

## **CE 492 PROJECT**

Required Course

Spring 2010

**Instructor:** Name: Cem Avci  
Office Hours: MMWW 34

**Course Data:** Hours: FFF 678  
Room: M3100

### **Course Description (Catalog):**

#### **CE492 Project**

**(0+0+8)4**

Inter-disciplinary project undertaken typically by a small team of students, under the supervision of a faculty member. The object is to enable the student to apply as much of his/her education as possible to the solution of a specific realistic problem. Students are required to meet on a regular basis for consultation with, and report orally to their project supervisor. A written midterm progress report and a final report are required of each student together with at least one oral report to his/her classmates.

**Prerequisite:** Senior year level

#### **Course Objectives (Learning Outcomes):**

To develop an understanding of and appreciation for basic concepts in engineering design.

To introduce formal report writing such as proposals, design criteria and progress reports.

To implement team work and teach effective presentation skills.

To discuss socio-environmental issues and ethical conduct.

**Textbook:** There are no assigned books; only class notes and discussions will suffice.

**Reference Books:** N/A

#### **Curricular Context**

This required course constitutes a transition from fundamental math and science topics to specific applications within the context of all engineering disciplines. Estimated design content of the course is 100%.

#### **Laboratory and Computer Usage:**

Computer usage is limited to analyzing systems or components of a structure or an infrastructure. No design software shall be used.

#### **Class Policies:**

Homework: Homework questions to be assigned from various lectures such as proposal, design criteria and weekly progress reports. 20% of the course grade.

Proposal and Interim presentations: 20% of the course grade.

Final Presentation: Final presentation and final report, 60% of the course grade.

#### **Contribution of the Course to Program Outcomes:**

- (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 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
- (f) An understanding of professional and ethical responsibility
- (g) An ability to communicate effectively
- (i) A recognition of the need for, and ability to engage in life-long learning
- (k) An ability to use the techniques, skills and modern engineering tools necessary for engineering practice

#### **Course Assessment:**

Course will be assessed on the basis of the accomplishments regarding the course objectives and the contributions to the program outcomes. The evaluation will consist mainly of the responses from the students, who will provide their comments to various course related questions in the final week of the semester.

<b>Week</b>	<b>Topics</b>	<b>Homework Assignment</b>	<b>Objectives</b>
1	Introduction and presenting project topics from various fields of Civil Engineering, forming project teams.		To introduce design project topics to student teams.
2	Introduction to proposal writing; letter of intent; request for proposal.		To describe the importance of proposal writing and formal communication techniques.
3	Step-by-step proposal writing including methodology, organization chart, project schedule, project cost, and resumes.		To give details about how to write a winning proposal.
4	Project implementation: how to start and organize a project from A to Z. Design brief and its table of contents.	Write a formal proposal about your design project including all the materials described in previous lecture.	To learn formal proposal writing techniques.
5	Design Criteria	Write a formal design criteria about your project	To learn the basic concepts and needs of a design criteria
6	Team presentations – proposal presentation	Write a formal progress interim report about your project.	To be able to make formal presentations and learn how to critique presenting teams.
7	Guest lecturer from civil engineering field.	Write a formal progress interim report about your project.	To give a lecture about engineering design procedures.
8	Guest lecturer from civil engineering field.	Write a formal progress interim report about your project.	To give a lecture about project management.
9	Team presentations – progress presentation	Write a formal progress interim report about your project.	To be able to write formal interim reports and make short presentation
10	Guest lecturer from civil engineering field.	Write a formal progress interim report about your project.	To give a lecture about civil engineering practice in Turkey.
11	Spring Break – No Class		
12	Ethics in Engineering business	Write a formal progress interim report about your project.	To understand and identify professional conduct and rules.
13	Project discussion period. Preparation for the final presentations.	Write a formal progress interim report about your project.	To prepare for final presentations.
14	Final project presentation		To present design projects in front of department's staff; submit a written project thesis.