**CONSTRUCTION MANAGEMENT TECHNOLOGY (CMT)**

**CMT 1213 Introduction to Construction**
*Description:* Overview of the entire construction industry with emphasis on construction materials, methods and systems. Both building and heavy highway construction drawings and their interpretation. Same course as CMT 1214.
*Credithours:* 3
*Contact hours:* Lecture: 3
*Levels:* Undergraduate
*Schedule types:* Lecture
*Department/School:* Engineering Technology

**CMT 2203 Construction Drawings (for non-majors)**
*Description:* Principles of graphic communication are applied to reading and drawing construction plans, with emphasis to fire protection systems. Does not meet CMT degree requirements. (Online course for non-CMT majors).
*Credithours:* 3
*Contact hours:* Lecture: 3
*Levels:* Undergraduate
*Schedule types:* Lecture
*Department/School:* Engineering Technology

**CMT 2253 Printreading & BIM**
*Prerequisites:* Grade of "C" or better in MATH 1513 or ALEKS score greater or equal to 60 or permission of instructor.
*Description:* Principles of 2D and 3D graphic communication are applied to reading and drawing construction plans. Techniques for measuring items of construction work from plans and specifications are also covered.
*Credithours:* 3
*Contact hours:* Lecture: 3
*Levels:* Undergraduate
*Schedule types:* Lecture
*Department/School:* Engineering Technology

**CMT 2263 Estimating I**
*Prerequisites:* Grade of "C" or better in CMT 1213 and CMT 2253 and MATH 1613 or MATH 1715 or ALEKS score greater or equal to 65 or permission of instructor.
*Description:* Quantity take-off with emphasis on excavation, formwork and concrete, masonry, rough carpentry and miscellaneous specialty items.
*Credithours:* 3
*Contact hours:* Lecture: 3
*Levels:* Undergraduate
*Schedule types:* Lecture
*Department/School:* Engineering Technology

**CMT 2351 Concrete Technology Lab**
*Prerequisites:* Grade of "C" or better in CMT 1214, CMT 2253, and CMT 2342 or concurrent enrollment in CMT 2342 or permission of department.
*Description:* Practical applications of material selection, proportioning, batching, mixing, conveying, placing, finishing, curing, and testing concrete. Previously offered as CMT 2343.
*Credithours:* 1
*Contact hours:* Lab: 2
*Levels:* Undergraduate
*Schedule types:* Lab
*Department/School:* Engineering Technology

**CMT 2352 Concrete Technology**
*Prerequisites:* Grade of "C" or better in CMT 1214 and CMT 2253 or permission of department.
*Credithours:* 2
*Contact hours:* Lecture: 2
*Levels:* Undergraduate
*Schedule types:* Lecture
*Department/School:* Engineering Technology

**CMT 3273 Scheduling Construction Projects**
*Prerequisites:* Acceptance to the CMT Upper-Division or permission of department; grade of "C" or better in CMT 2253.
*Description:* Scheduling basics, including bar charts and critical-path methods; manual and computer techniques using current software; emphasis on using schedules for construction project management.
*Credithours:* 3
*Contact hours:* Lecture: 3
*Levels:* Undergraduate
*Schedule types:* Lecture
*Department/School:* Engineering Technology

**CMT 3322 Construction Practicum I**
*Prerequisites:* Grade of "C" or better in CMT 1213 and CMT 2253, or permission of department.
*Description:* Supervised field experience in construction; 400 hours minimum documented time required. Same course as 3331.
*Credithours:* 2
*Contact hours:* Lecture: 2
*Levels:* Undergraduate
*Schedule types:* Lecture
*Department/School:* Engineering Technology

**CMT 3323 Strength of Materials for Construction Managers**
*Prerequisites:* Acceptance to the CMT Upper Division or permission of department; grade of "C" or better in MATH 2123 and GENT 2323.
*Description:* Stress and strain and their relationship to loads in buildings. Axial and bending loads on beams and columns. Applications in building and construction emphasized.
*Credithours:* 3
*Contact hours:* Lecture: 3
*Levels:* Undergraduate
*Schedule types:* Lecture
*Department/School:* Engineering Technology
CMT 3332 Construction Practicum II
Prerequisites: Grade of "C" or better in CMT 2263, CMT 3322 and CIVE 3614 or permission of department.
Description: Supervised temporary, full-time employment in construction, emphasizing field and office engineering and a variety of project management functions; 400 hours minimum documented time required. Previously offered as CMT 3333.
Credit hours: 2
Contact hours: Lecture: 2
Levels: Undergraduate
Schedule types: Lecture
Department/School: Engineering Technology

CMT 3364 Structures I
Prerequisites: Grade of "C" or better in CMT 2343 and CMT 3323 or GENT 3323 or ENSC 2143 and MATH 2114, CMT 3322 and acceptance to the upper division.
Description: Methods of structural analysis applicable to construction; design of timber structures and forms for concrete structures. Previously offered as CMT 3363.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 2
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

CMT 3433 Principles of Site Development
Prerequisites: Grade of "C" or better in CMT 2343, CIVE 3614 and CMT 3323 or GENT 3323 or ENSC 2143 and acceptance to Upper Division.
Description: Site layout, vertical and horizontal control, surveying instrument adjustments, site investigations, excavations, site drainage and geotechnical considerations. Course previously offered as CMT 2333.
Credit hours: 3
Contact hours: Lecture: 2 Lab: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

