

## COURSE SYLLABUS (2 Page)

<b>Course Number:</b>	CEGR 3111
<b>Course Name:</b>	Construction Engineering
<b>Credits and Contact Hours:</b>	3
<b>Instructor:</b>	Erika Weber
<b>Textbook:</b>	Textbook not Required
<b>Other Supplemental Materials:</b>	Handouts

**Catalog Description:** The principles and techniques of engineering construction projects from the conceptual phase, through design and construction, to completion and close-out are presented. Students develop the analytical skills and awareness necessary on the design engineering side of construction projects. Topics include: project initiation, estimating, budgeting, allocation of resources, construction equipment, formwork and bracing, temporary structures, erection and assembly methods, application of PCI, ASCE, and AASHTO codes, and value engineering.  
*Most Recently Offered (Day): Spring 2016, Fall 2015, Spring 2015*  
*Most Recently Offered (Evening): Spring 2014, Spring 2013, Fall 2014*

**Pre-Requisites/Co-Requisites:** CEGR 3122, CEGR 3255, and CEGR 3278

**Course is: Required (R)**

**Goals:** To prepare civil engineering students for engineering jobs in the construction industry and to provide vital information of the role and management of engineering in the construction industry.

### **Student Outcomes Addressed:**

In this course, students will develop the following Student Outcomes:

- A. an ability to apply knowledge of mathematics, science, and engineering
- D. an ability to function on multidisciplinary teams
- E. an ability to identify, formulate, and solve engineering problems
- F. an understanding of professional and ethical responsibility
- G. an ability to communicate effectively
- I. a recognition of the need for, and an ability to engage in life-long learning
- J. a knowledge of contemporary issues
- K. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
- L. an ability to explain key concepts and problem-solving concepts used in management
- M. an ability to explain key concepts and problem solving processes used in business, public policy, and public administration

**Course Topics:**

Topics studied in this course include: construction drawings, specifications, contracts, REVIT, estimating, scheduling, equipment selection, bid methods, management and job site safety.

Students will be introduced to construction documentation standards, and industry programs.

This course will provide students with the opportunity to: acquire the techniques, skills, and modern engineering tools necessary for engineering practice; apply knowledge of mathematics, science and engineering.