The Arts and Community web page helps students access options for getting involved that include art galleries and auditions.
- Central Piedmont Tix sells tickets for Central Piedmont performances.
- Central Piedmont offers a range of Events and Performances featuring the arts, community service, technology and global competitiveness.
- The Geek Fest is the college’s annual technology and innovations event.
- The Sensoria festival is Central Piedmont’s signature celebration of literature and the arts.

Health, Recreation, and Wellness

- Health Resources include walking trails, health screenings, dance and fitness classes, lunch and learns, and much more.
- Recreation and Fitness activities include fitness centers, yoga and intramural sports.
- Recreation and Wellness Courses are offered through Corporate and Continuing Education.

Technology

Affordable and Assistive Technology

- Affordable Technology may be available to Central Piedmont students in the form of laptops, Internet and software downloads.
- Assistive Technology is available for students with disabilities through Disability Services and at the campus Libraries.
- Borrow calculators, laptops, books and media from Central Piedmont libraries using your ID card.
- Central Piedmont has open computer labs for all student to use on each campus through the Student Technology Centers, Libraries, and Student Services Support Labs.
- Printing and Copying services are available for students at Central Piedmont campuses.

Mobile Technology

- Central Piedmont Cloud helps students use Central Piedmont applications on their own devices.
- The Central Piedmont Mobile App gives students access to many Central Piedmont resources, including class schedules and grades, Blackboard, financial information, maps, calendars and the catalog.
- The Wireless Network lets students on any campus connect to Central Piedmont technology.

Technology Help

- The ITS Help Desk provides support of college licensed applications, and user accounts. Students can call 704.330.5000 for help.
Student Life
The Office of Student Life places a priority on activities that support and enhance learning in the classroom, provide opportunities for student leadership development and honor the rich diversity at Central Piedmont and in the surrounding community. Student Life staff are present on each 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 Central Piedmont student organizations, including the Student Government Association, Phi Theta Kappa International Honor Society and a variety of student leadership experiences.

Activities sponsored or supported by Student Life include festivals, lectures, workshops, recreational experiences, conferences, field trips, service projects, educational exhibits, discussions, and other co-curricular experiences. A full online calendar of Student Life events and activities can be found on the Central Piedmont app and on the Student Life website.

For further information, visit the Student Life office on any campus, connect with us on Facebook or Instagram, or 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 Central Piedmont campuses. Some of these organizations focus on special interests and others are directly related to curriculum programs offered at Central Piedmont. Although some clubs have membership requirements, no student organization at Central Piedmont is allowed to discriminate on any grounds. A complete list of student clubs and organizations is available on the Student Organizations page on the Student Life website.

Student Information

Central Piedmont Today is your student e-newsletter sent to your college email every Wednesday, or read anytime via the Central Piedmont app. Central Piedmont Today covers a wide range of useful information about college events, registration, policy changes, important deadlines, student discounts, scholarships, and financial aid updates, as well as unique student involvement opportunities. Consider it your source for alumni and current college news, events, recaps, stories, and more.

Family Resource Center at Central Piedmont

The Family Resource Center (FRC) offers students a positive, safe and friendly environment to recharge, educate, and support students and their families. The FRC provides resources and connections to programs about smart and healthy living habits, self-care and other valuable life skills and promotes empowering support systems.

The Family Resource Center, located in Room 254 of the Overcash Building on Central Campus, serves Central Piedmont students, staff and faculty on all six campuses.

The Family Resource Center offers:

• A warm, welcoming environment with access to a variety of educational materials focusing on wellness and self-care
• Educational workshops and drop-in programs
• Assistance in identifying college and community resources that may be helpful to student-parents and caregivers
• 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, visit the Family Resource Center website or call 704.330.6246.
Grievance Process for Students

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.

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. However, in accordance with 7.20 Sexual Misconduct Policy, some forms of harassment may also violate the college's policy against Sexual Misconduct under Title IX. When a report of harassment is received, the Title IX coordinator will determine whether it shall proceed under this policy or the Sexual Misconduct Policies and Procedures.

