

COURSE SYLLABUS (2 Page)

Course Number: CEGR 3255
Course Name: Structural Materials I Laboratory

Credits and Contact Hours: 2

Instructor: Erika Weber

Textbook: *Title:* Civil Engineering Materials (2nd ed.)
Authors: Somayaji
Year: 2001

Catalog Description: Composition, properties, and testing of: wood, natural and artificial aggregates, bitumens, Portland cement concrete, pozzolans, and structural metals. Experiments in solid mechanics. Data analysis, presentation, and report writing. One and a half hours of lecture and three hours of laboratory per week.
Most Recently Offered (Day): Spring 2016, Fall 2015, Spring 2015
Most Recently Offered (Evening): Course has not been offered in 3 years

Pre-Requisites/Co-Requisites: MEGR 2141; MEGR 2144 (Pre- or Corequisite)

Course is: Required (R)

Goals: Structural materials, including aggregates, concrete, steel, timber, and masonry will be studied in this course. Students will be introduced to material tests, data analysis, results presentation, and report writing.

Student Outcomes Addressed:

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

- A. an ability to apply knowledge of mathematics, science, and engineering
- B. an ability to design and conduct experiments, as well as to analyze and interpret data
- I. a recognition of the need for, and an ability to engage in life-long learning
- K. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Course Topics:

Topics include aggregates, specific gravity and absorption, concrete, concrete mix design, steel, stress and strain relationships, masonry, timber, composites, experimental techniques and materials manufacture. Professional writing skills are emphasized. Each student is required to review one journal paper regarding a structural material covered in this class.