

CE 394
Civil Engineering History, Ethics,
Engineering Economic Analysis, and
Case Studies



Course Information, Fall 2001

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Purdue University
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**School of Civil Engineering
FALL 2001**

**CE 394
Civil Engineering History, Ethics, Engineering Economic Analysis, and
Case Studies**

TTh 12:00-1:15pm

Room: CIVL 1144

Instructor: Samuel Labi, CIVL 4113, labi@ecn.purdue.edu
Teaching Assistants: Ashad Hamideh and Kannan Viswananth

Office Hours: Samuel Labi: MWF 11:00am- 1:00pm

Course Type

CE384 is a core course for undergraduate studies in Civil Engineering. It is useful to all undergraduate students who intend to pursue a career in civil engineering and related disciplines.

Course Objective

The goals of the course are as follows:

- Develop concepts of economics applied to engineering problems and decisions
- Develop an appreciation of the evolution of various Civil Engineering disciplines and ethics of this profession
- To help students in their preparations for the EIT Exam

Course Description

The economic analysis section of this course starts with a discussion of the basics concepts of engineering economics, such as the time value of money, cash flow diagrams, and interests rates. With this background, the course proceeds to present various means by which alternative engineering projects can be evaluated for the selected of the most attractive alternative. Then the course discusses the concept of depreciation of civil engineering assets, bonds and inflation adjustment. The course then discusses features of the financial environment. Finally, techniques for evaluating risks and the impacts of decisions are presented.

The second part of the course involves discussions of the historical evolution various civil engineering disciplines as well as presentation of recent case studies in civil engineering design and implementation.

Course Pre-requisites

MA 261 (Multivariate Calculus).

Course Material

Textbook:

Civil and Environmental Systems Engineering, by Charles S. Revelle, Earl Whitlatch, and Jeff Wright, Simon & Schuster Custom Publishing, Upper Saddle River, New Jersey, 1997. The textbook for the second half of the course will be The Builders: Marvels of Engineering, National Geographic Society. Both books are available at campus bookshops.

Other Resources:

- (a) CE394 Main Website: for sample examinations, homework assignments, etc.

<http://bridge.ecn.purdue.edu/~ce394>

This site is currently operational.

- (b) CE394 webCT: For viewing your grades.

<http://webct.cc.purdue.edu/public/CE394/>

This site will be operational by September 1, 2001.

Class Attendance

Students are expected to attend all classes. Absences should be preceded by notification (e-mail or otherwise). Class attendance records may be taken at random, and your overall attendance evaluation may be based on such random records.

Homework Policy

Homework must be turned in no later than the beginning of the class session on the day that they are due. Any adjustments to homework grades must be resolved within two weeks of the day on which that homework assignment is returned. All questions about grades should first be directed to the TA. All grades must be finalized within this period – in other words, no additional points shall be awarded at the end of the semester to "boost" your grade if near the grade cutoff.

Students are expected to submit all homework assignments in a timely fashion. Every late day of submission results in 10% loss of overall points for the assignment.

Grading Policy

There will be two in-class exams and no final exam. The in-class exams will be on engineering economics and will be of a format similar to that used for the fundamentals of Engineering exam. Without prior notification, an in-class quiz will be given at the beginning of any economics class period..

The grading distribution for the course is as follows:

Economics Homework	15%
1 st Exam	15%
2 nd Exam	15%
Quizzes	10%
Homework (Ethics, Professionalism, and Problems associated with Case Histories)	50%

Final grade breakdowns will be at the sole discretion of the instructors but will be no higher than the lowest cutoff value:

100 - 90%	A
89 - 80%	B
79 - 70%	C
69 - 60%	D
<60%	F

Student Conduct:

Students are expected to abide by the Purdue University Student Conduct Code. Further, it is assumed that each and every student subscribes to a personal code of ethics based on a value system that adheres to the highest standards of academic integrity. Any breach of academic honesty or disruptive classroom behavior will be handled in accordance with established university procedures. (This Student Code of Honor is analogous to the CODE OF ETHICS of the American Society of Civil Engineers that guides practicing professional civil engineers.) Interaction between the instructors and the students in this

course will be similar to interaction among professionals. Wearing of baseball caps is strongly discouraged.