If the decision or action is alleged to be discriminatory, the student should refer to 7.13 Discrimination and Harassment Policy.

If the decision or action concerns a course grade or any other college decision or action, the student should refer to 7.09 Grievance Process for Students.

Student 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 is 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.

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 on campuses or any other Central Piedmont site is specifically prohibited. Possession of weapons is regulated by Policy 6.40 Possession of Weapons and by provisions set forth in North Carolina General Statute 14-269.2. Violators will be prosecuted by the authorities.

For more information, go to Policy 7.00 Conduct of Students.
As a Learning College, Central Piedmont creates environments that generate positive, nurturing, and learning-focused experiences for students in the classroom. To assist students on their academic journey, the college offers 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 Central Piedmont students enrolled in curriculum courses in the following key areas: math, science, writing and study skills. The Center is located on Central Campus, in Central High Building, Room 103. The ALC promotes independent learning and the development of skills necessary to support academic and life-long learning success. One-on-one tutoring sessions are arranged by appointment for students, as well as subject-specific workshops. The Central Campus ALC also houses a computer lab for student use with limited assistance.

Tutoring Services also are available on:

- Cato Campus at Harris Boulevard and Grier Road
- Levine Campus in Matthews
- Merancas Campus in Huntersville

Schedules vary by location. For further information, contact the ALC at 704.330.6474 or visit the Academic Learning website.

**Quick Reference:**

- Attendance (p. 386)
- Changing Grades (p. 386)
- Academic Honesty and Integrity (p. 386)

**Academic Regulations**

**Attendance**

Absences

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.

Students at Central Piedmont 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.

**Class Withdrawals**

Students 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, students must withdraw prior to the 35 percent date of the class. Final dates for withdrawing from classes are available from class instructors. Students may withdraw by:

1. Contacting registration personnel on any Central Piedmont campus, or
2. Through their MyCollege student account accessed from cpcc.edu

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, students who received a “W” must re-register and pay for the course in a subsequent term. Withdrawals may affect financial aid and veteran students.

Class withdrawal for veteran students:

- Financial Aid veteran students need to contact the Financial Aid/VA Office before withdrawing from courses.
- In addition, veteran students need to contact the Central Piedmont Veterans Affairs Certifying Official if withdrawing from any course. Reductions may result in an overpayment to the US Department of Education and the US Department of Veterans Affairs.

For more information, go to Policy 5.11 Attendance Regulation.

**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.

**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 MyCollege, select the Faculty and Advising Tools button, then select Online Forms, then Grade Change.
2. An electronic notification will be sent to the College Registrar/Dean, Admissions, Records, Registration and Graduation or a designee, who will also electronically approve the change request and personally
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:

- AU: Audit
- I:Incomplete
- P: Passing*
- R: Repeat*
- S: Satisfactory
- U: Unsatisfactory
- W: Withdrawal
- WN: Withdrawal/Never Attended
- X: Credit by Examination

* 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 171, 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 122, 1 credits, Grade C = 2 points, 2 X 1 = 2

Total Credits: 12 Total Points: 33

Divide 35 points by 13 credits = 2.75 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 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 from Classes

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 U.S. 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 Grades
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 is recorded with the “I” (e.g., I/B) and the GPA is recomputed. An “I” which is unresolved is 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 cumulative grade point average falls 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. Students who improve their GPA at the end of the next term are placed back into good standing.

Academic Probation
Students who are on Academic Warning and do not earn a term GPA of 2.0 or higher are escalated to Academic Probation. 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 Central Piedmont 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.
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 cpcc.bncollege.com. They also can be obtained by calling the Central Campus Bookstore at 704.330.6649.

All forms of payment, except cash, can be used when placing an order online at cpcc.bncollege.com. Purchased books may be requested for pick up at any campus or shipped directly to a student address.

