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. 1)
- Construction Management Technology Certificate-Specialization in Entry Level Construction Supervision (C35190-C2) (p. 1)
- Construction Management Technology Certificate-Specialization in Entry Level Estimating I (C35190-C3) (p. 1)
- Construction Management Technology Certificate-Specialization in Entry Level Project Supervision (C35190-C5) (p. 1)
- Construction Management Technology Certificate-Specialization in Green Building (C35190-C7) (p. 1)
- Construction Management Technology Certificate-Specialization in Introduction to Building Code Inspector (C35190-C8) (p. 2)
- Construction Management Technology Certificate-Specialization in Entry Level Construction Skills (C35190-C9) (p. 2)
- Construction Management Technology Certificate-Specialization in Construction Management Technology Foundations (C35190-20) (p. 2)
- Construction Management Technology Certificate Specialization in Construction Skills Career Exploration (C35190-51) (p. 2)

Admissions

- Completion of a high school diploma or equivalent is encouraged as the foundation of a career in this area.
- Many courses have perquisites or co-requisites; check the Courses section for details.

Contact Information

For more information, call the Skilled Trades Division at 704.330.4421 or the Skilled Trades 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.

Major Requirements		
BPR 130	Print Reading-Construction	3.0
CAR 140	Basic Carpentry	4.0
CMT 120	Codes and Inspections	3.0
WOL 110	Basic Construction Skills	3.0
WBL 111	Work-Based Learning I	1.0
Total Credits		**14**

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		
BPR 130	Print Reading-Construction	3.0
CMT 212	Total Safety Performance	3.0
BUS 139	Entrepreneurship I	3.0
CMT 210	Construction Management Fundamentals	3.0
CMT 218	Human Relations Issues	3.0
SST 140	Green Building and Design Concepts	3.0
Total Credits		**18**

Construction Management Technology Certificate with a Specialization – Entry Level Estimating I (C35190-C3)

Major Requirements		
Take one of the following courses:		3.0-4.0
ACC 120	Principles of Financial Accounting	
BUS 230	Small Business Management	
BUS 139	Entrepreneurship I	
BPR 130	Print Reading-Construction	3.0
CST 241	Planning/Estimating I	3.0
CMT 210	Construction Management Fundamentals	3.0
CIS 110	Introduction to Computers	3.0
Total Credits		**15-16**

Construction Management Technology Certificate Specialization in Entry Level Project Supervision (C35190-C5)

Major Requirements		
BPR 130	Print Reading-Construction	3.0
CMT 210	Construction Management Fundamentals	3.0
CMT 212	Total Safety Performance	3.0
CMT 214	Planning and Scheduling	3.0
CMT 216	Costs and Productivity	3.0
CMT 218	Human Relations Issues	3.0
Total Credits		**18**

Construction Management Technology Certificate Specialization in Green Building (C35190-C7)

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

Major Requirements		
BPR 130	Print Reading-Construction	3.0
CMT 120	Codes and Inspections	3.0
CST 111	Construction I	4.0
SST 140	Green Building and Design Concepts	3.0
Total Credits		**13**

Construction Management Technology Certificate Specialization in Introduction to Building Code Inspector (C35190-C8)

Major Requirements		
ARC 112	Construction Materials & Methods	4.0
BPR 130	Print Reading-Construction	3.0
CMT 120	Codes and Inspections	3.0
CST 111	Construction I	4.0
WBL 111	Work-Based Learning I	1.0
WBL 121	Work-Based Learning II	1.0
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		
BPR 130	Print Reading-Construction	3.0
WOL 110	Basic Construction Skills	3.0
CST 111	Construction I	4.0
ELC 111	Introduction to Electricity	3.0
WLD 111	Oxy-Fuel Welding	2.0
Total Credits		**15**

Construction Management Technology Certificate Specialization in Construction Management Technology Foundations (C35190-20)

Major Requirements		
WOL 110	Basic Construction Skills	3.0
CMT 210	Construction Management Fundamentals	3.0
CMT 212	Total Safety Performance	3.0
BPR 130	Print Reading-Construction	3.0
Total Credits		**12**

Construction Management Technology Certificate Specialization in Construction Skills Career Exploration (C35190-51)

Major Requirements		
WOL 110	Basic Construction Skills	3.0
BPR 130	Print Reading-Construction	3.0
ARC 225	Architectural Building Information Modeling I	2.0
ELC 113	Residential Wiring	4.0
AHR 110	Introduction to Refrigeration	5.0
Total Credits		**17**

CMT 120. Codes and Inspections. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers building codes and the code inspections process used in the design and construction of residential and commercial buildings. Emphasis is placed on commercial, residential, and accessibility (ADA) building codes. Upon completion, students should understand the building code inspections process and apply building code principals and requirements to construction projects.

CMT 210. Construction Management Fundamentals. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course introduces the student to the fundamentals of effective supervision emphasizing professionalism through knowledge and applied skills. Topics include safety, planning and scheduling, contracts, problem-solving, communications, conflict resolution, recruitment, employment laws and regulations, leadership, motivation, teamwork, discipline, setting objectives, and training. Upon completion, students should be able to demonstrate the basic skills necessary to be successful as a supervisor in the construction industry.

CMT 212. Total Safety Performance. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the importance of managing safety and productivity equally by encouraging people to take individual responsibility for safety and health in the workplace. Topics include safety management, controlling construction hazards, communicating and enforcing policies, OSHA compliance, personal responsibility and accountability, safety planning, training, and personal protective equipment. Upon completion, the student should be able to properly supervise safety at a construction jobsite and qualify for OSHA Training Certification.
Corequisites: Take CMT 210

CMT 214. Planning and Scheduling. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the need for and the process of planning construction projects, as well as the mechanics and vocabulary of project scheduling. Topics include project preplanning, scheduling formats, planning for production, short interval planning, schedule updating and revising, and computer-based planning and scheduling. Upon completion, the student should be able to understand the need for planning and scheduling, the language and logic of scheduling, and use of planning skills.
Prerequisites: Take all: CMT 210 and BPR 130

CMT 216. Costs and Productivity. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course covers the relationships between time, work completed, work-hours spent, schedule duration, equipment hours, and materials used. Topics include production rates, productivity unit rates, work method improvements, and overall total project cost control. Upon completion, the student should be able to demonstrate an understanding of how costs may be controlled and productivity improved on a construction project.
Prerequisites: Take CMT 210

CMT 218. Human Relations Issues. 3.0 Credits. Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0
This course provides instruction on human relations issues as they relate to construction project supervision. Topics include relationships, human behavior, project staffing issues, teamwork, effective communication networks, laws and regulations, and identifying and responding to conflict, crisis, and discipline. Upon completion, the student will demonstrate an understanding of the importance of human relations in the success of a construction project.
Prerequisites: Take CMT 210

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.

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 of C

CST 112. Construction II. 4.0 Credits. Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0
This course covers building methods and materials used to dry-in a building. Topics include safety, ceiling/roof framing applications, roof finishes, windows, and exterior doors. Upon completion, students should be able to safely erect different roof types and properly install windows and exterior doors, roofing, and exterior finish materials.
Prerequisites: Take CST 111

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: CST 241