CMT 3463 Environmental Building Systems
Prerequisites: Grade of "C" or better in PHYS 1214 and acceptance to the CMT Upper Division.
Description: Plumbing, heating, air-conditioning, electrical and lighting systems as applied to residences and commercial buildings.
Credit hours: 3
Contact hours: Lecture: 2 Lab: 3
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

CMT 3554 Structures II
Prerequisites: Grade of "C" or better in 3364 and acceptance to the CMT Upper Division.
Description: Analysis and design of elements in steel and reinforced concrete structures; review of shop drawings for both types of construction. Course previously offered as CMT 3553.
Credit hours: 4
Contact hours: Lecture: 3 Lab: 2
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

CMT 3633 CAD and BIM for Construction Managers
Prerequisites: Grade of "C" or better in CMT 1213 and CMT 2253.
Description: Interpretation and production of construction drawings using computer aided drafting. Theory and use of Building Information Modeling software builds upon computer aided drafting skills.
Credit hours: 3
Contact hours: Lecture: 2 Lab: 2
Levels: Undergraduate
Schedule types: Lab, Lecture, Combined lecture and lab
Department/School: Engineering Technology

CMT 4050 Advanced Construction Management Problems
Description: Special problems in construction management. Offered for variable credit, 1-6 credit hours, maximum of 6 credit hours.
Credit hours: 1-6
Contact hours: Other: 1
Levels: Undergraduate
Schedule types: Independent Study
Department/School: Engineering Technology

CMT 4263 Estimating II
Prerequisites: Grade of "C" or better in EET 1003, CMT 2263 and GENT 2323 or ENSC 2113; acceptance to the CMT Upper Division or permission of department.
Description: Extensive use of actual contract documents for quantity take-off, pricing and assembling the bid for several projects. Use of computers in estimating.
Credit hours: 3
Contact hours: Lecture: 3
Levels: Undergraduate
Schedule types: Lecture
Department/School: Engineering Technology

CMT 4273 Technology in Construction
Prerequisites: Grade of "C" or better in CMT 4263 and acceptance to the CMT Upper Division.
Description: Applications of various technologies including software for construction.
Credit hours: 3
Contact hours: Lab: 6
Levels: Undergraduate
Schedule types: Lab
Department/School: Engineering Technology

CMT 4283 Business Practices for Construction
Prerequisites: Acceptance to the CMT Upper Division; grade of "C" or better in ACCT 2103, CMT 3273 and CMT 4563; or permission of department.
Description: Principles of management applied to construction contracting; organizing office and field staff; bonding, liens, financial management practices; introduction to the construction manager concept; schedule of values; construction billings.
Credit hours: 3
Contact hours: Lecture: 3
Levels: Undergraduate
Schedule types: Lecture
Department/School: Engineering Technology
CMT 4293 Construction Manager Concepts
Prerequisites: Grade of “C” or better in CMT 3332, CMT 4283, CMT 4273, CMT 3364, and ENGL 3323 and acceptance to the CMT Upper Division or permission of department.
Description: Capstone course utilizing skills and knowledge of estimating, scheduling, bidding, construction management, CAD, TQM, partnering and safety; includes topics in leadership, motivation and the use of current project management software.
Credit hours: 3
Contact hours: Lecture: 3
Levels: Undergraduate
Schedule types: Lecture
Department/School: Engineering Technology

CMT 4333 Equipment Management for Constructors
Prerequisites: Grade of “C” or higher in CMT 2263, CMT 2343 and ACCT 2103 and acceptance to the CMT Upper Division or permission of department.
Description: Selection and use of equipment, estimating equipment costs, estimating equipment production rates for all types of equipment used in building construction and heavy/highway construction.
Credit hours: 3
Contact hours: Lecture: 3
Levels: Undergraduate
Schedule types: Lecture
Department/School: Engineering Technology

CMT 4443 Construction Safety and Loss Control
Prerequisites: Must be accepted to the CMT Upper Division or obtain department permission.
Description: A detailed study of OSHA Part 1926 - Construction Safety and Health Compliance and related safety topics including topics related to the OSHA 30-hour training program; concepts and methods of loss control.
Credit hours: 3
Contact hours: Lecture: 3
Levels: Undergraduate
Schedule types: Lecture
Department/School: Engineering Technology

CMT 4533 Heavy Civil Construction and Estimating
Prerequisites: Grade of “C” or better in CMT 4263, CMT 2343, CMT 2263 and acceptance to the CMT Upper Division or permission of department.
Description: Theory and application of contractor estimating and bidding procedures used in heavy and highway construction projects.
Credit hours: 3
Contact hours: Lecture: 3
Levels: Undergraduate
Schedule types: Lecture
Department/School: Engineering Technology

CMT 4563 Construction Law and Insurance
Prerequisites: A grade of “C” or better in CMT 3322 and SPCH 2713 and acceptance to the CMT Upper Division or permission of the department.
Description: Legal and insurance problems as they pertain to the construction industry.
Credit hours: 3
Contact hours: Lecture: 3
Levels: Undergraduate
Schedule types: Lecture
Department/School: Engineering Technology