Online Learning

Online learning 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 which 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 online 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:

- Academic Advising
- Admissions and Registration
- Assistance with Financial Aid
- Bookstore Services
- Career Services
- Library and Media Services
- Testing and Assessment

For more information regarding online program offerings, visit Online Learning at Central Piedmont.

For technical assistance, students may call the Central Piedmont ITS Helpdesk at 704.330.5000.

Global Learning

International experience is one of the most important components of a 21st-century education. Central Piedmont’s Global Learning Office prepares students and faculty for life and work in the global society by hosting speakers on international topics via **Global Issues Forums**, equipping students with global competencies and skills through the **N.C. Scholar of Global Distinction Program**, and providing opportunities to broaden perspective and boost language skills with short-term, **Faculty-Led Study Abroad**.

**Study Abroad programs** vary each year by location, instructors, and courses. Destinations 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.

**N.C. Scholars of Global Distinction** is a unique partnership between UNC-Chapel Hill and N.C. Community Colleges, which enables participating students to expand their intercultural awareness and to understand the global relevance of their college studies. Requirements include completing global courses, attending international events, and 30 hours of cultural immersion or study abroad. Central Piedmont offers numerous other internationally-focused activities, including international Service-Learning, global internships, and opportunities for community engagement. For more information, contact the Director of Global Learning at 704.330.6167 or visit the Global Learning website. The office is located on Central Campus, in the Overcash Building, Room 303.

Library

The Central Piedmont Library serves a diverse learning community by providing information literacy instruction, relevant resources and point-of-need services designed to foster academic and workforce success.

The Central Piedmont Library is comprised of seven full-service libraries on six college campuses. The library’s website serves as the gateway to access online resources, print books, magazines, 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 online every day, 24 hours a day.

The Central Piedmont Library provides library instruction, interlibrary loan, textbook reserve service, group study facilities, one-on-one research appointments and online research assistance as well as well as integrated IM/webchat reference service. A comprehensive description of the library as place, resource and service is found on the library website.

**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**  
1241 Charlottetowne Avenue  
Charlotte, NC 28204  
704.330.6885

**Harper Campus Library**  
315 Hebron Street  
Charlotte, NC 28273  
704.330.4418

**Harris Campus Library**  
3210 CPCG Harris  
Campus Drive
Service-Learning

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. Central Piedmont research data shows that service-learning has a high correlation with student success.

Service-Learning serves as a liaison between instructors, students and the partnering community agencies that provide service opportunities for students. Service-Learning 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, Service-Learning 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.

Service-Learning is located on:

- Central Campus, Overcash Building, Room 257
- Harper Campus, Harper IV, Room 103-B
- Cato Campus, Cato II, Room 269
- Levine Campus, Levine II, Room 1402
- Merancas Campus, Transportation Systems, Room 200
- Harris Campus, Harris I, Room 1233

Information is available online on the Service-Learning website or at 704.330.6445.

Workplace Learning Options

Work-based Learning

Work-based Learning (formerly Co-op) is an academic class that allows students to gain practical work experience. Rather than attend 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. Participating students benefit by work experience that can help in getting a career-related job after graduation. 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. Enrollment in a program of study which includes a WBL class as a required course or technical elective.
2. Minimum GPA requirements and successful completion of certain courses determined by the Program Chair or faculty adviser.
3. Recommendation to participate in the WBL class from the Program Chair or faculty adviser.
4. Approval to participate by the Workplace Learning office.
5. Students currently working in their field may be able to receive academic credit for the WBL class at their current job.

Placement is not guaranteed for all eligible students. For more information:

- visit the Workplace Learning Coordinator at a Central Piedmont campus (No coordinator located at Harris Campus)
- call 704.330.6217
- email workplace.learning@cpcc.edu
- visit the Workplace Learning website

Locations for Workplace Learning offices 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 Central Piedmont 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 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 by agreements between employers and the N.C. Department of Commerce (NC DOC).

