

CEE 4950 – SENIOR DESIGN PROJECT
Required Course

Catalog Description:

CEE 4950: Senior Design Project. Lab 6. Credit 3. Comprehensive design project of civil engineering projects using a team approach. Prerequisite: Consent of Instructor (used to restrict participation to graduating seniors).

Math & Basic Sciences:	0 Credits	Course Coordinator:	Steven M. Click
Engineering Topics:	3 Credits	Contains Significant Design:	Yes
General Education:	0 Credits	Updated:	2014-06-11
Other:	0 Credits	Specify Type if Other:	

Text Book(s) and Supplemental Material(s):

None

Course Goal(s):

The goal of CEE 4950 Senior Design Project is to develop the student's ability to synthesize his or her accumulated engineering knowledge and apply it to the solution of a complex, realistic engineering project within a professional engineering environment.

Instructional Outcomes for the Course:

Students will be expected to:

1. Apply engineering knowledge to determine a viable solution to a realistic engineering project.
2. Find and use resources beyond those covered in engineering classes to support my work on a realistic engineering project.
3. Work cooperatively in a team environment to complete a realistic engineering project
4. Prepare a formal technical report which presents both methodology and solution to a realistic engineering project
5. Prepare materials for and give an oral report which presents both methodology and solution to a realistic engineering project

Criterion 3 Student Outcomes addressed by this Course:

- a) An ability to apply knowledge of mathematics, science, and engineering
- c) An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- d) An ability to function on multidisciplinary teams
- e) An ability to identify, formulate, and solve engineering problems
- g) An ability to communicate effectively
- 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

Program Criteria addressed by this Course:

- Apply knowledge of mathematics through differential equations, calculus-based physics, chemistry, and at least one additional area of basic science, consistent with the program educational objectives
- Apply knowledge of four technical areas appropriate to civil engineering
- Design a system, component, or process in more than one civil engineering context
- Explain basic concepts in management, business, public policy, and leadership

Course Topics:

1. Course introduction
2. How to prepare a technical report
3. How to prepare and give a technical presentation
4. Management and leadership in engineering
5. Interim and final presentations
6. Project working time

Additional Topics/Assignments for dual-level (4000/5000) courses:

None.