

CGN: Civil Engineering

Courses

CGN 2328 Computer Graphics for Engineering

College of Sci and Engineering, Department of Civil Engineer & Construct Mgt

3 sh (may not be repeated for credit)

This course introduces the graphic principles and practices in engineering. This course includes the development of the basic drafting skills needed to produce civil and other engineering plans and graphical presentations. The elements of descriptive geometry are addressed. A major component of the course is an introduction to the fundamentals of computer-aided drafting and design (CADD).

CGN 3501 Civil Engineering Materials

College of Sci and Engineering, Department of Civil Engineer & Construct Mgt

3 sh (may not be repeated for credit)

Prerequisite: EML 3011*

This course introduces the behaviors, properties, and testing of commonly used civil engineering materials such as aggregates, Portland cement, concrete, asphalt cement concrete, masonry, steel, and timber. Description of the manufacturing process of construction materials and their applications in the field is also covered.

CGN 3501L Civil Engineering Materials Lab

College of Sci and Engineering, Department of Civil Engineer & Construct Mgt

1 sh (may not be repeated for credit)

Prerequisite: CGN 3501*

The introduces the performance of laboratory testing and analysis techniques used in the determination of the mechanical behavior of materials under load that are commonly used in Civil and Construction engineering field following ASTM, AASHTO, and other engineering standards.

CGN 4803L Civil Engineering Capstone I

College of Sci and Engineering, Department of Civil Engineer & Construct Mgt

1 sh (may not be repeated for credit)

This course is the first part of a two-semester design project. Students are introduced to professional practice issues such as: procurement of work; bidding versus quality based selection processes; how design and construction professionals interact to construct a project; the importance of professional licensure and continuing education; and other professional practice issues. Students work in multi-disciplinary teams to develop a proposal and preliminary design report for a selected Civil Engineering project with oral presentation.

CGN 4804L Civil Engineering Capstone II

College of Sci and Engineering, Department of Civil Engineer & Construct Mgt

2 sh (may not be repeated for credit)

Prerequisite: CGN 4803L

This course is the second part of a two-semester design project class. Under faculty supervision, student teams proceed with the design project according to the plan developed in capstone 1. Students submit a final report and give a formal oral presentation.

CGN 4901L Directed Study in Civil Engineering

College of Sci and Engineering, Department of Civil Engineer & Construct Mgt

3 sh (may not be repeated for credit)

Approval by sponsoring professor and director of engineering program. Students will participate in the study of topics agreed to by a sponsoring and supervising professor.

CGN 4930 FE Exam Review Seminar

College of Sci and Engineering, Department of Civil Engineer & Construct Mgt

0 sh (may not be repeated for credit)

Prerequisite: CGN 4803L*

This course is a seminar that provides review lectures and problem-solving sessions for senior civil engineering students who need to take the Fundamentals of Engineering (FE) Exam to become engineers in training. Course content will include a review of relevant math, science, engineering economy, and ethics topics as well as fundamental concepts from the Civil engineering program as required on the FE exam.

CGN 4931 Special Topics in Civil Engineering

College of Sci and Engineering, Department of Civil Engineer & Construct Mgt

3 sh (may be repeated for up to 6 sh of credit)

This course provides topics of special interest in Civil Engineering, which may vary each time the course is offered. Course content may be engineering science, engineering design, or a combination of both. The special interest topic, when offered, will be stated in the schedule booklet. The course may be repeated by students participating in the study of topics agreed to by an instructor. The course may be repeated with Civil Engineering technical contents and can be used to substitute a required and/or an elective course. Senior standing and consent of the instructor or department are required.

CGN 4940L Internship in Civil Engineering

College of Sci and Engineering, Department of Civil Engineer & Construct Mgt

3 sh (may not be repeated for credit)

Students will participate in practical engineering work under industrial supervision. Approval of both the sponsoring employer and department is required prior to enrolling in this course. Students must do engineering work with a company equivalent to 256 hours (32 hours per week for 8 weeks or some other combinations) to get credit for 3 credit hours elective course.

* This course may be taken prior to or during the same term.