To learn more about participating in an apprenticeship, potential students should visit the Apprenticeship Charlotte website or send an email to workplace.learning@cpcc.edu.
Graduation

Graduation Services of Central Piedmont awards degrees, diplomas, certificates and Adult High School diplomas to eligible students. In order to receive a degree, diploma, or certificate 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>First Day of the Spring Term</td>
</tr>
<tr>
<td>Summer</td>
<td>May 1</td>
</tr>
<tr>
<td>Fall</td>
<td>First Day of the Fall Term</td>
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</tbody>
</table>

There is no application deadline; however, spring applications submitted by March 25 are guaranteed to be processed in time to participate in the graduation ceremony.

Adult High School students do not need to fill out a graduation application. However, they are required to meet with their advisor.

Graduation Requirements

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

Returning students:

- For students not enrolled in program-related courses for three or more consecutive semesters, requirements for program completion are based on the requirements in effect when they re-enroll in the program, not on those in effect when they 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 - Students 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.

Residence - Students must meet the Curriculum Program Residency requirements of the college.

Hours/Credits:

- Degrees - A minimum of 21 program hours must be earned at Central Piedmont.
- College Diplomas - A minimum of 12 program hours must be earned at Central Piedmont.
- Certificates - A minimum of thirty percent (30%) of program credits must be earned at Central Piedmont.

For more information on policies governing graduation, please see Policy 5.13 Program Completion Requirements.

Graduation Process for Degrees & Diplomas

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

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

2. Submit a Graduation Application
   Potential graduates should submit a graduation application to Graduation Services during the time frame published. Applications should be submitted online through a MyCollege student account (if the student is admitted to the program.)

3. Receive a Degree Audit Status Update
   Graduation analysts review records and email degree audit status updates to students’ Central Piedmont email address approximately six weeks after a graduation application is submitted. These evaluations cannot be completed at the time the application is submitted.

4. Receive a Copy of the Earned 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 Central Piedmont 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 completed.

Graduation Process for Certificates

1. Meet with an Advisor
   Students should meet with their advisors 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 are submitted and that students have a course of study for the remainder of their program.

2. 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.)

3. Receive a Certificate Audit Update
Graduation analysts review records and email students degree audit updates approximately 6-8 weeks after an application is submitted. These evaluations cannot be completed at the time the application is submitted.

4. Receive the Earned Certificate
After completion of all requirements, including successful completion of final courses required for graduation, a notation of the certificate and the date of graduation is entered on the Central Piedmont 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
1. Meet with an Advisor
Students should meet with their Adult High School advisor first. Advisors review student education plans and determine a term of graduation. Advisors will notify the Adult High School Graduation Analyst of students who have completed or are completing all requirements. Adult High School students do not need to fill out a graduation application.

2. Receive Update from Graduation Office
When notified of pending completion by the Adult High School advisor, graduation analysts review records and email diploma status updates to students via their Central Piedmont email in approximately 4-6 weeks.

3. Receive the Adult High School 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 Central Piedmont 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 to be awarded the Adult High School Diploma.

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.

Central Piedmont holds one graduation ceremony in May of each year. Information is sent to eligible graduates in March, via Central Piedmont email. 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 remaining to complete during the summer term. They should apply for graduation as scheduled and must show proof of registration for their two final courses before permission is granted to participate in the ceremony as a summer graduate.
Career Resources

Central Piedmont provides a comprehensive set of resources to help students and community members reach their career goals.

For Central Piedmont Curriculum Students and Alumni

Career Services
Central Piedmont Career Services is committed to helping students and graduates successfully navigate the transition from college to career. Career Services provides holistic career counseling to promote lifelong career development and job search skills by establishing collaborative relationships with students, graduates, faculty, and employers.

Workplace Learning Programs
An important part of being able to find employment after graduation is getting experience while you are in classes. Workplace Learning has information about gaining experience through internships (paid and unpaid), work-based learning classes (earning class credit) and apprenticeships (jobs paired with in-depth training at Central Piedmont).

