

CE 101 INTRODUCTION TO CIVIL ENGINEERING

Required Course

FALL 2008

Instructor: *Name:* Semih S.Tezcan
Office Hours: All afternoons (Phone in and drop by)

Course Data: *Hours:* FFF 678
Room: M2230

Course Description (Catalogue):

CE101 Introduction to Civil Engineering

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Historical background, present status and future challenges of civil engineering profession. Ethics and professional responsibility. Written and oral communication. Concepts of analysis, design, computational approaches, experiments. Interpretation of results and decision making. Invited lecturers.

Prerequisite: Consent of instructor

Course Objectives (Learning outcomes) :

The Course is not intended to teach any particular Civil Engineering subject. However, the main emphasis will be in gaining practical and theoretical experience in conducting independent research on any Civil Engineering subject, as well as in oral and written presentations, in team work and in self-discipline.

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

Reference Books: Library research and presentations on specific topics will be required .

Curricular context:

The students will be organized in groups of five or six and will conduct research on a preselected general engineering subject. The main idea is to improve the abilities to perform an in-depth study on an unfamiliar subject and to be able to convey the messages successfully to others and/or public. Some prominent external speakers will be also invited to give conferences

Computer Usage:

The students will prepare assignments and projects using presentation, word processor and spreadsheet programs.

Laboratory Sessions:

Students will get themselves acquainted with university's Civil Engineering laboratories and conduct simple experiments.

Class Policies:

Grading will be based on attendance, skill in presentations, willingness to take initiatives, sense of responsibilities, degree of success in team/group/committee work, interest in the Course, sincerity and devotion

Contribution of the Course to Program Outcomes:

- (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,
- (j) A knowledge of contemporary issues,

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.

Week	Topics	Homework Assignment	Objectives
1	Welcome to Civil Engineering, introduction to Civil Engineering curriculum at Bogazici University		To welcome students to the department and present introductory remarks.
2	Civil Engineering and its areas		To introduce brief history and fields of Civil Engineering, and materials used.
3	Ethics in Engineering business		To understand and identify professional conduct and rules.
4	Team presentations	Earthquake presentation (write report and prepare power point presentation)	To be able to conduct research, write a report and prepare oral team presentation on a topic.
5	Meet the department's staff, the professors.		To get acquainted with professors and to discuss with them issues such as departmental programs to Civil Engineering careers in general.
6	Spreadsheet applications	Prepare a spread sheet application on finding intersection points of a straight line with a parabolic curve.	To familiarize students with spread sheet programming.
7	Laboratory visits (hydraulics, structural materials, soils, and earthquake)		To familiarize various topics and research in Civil Engineering area.
8	Guest lecturer - a practicing Civil Engineer from the industry.		To interact students with professionals and demonstrate them the range of Civil Engineering applications.
9	Small laboratory experiments such as determination of concrete strength with ranging water/cement ratios. Also, observe ongoing laboratory works.	Submit a laboratory report on concrete strength.	To be able to learn how to mix a concrete batch, to observe the differences of strength between different water/cement ratios, to analyze data, and report writing.
10	Construct a balsa wood bridge of 0.5 – meter clear span in structural laboratory.	Bridge research written report and oral presentation.	To introduce the concept of design an economical and aesthetic structures.
11	Site visit – Tekfen high rise building construction site		To demonstrate students large Civil Engineering projects and their involvements.
12	Bridge building competition – largest ratio of applied load at mid-span to bridge load at mid-span to bridge's own weight wins.		To participate in engineering competition and appreciate order of loads on structural elements.
13	Team presentations	Bridge presentations (write report and prepare power point presentation).	To make oral presentation on bridge building competition and discuss modes of failures and recommend further improvements.