

# Civil Engineering Technology (CET)

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## Courses

### **CET 105 Construction Methods (3 Hours)**

This course introduces the student to the terms, methods, procedures, sequences of operation, and types of construction and planning in civil and building construction. This course is typically offered the first half of each semester. 3 hrs. lecture/wk.

### **CET 123 Building Codes (3 Hours)**

This course examines the organization, intent and use of building codes in general and the International Building Code in particular. Students will cover the reasons codes exist and how they form an integral part of the design criteria for every building project. Additional topics include building types, fire protection, accessibility, roofs, foundations, and interiors/exterior. This course is offered in the spring semester. 3 hrs. lecture/wk.

### **CET 125 Construction Specifications\* (2 Hours)**

**Prerequisites or corequisites:** CET 105.

Upon successful completion of this course, the student will be able to describe the phases of a project, identify the bidding requirements, explain contractual relationships between parties, categorize the drawings, write specifications, list warranties and explain contract modifications.

### **CET 129 Construction Management (3 Hours)**

This course is intended for students interested in learning management principles for construction projects. Upon successful completion of this course, the student should be able to perform many processes associated with construction projects and complete forms typically used in project management. Topics include contract documents, scheduling, job costs and management issues. Project management software will be used to schedule and track project resources and progress. 2 hrs. lecture, 3 hrs. lab/wk.

### **CET 140 Civil Engineering Materials\* (3 Hours)**

**Prerequisites or corequisites:** MATH 116 or higher.

Upon successful completion of this course, the student will be able to analyze materials commonly used in civil engineering construction projects. Common properties of soil, concrete and asphalt will be studied for classification as engineering materials. Students will learn to perform typical materials tests in accordance with ASTM guidelines.

### **CET 160 Green Building Fundamentals (3 Hours)**

This course introduces the student to sustainable design and green building practices used in the construction industry. The goal of the course is to improve the energy and environmental performance of buildings through a better understanding of standard practices used by industry professionals, as well as, to provide students preparation for the Leadership in Energy and Environmental Design (LEED) Professional Accreditation Exam. Course content will focus on sustainable practices as prescribed in the LEED Green Building Rating System.

### **CET 205 Advanced Construction Methods\* (3 Hours)**

**Prerequisites :** CET 105.

This course explores various building materials and how they are assembled during the construction process. Topics include wood, brick masonry, steel, concrete, and sustainable construction. Emphasis is placed on field construction techniques over building materials, which is presented in the introductory construction methods course.

### **CET 225 Construction Documents\* (2 Hours)**

**Prerequisites :** CET 125.

This course covers general documents used before, during, and after construction. Topics include document submittals, procurement, bidding, negotiating, and addenda. Modifications, claims, disputes, and payment are also addressed.

### **CET 227 Construction Cost Estimating\* (3 Hours)**

**Prerequisites :** CET 105 and CET 125 or department approval.

**Prerequisites or corequisites:** DRAF 129 or department approval.

This course adds to the student's knowledge of the construction process by covering the principles of construction estimating. Topics include estimating quantities of material using reference books, tables and the Construction Specifications Institute (C.S.I.) format and preparing estimating reports. Students will use industry-standard software for construction estimating. The student needs a basic knowledge of spreadsheet software to be successful in this course.

### **CET 229 Advanced Construction Management\* (3 Hours)**

**Prerequisites :** CET 129 and MATH 116 or higher.

This course builds on the introductory construction management course. The emphasis is on using sustainability to safely and efficiently manage a commercial construction job. Topics include earthmoving and heavy equipment; concrete, masonry, and steel construction; and construction process management. By building with the environment in mind, we can produce buildings that use our limited resources efficiently and provide a healthier environment for the occupants.

### **CET 271 Construction Management Internship I\* (3 Hours)**

**Prerequisites :** Department approval.

This course consists of supervised work experience in an approved training situation. It is designed to provide practical experience in the construction industry. An average of 15 hours per week for the semester of on-the-job training is required.