For All Charlotte Community Members

Small Business Center
The Small Business Center supports entrepreneurship, small business training, and economic development through innovative continuing education programs to help entrepreneurs start a business, grow a business, or keep pace with the ever-changing small business environment. Services are open to the Charlotte community.

Job and Career Enhancement Courses (Non-credit)
Corporate and Continuing Education offers courses and programs year-round and is designed for adults who want to strengthen job skills, change careers, and become more competitive in the job market. These courses are open enrollment and delivered in a variety of formats and in multiple locations. The training is most often short-term, industry-based, and focused on real-world applied skills and certifications.

College and Career Readiness Courses
Whether the goal is to attain a high school credential, take courses in English as a Second Language, gain first work experiences, or simply to upgrade skills, College and Career Readiness courses combine job skills with career support and assistance. Visit the College and Career Readiness website to see all programs to help jump start a career.

Career Services
Career Services helps students and graduates of college credit, curriculum programs with career decision-making, job search, and connecting students with employers through on-campus hiring events. The following services are provided:

• Career Counseling: Currently enrolled students can make an appointment for an individual meeting with a career counselor to assist them in making a decision about their program of study and career. Students may choose to meet in-person with a career counselor on any campus. Career assessments and other electronic resources are often used to help students learn more about themselves, the world of work, and the best fit for both.

• Online Career Information: The comprehensive Career Services website includes online presentations, links to a wide array of career resources, a career guide written by Central Piedmont career counselors, and links to area companies. Our Career Coach site helps you explore programs and learn about job opportunities, salaries, and outlook in the Charlotte region.

• Online Job Postings: Area employers list job opportunities exclusively for students and alumni on the online student job board. Students and alumni can use their Central Piedmont login to view current openings.

• Resume Assistance: Resumes may be emailed to career.services@cpcc.edu or an appointment can be made for a complimentary critique. Students also may stop by during drop-in hours held at the Central or Levine campuses. Find advice about how to get started on the online Career Guide.

• Mock Interviews: Interviewing skills may be practiced with a career counselor and feedback received while being recorded. Online Interviewing Assistance also is available for mock interviewing so that a video can be sent directly to a career counselor for review.

• Career Fairs: A Career Fair is held each spring for students and community members to meet with over 70 employers.

• On-Campus Recruitment: Individual companies visit Central Piedmont campuses to recruit students for full- and part-time work in the fall and spring semesters. Log in to the online job board for a full calendar of events.

Career Services are available in person on all campuses. To make an appointment, contact Career Services through the Career Services website, by phone at 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 (non-degree) courses address critical, practical skills with classes ranging from start-up and financing to marketing. Courses focus on:
  
  Accounting with QuickBooks®  
  Business Growth and Development  
  Business Plan Writing  
  Funding and Financing  
  How to Start a Business  
  Nonprofit Essentials

- Introductory seminars, workshops, and forums to promote awareness and answer student questions
- A 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 online and by phone at 704.330.6736 or contact Customer Service at 704.330.4223.
Index

A
About Central Piedmont ...................................................... 8
Academic Calendar ........................................................... 8
Academic Learning Center (ALC) .......................................... 386
Academic Regulations ......................................................... 386
Academic Related (ACA) ..................................................... 229
Accelerated Career Training (ACT) ....................................... 82
Accounting (ACC) ............................................................. 229
Accounting and Finance ...................................................... 88
Accreditations ........................................................................ 8
Administrators, Full-Time Faculty and Professional Staff .......... 10
Adult English as a Second Language (Adult ESL) .................... 81
Adult High School Diploma .................................................. 81
Advanced Placement Examination Course Credit Guidelines .... 48
Advertising + Graphic Design ................................................. 92
Agriculture (AGR) .................................................................. 231
Air Cond, Heating, and Refrig (AHR) ....................................... 231
Air Conditioning, Heating and Refrigeration Technology ........ 93
Alternative Energy Technology (ALT) ..................................... 232
American Sign Language (ASL) .............................................. 233
Anthropology (ANT) ............................................................. 234
Appealing Ineligibility for Financial Aid .................................. 69
Architectural Technology ....................................................... 96
Architecture (ARC) .............................................................. 235
Art (ART) ............................................................................. 237
Associate in Applied Science Degrees, Diplomas, Certificates ... 86
Astronomy (AST) .................................................................... 240
Audio Engineering ............................................................... 218
Automation & Robotics (ATR) .................................................. 240
Automotive (AUT) ............................................................... 241
Automotive Body Repair (AUB) .............................................. 242
Automotive Systems Technology ............................................. 97

