

CE 431/432 SENIOR DESIGN PROJECT

Type (check one): Required: X Elective: _____

2005-2006 Catalog Data: CE 431/432. Senior Design Project. Interdisciplinary team design projects are initiated by the student (or suggested by the faculty) and approved by the faculty. Investigated and developed throughout the senior year by the students. Reports are presented in both oral and written form. Practitioner involvement is required in each project. Professional registration, responsibility, and ethics. Prerequisite: CE 315. Taken in sequence during the last two semesters before graduation. Two semesters, four credits.

Prerequisites: CE 315

Co-Requisites: None

Textbook: None

Other Required Materials: None

Other References: None

Instructor: L. Yu Lin, K. Madhavan, S. Malasri, and G. McGinnis
Department of Civil and Environmental Engineering

Course Objectives: To provide students with practical design experience in civil engineering projects.

Prerequisites by Topics: Demonstrated ability in civil engineering courses

Topics: CE 431: Students complete project design for one option (two credits)
Project proposals. Review of proposals. Progress reports.
Formal presentations. Submit final written report.

CE 432: Students complete alternate solutions and reports (two credits)
Progress reports. Formal presentation of projects.
Submit final written report.

Class Schedule: One 50-minute session per week

Prepared by: Dr. K. Madhavan

Date: August 2005

**Professional Component:
CE 431/432 SENIOR DESIGN PROJECT**

Category (check one)	<input type="checkbox"/> Math/Basic Science <input checked="" type="checkbox"/> Engineering <input type="checkbox"/> General Education <input type="checkbox"/> Other
Design (check one)	<input checked="" type="checkbox"/> Significant <input type="checkbox"/> Some <input type="checkbox"/> None
Realistic Constraints (check all that apply)	<input checked="" type="checkbox"/> Economic <input checked="" type="checkbox"/> Environmental Sustainability <input type="checkbox"/> Manufacturability <input checked="" type="checkbox"/> Ethical <input checked="" type="checkbox"/> Health & Safety <input checked="" type="checkbox"/> Social <input type="checkbox"/> Political

Relationship to Program Outcomes:

Check all that apply:

- (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
- (c) an ability to design a system, component, or process to meet desired needs
- (d) an ability to function on multi-disciplinary 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
- (h) the broad education necessary to understand the impact of engineering solutions in a global and societal context
- (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