CONSTRUCTION MANAGEMENT TECHNOLOGY (CMTC)

CMTC 235. CONSTRUCTION MATERIALS AND TECHNIQUES. 5 Credits.
Notes: METC 102 may be waived by the instructor if you have two years of high school drafting.
Pre-requisites: METC 102, METC 110 or MENG 217, all with grades ≥C.
This course introduces various materials and techniques used in construction. Students gain an understanding of the fundamental principles of structural, physical and long-term performance of some of these materials through lecture and lab experiments. Students also gain an understanding of some of the mechanical and non-mechanical properties of various materials, common construction methods and knowledge of material properties and applications in construction.

CMTC 236. CONSTRUCTION MATERIALS AND TECHNIQUES II. 5 Credits.
Pre-requisites: CMTC 235.
This course introduces various materials and techniques used in construction for internal and external finishing. Students gain an understanding of the fundamental principles of structural, physical, and long-term performance of some of these materials and techniques through lecture and lab experiments. Students also gain an understanding of common construction methods and knowledge of mechanical systems and their application in construction.

CMTC 305. CONSTRUCTION ESTIMATING. 4 Credits.
Pre-requisites: CMTC 235 and MATH 142, MATH 161 or MATH 162; all ≥C.
This course provides students with the ability to estimate construction costs by reading and interpreting technical drawings. Primary focus is on calculating materials, labor and equipment cost for both residential and commercial building projects. Students generate quantity takeoffs for specific building projects.

CMTC 320. NON-METALLIC PROCESSES. 5 Credits.
Pre-requisites: METC 110; junior/senior status or permission of instructor.
Survey of non-metallic materials (such as woods, plastics, and ceramics) and the industrial processes utilized to convert raw materials into finished products. Course includes characteristics and properties of non-metallic materials and utilization of industrial tools and processing equipment.

CMTC 335. ARCHITECTURE. 4 Credits.
Notes: four hour lecture per week.
Pre-requisites: METC 110 or MENG 217, with a grade ≥C.
Design, layout, and development of residential dwellings and large structures.

CMTC 345. SOILS/SURVEYING. 4 Credits.
Pre-requisites: MATH 142, MATH 161 or MATH 162; with a grade ≥C.
This course introduces soil mechanics and site surveying. Through lecture and field work the course examines characteristics and compositions of soil, soil classification systems and the strength of soil masses. Students practice fundamentals of construction surveying, including taping, leveling, angular measurement, traversing, topographic surveying, building layout and grade staking.

CMTC 354. BUILDING CODES. 4 Credits.
Pre-requisites: ENGL 201 with a grade ≥C.
Building Codes is a comprehensive course pertaining to International Building Codes (IBC). Emphasis is placed on code requirements for both commercial and residential applications to include structural, mechanical, plumbing, fire, fuel gas and private sewage code requirements.

CMTC 399. DIRECTED STUDY. 1-5 Credits.
Cross-listed: APTC 399, DNTC 399, MNTC 399, TECH 399.
Pre-requisites: permission of the instructor, department chair and college dean.
Directed Study.

CMTC 439. TOPICS IN CONSTRUCTION. 6 Credits.
Notes: An authorized elective substitution for CMTC 495. This 6 credit course is only offered during the summer quarter.
Pre-requisites: TECH 331, TECH 462: all with grades ≥C, and junior standing.
This course explores topics in construction that are beyond the scope of the regular program course curriculum. It allows for a more in-depth coverage through lecture, discussion, and explorations of the construction world as students prepare to enter the work force.

CMTC 490. SENIOR CAPSTONE: PRODUCTION LAB. 4 Credits.
Cross-listed: APTC 490, TECH 490, DNTC 490, MNTC 490.
Notes: the course will simulate a real world design team concept by utilizing a design group that contains members of different program majors.
Pre-requisites: senior standing.
Satisfies: a university graduation requirement–senior capstone.
The course simulates the real world situation that graduates face. Students will work in teams to apply techniques of production management, product design/development, plant layout, scheduling, cost accounting, assembly, inspection and quality control to produce a product. Learning to deal with the team dynamics is a valuable learning process. Each student team produces a new product and a final written report to demonstrate how the process and goals of the course have been realized.

CMTC 491. SENIOR PROJECT. 4-6 Credits.
Cross-listed: APTC 491, TECH 491, DNTC 491, MNTC 491.
Pre-requisites: senior standing.
Independent and/or group study and implementation of a design and development project. (variable time).

CMTC 495. INTERNSHIP. 1-15 Credits.
Cross-listed: APTC 495, TECH 495, DNTC 495, MNTC 495.
Notes: Graded Pass/Fail. This course may be repeated.
Pre-requisites: junior or senior status and permission of the instructor, department chair and dean.
A maximum of 5 credits may be earned toward electives for a Technology major. Students considering electives for a Technology minor should consult with their departmental advisor.

CMTC 496. EXPERIMENTAL COURSE. 1-6 Credits.
Cross-listed: APTC 496, TECH 496, DNTC 496, MNTC 496.
Experimental Course.

CMTC 497. WORKSHOP, SHORT COURSE, CONFERENCE, SEMINAR. 1-6 Credits.
Cross-listed: APTC 497, TECH 497, DNTC 497, MNTC 497.
Workshop, short course, conference, or seminar.

CMTC 498. SEMINAR. 1-6 Credits.
Cross-listed: APTC 498, TECH 498, DNTC 498, MNTC 498.
Seminar.

CMTC 499. DIRECTED STUDY. 1-5 Credits.
Cross-listed: APTC 499, TECH 499, DNTC 499, MNTC 499.
Pre-requisites: permission of the instructor, department chair and college dean.
Designed for students wanting to pursue a subject beyond the scope of regular courses.