B
Baking and Pastry Arts ......................................................... 100
Baking and Pastry Arts (BPA) ............................................... 243
Banking and Finance (BAF) ................................................... 244
Basic Law Enforcement Training .......................................... 103
Biology (BIO) Courses ......................................................... 244
Biomedical Equipment Technology ....................................... 104
Biomedical Equipment Technology (BMT) ......................... 246
Blueprint Reading (BPR) ...................................................... 246
Bookstores ........................................................................... 388
Broadcasting and Production Technology ............................. 105
Broadcasting and Production Technology (BPT) ................. 246
Broadcasting Service of Central Piedmont ............................ 36
Business Administration ....................................................... 106
Business and Industry .......................................................... 216
Business (BUS) .................................................................... 247
Business Processes ............................................................. 218

C
Campus Tours ....................................................................... 48
Campuses, Addresses, Maps ................................................ 37
Cardiovascular Tech (Invasive) (ICT) ................................. 250
Cardiovascular Tech (Non-Invasive) (NCT) ......................... 250
Cardiovascular Technology ................................................ 109
Career & College Promise (CCP) High School Enrollment .... 80
Career & College Promise Courses During High School ........ 224
Career Development ............................................................ 82
Career Resources ............................................................... 395
Career Services .................................................................... 395
Carpentry (CAR) .................................................................... 251
Central Piedmont Foundation / Institutional Advancement .... 37
Central Piedmont General Education Goals ......................... 85
Central Piedmont Terminology ............................................. 37
Chemistry (CHM) ............................................................... 251
Chemistry Concepts (CHM) .................................................. 253
Civil Engineering and Geomatic (CEG) ............................ 253
Civil Engineering (CIV) ........................................................ 253
Civil Engineering Technology ............................................... 111
College Administration ......................................................... 39
College and Career Readiness Programs ............................... 81
College Policies and Procedures .......................................... 40
College Security Services ..................................................... 59
College Transfer Programs .................................................. 85
College-Level Curriculum Courses ...................................... 227
College-Level Curriculum Programs .................................... 84
College-Level Examination Program (CLEP) ....................... 53
Collision Repair and Refinishing Technology ....................... 112
Communication ................................................................. 218
Communication (COM) ....................................................... 254
Computer and Information Technology ............................... 218
<table>
<thead>
<tr>
<th>Index</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Engineering Technology</td>
<td>114</td>
</tr>
<tr>
<td>Computer Information Technology (CTS)</td>
<td>255</td>
</tr>
<tr>
<td>Computer Science (CSC)</td>
<td>256</td>
</tr>
<tr>
<td>Computer Tech Integration (CTI)</td>
<td>258</td>
</tr>
<tr>
<td>Computer-Integrated Machining Technology</td>
<td>116</td>
</tr>
<tr>
<td>Construction</td>
<td>218</td>
</tr>
<tr>
<td>Construction (CST)</td>
<td>259</td>
</tr>
<tr>
<td>Construction Management (CMT)</td>
<td>259</td>
</tr>
<tr>
<td>Construction Management Technology</td>
<td>119</td>
</tr>
<tr>
<td>Continuing Education</td>
<td>217</td>
</tr>
<tr>
<td>Corporate and Continuing Education</td>
<td>216</td>
</tr>
<tr>
<td>Corporate Learning Center</td>
<td>216</td>
</tr>
<tr>
<td>Cosmetology</td>
<td>122</td>
</tr>
<tr>
<td>Cosmetology (COS)</td>
<td>218</td>
</tr>
<tr>
<td>Counseling Services</td>
<td>59</td>
</tr>
<tr>
<td>Course Credit and Placement</td>
<td>48</td>
</tr>
<tr>
<td>Courses / Course Registration</td>
<td>224</td>
</tr>
<tr>
<td>Criminal Justice (CJC)</td>
<td>262</td>
</tr>
<tr>
<td>Criminal Justice Technology</td>
<td>124</td>
</tr>
<tr>
<td>Culinary Arts</td>
<td>127</td>
</tr>
<tr>
<td>Culinary (CUL)</td>
<td>264</td>
</tr>
<tr>
<td>Cyber Crime Technology (CCT)</td>
<td>267</td>
</tr>
<tr>
<td>Cytotechnology</td>
<td>129</td>
</tr>
<tr>
<td>Cytotechnology (CYT)</td>
<td>268</td>
</tr>
<tr>
<td>D</td>
<td></td>
</tr>
<tr>
<td>Dance (DAN)</td>
<td>269</td>
</tr>
<tr>
<td>Database Management Technology (DBA)</td>
<td>271</td>
</tr>
<tr>
<td>Dental Assisting</td>
<td>130</td>
</tr>
<tr>
<td>Dental (DEN)</td>
<td>271</td>
</tr>
<tr>
<td>Dental Hygiene</td>
<td>131</td>
</tr>
<tr>
<td>Design: Creative (DES)</td>
<td>274</td>
</tr>
<tr>
<td>Developmental Courses</td>
<td>224</td>
</tr>
<tr>
<td>Developmental Disabilities (DDT)</td>
<td>276</td>
</tr>
<tr>
<td>Developmental Studies</td>
<td>84</td>
</tr>
<tr>
<td>Diesel and Heavy Equipment Technology</td>
<td>132</td>
</tr>
<tr>
<td>Digital Media Technology (DME)</td>
<td>276</td>
</tr>
<tr>
<td>Disability Services</td>
<td>60</td>
</tr>
<tr>
<td>Disclosure</td>
<td>40</td>
</tr>
<tr>
<td>Drafting (DFT)</td>
<td>276</td>
</tr>
<tr>
<td>Drama/Theatre (DRA)</td>
<td>277</td>
</tr>
<tr>
<td>Dual Enrollment during High School</td>
<td>376</td>
</tr>
</tbody>
</table>

| E                                                                      |      |
| Early Childhood Education                                             | 134  |
| Economics (ECO)                                                      | 278  |
| Education (EDU)                                                      | 279  |
| Electrical (ELC)                                                     | 283  |
| Electrical Engineering Technology                                    | 137  |
| Electrical Systems Technology                                        | 139  |
| Electrical Utility Substation(EUS)                                   | 283  |
| Electronic Commerce (ECM)                                            | 286  |
| Electronics (ELN)                                                    | 286  |
| Electronics Engineering Technology                                   | 142  |
| Emergency Food Pantries                                              | 61   |
| Emergency Management                                                 | 143  |
| Emergency Medical Science                                            | 143  |
| Emergency Medical Science (EMS)                                      | 286  |
| Engineering (EGR)                                                    | 288  |
| English As a Foreign Language (EFL)                                  | 291  |
| English (ENG)                                                        | 289  |
| Enrollment                                                           | 47   |
| Entertainment Technologies (ENT)                                     | 291  |
| Entrepreneurship and Small Business                                  | 219  |
| Environmental Science (ENV)                                          | 291  |

| F                                                                      |      |
| Financial Aid                                                        | 61   |
| Financial Aid Processes, Federal Regulations                         | 63   |
| Financial Aid Programs                                               | 65   |
| Financial Aid Satisfactory Academic Progress (SAP)                   | 66   |
| Financial Services                                                   | 219  |
| Fire Protection (FIP)                                                 | 292  |
| Fire Protection Technology                                            | 144  |
| First Year Experience / Orientation                                  | 50   |
| French (FRE)                                                          | 294  |

| G                                                                      |      |
| General Business                                                     | 219  |
| Geographic Information Systems (GIS)                                 | 295  |
| Geography (GEO)                                                      | 296  |
| Geology (GEL)                                                        | 296  |
| Geomatics Technology                                                 | 146  |
| German (GER)                                                         | 297  |
| Gerontology (GRO)                                                    | 297  |
| Global Engagement                                                    | 41   |
Index

Nursing (NUR) ................................................................. 339
Nutrition (NUT) ............................................................ 341

O
Occupational Therapy Assistant ......................................... 186
Occupational Therapy Assistant (OTA) ............................... 341
Office Administration .................................................. 188
Office Systems Technology (OST) ..................................... 343
Online Learning ............................................................ 389
Operations Management (OMT) ........................................ 345
Ophthalmic Medical Personnel ......................................... 191
Opticianry (OPH) .......................................................... 345

P
Paralegal Technology ...................................................... 192
Pathways to Careers ..................................................... 83
Pharmacy (PHM) .......................................................... 346
Pharmacy Technology .................................................... 194
Philosophy (PHI) .......................................................... 348
Physical Education (PED) ............................................... 348
Physical Science (PHS) ................................................... 349
Physical Therapist Assistant .......................................... 196
Physical Therapy (PTA) .................................................. 349
Physics (PHY) ............................................................. 351
Political Science (POL) ................................................... 351
Polysomography .......................................................... 197
Polysomography (PSG) .................................................. 352
Printing (PRN) ............................................................. 353
Process Control Instrumentation (PCI) ............................... 354
Programs of Study ....................................................... 80
Psychology (PSY) .......................................................... 354
Public Safety ............................................................... 220
Public Safety for Healthcare Providers ............................... 220

R
Race Car Technology (RCT) ............................................. 355
Real Estate and Appraisal ............................................... 221
Register for College Credit Classes ................................... 376
Register for Corporate and Continuing Education Classes .... 377
Registering for Classes .................................................. 375
Religion (REL) ............................................................. 355
Respiratory Care (RCP) ................................................... 356
Respiratory Therapy ....................................................... 198
Rise 2 Work ............................................................... 84

S
Service-Learning ........................................................... 390
Simulation & Game Development (SGD) ......................... 397
Simulation and Game Development ................................ 200
Single Stop ................................................................. 71
Small Business Center ................................................. 216
Small Business Center ................................................. 395
Sociology (SOC) ............................................................ 360
Spanish (SPA) .............................................................. 361
Speech Language Pathology Assistant .............................. 203
Student Affairs Directors .............................................. 50
Student Conduct .......................................................... 384
Student Educational Records / FERPA ............................. 51
Student Handbook ......................................................... 378
Student Life ................................................................. 383
Student Services .......................................................... 59
Substance Abuse (SAB) ................................................. 362
Supply Chain Management ............................................ 204
Surgery (SUR) ............................................................... 363
Surgical Technology ...................................................... 205
Surveying (SRV) .......................................................... 364
Sustainability Technologies ............................................. 206
Sustainability Technologies (SST) ................................... 365

T
Teaching Education ......................................................... 221
Testing and Assessment .................................................. 53
Transcript Evaluation Process ......................................... 54
Transfer Resource Center .............................................. 71
Transportation, Distribution and Logistics ......................... 221
Transportation Technology (TRN) .................................... 365
TRIO Student Support Services ....................................... 71
Tuition and Fees ........................................................... 55
Turfgrass Management Technology .................................. 209
Turfgrass Management (TRF) .......................................... 366

V
Veterans Affairs Education Benefits ................................. 73
Veterans Education Benefits Regulations .......................... 76
Veterans Resources ....................................................... 72

W
Web Technologies (WEB) .............................................. 367
Welcome to Central Piedmont Community College .......... 7