

CE 473
ENGINEERING LAW, FINANCE AND ETHICS
COURSE SYLLABUS
FALL 2013

Catalog Description: An examination of the legal, financial and ethical issues regularly considered by all practicing engineers and construction project managers.

Instructor: Dana Sherman, Esq. (BA, JD, MBA, MBT, MPA)
Senior Lecturer,
Astani Department of Civil Engineering since 1979
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Meeting: ZHS 159 (Section 29676R)
Tues 6:30 to 9:10 p.m (a 10 minute break)

Office hours: OHE 530G: (a) After class,
(b) Tue and Thur afternoon BY APPOINTMENT
(c) By e-mail or telephone at any time

Prerequisites: Upper division or graduate standing or permission of the instructor.
The course is not limited to civil engineering majors. The course will be very demanding in the nature and amount of the material covered. No prior background is expected

Texts Required: BASICS of Engineering Economy by Blank and Tarquin (BEE)

Handout materials will be posted on Blackboard (H/O)

Grader: tba

Warning: This is not really one course, it is really three separate one semester courses that are combined into a single one semester course. You will be taught about the law, you will be taught about finance and engineering economics and you will be taught about basic concepts in ethics. There will be from 25 to 50 pages of reading each week. There will be quiz every week and a homework assignment/problem assignment due almost each week. The material is not hard, but for most of you it will be completely new. If this is the semester you are going to take 22 units, I suggest that this course not be one of them. If this is the semester you are going to have a baby or patent your invention or learn to socialize like a business student, this is not the semester to take this course. The class is not graded on a curve, but my expectations for what level of work constitutes an A are rather high. Oh, and if you are thinking about taking this course from someone else, sorry...I'm the only person who has ever taught the course.

Course Objectives:

The course is intended to provide the practicing engineer with an introduction to the knowledge and information necessary to engage in the daily practice of engineering and/or construction management. This includes an understanding of the legal context in which all firms must operate, contract principles, liability principles and risk management, as well as the principles of economics and finance utilized by engineers. The class will also make the student aware of ethical issues in engineering and business practice. The course material includes information necessary to pass the National Fundamentals of Engineering Examination.

Method of Instruction:

Lecture and class discussion will occupy the class period. Students are expected to participate in class and participation is considered when assigning final course grades. There will be no discussion sections or problem sessions.

Grading:

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|-------------|---------------------------------------|
| First Test | 40% (engineering economics) |
| Second Test | 40 (not cumulative: legal principles) |
| Quiz/Assign | 20 |
| | ----- |
| | 100% |

There is no “forced curve” and cooperative learning is encouraged on homework assignments. Thus, it is to your benefit to help each other as much as possible. However, this does not mean that you should simply copy a homework assignment of another student. If it is determined that copying of assignments is taking place, all students involved will get negative (not just zero) the number of possible points on the assignment. Further disciplinary action is described in SCAMPUS.

Weekly and cumulative class scores will be sent to each student frequently. You are also encouraged to contact the instructor if you are having problems as early in the course as possible and not wait until you are desperate condition.

Over the years, particularly in recent times, the quality of the USC students has improved considerably and I am certain that this class will not be an exception. The best students will be diligent in attending class and completing the homework assignments in a timely manner.

Assignments:

Assignments are due at the beginning of class. Late assignments are accepted up to one week late with a penalty of fifty percent of the actual score if the assignment is not discussed in class. Be sure to put your name on your written homework assignment papers and your STUDENT NUMBER. You should turn in the original assignment but **retain a copy for yourself**. We will attempt to post homework assignments within two weeks. Questions regarding the grading of a homework assignment should be brought to the attention of the instructor as soon as possible. Incorrect or erroneously omitted scores must be noted within two weeks. Unclaimed papers are discarded after 4 weeks.

Other Course Activities:

From time to time during the semester there may be additional activities relevant to the course which will not take place during regular class hours which are extra credit point opportunities. These points will be added to your total score after the letter grade cutoff points are established (that is these points really are extra credit). The maximum extra credit points available will be an additional 5% of the total points possible.

Quizzes and Examinations:

There will be a quiz and/or assignment due at almost every class. The quiz is based upon the lecture of the previous week and the reading material for that night's class. You are expected to have read the material prior to class. There is **no** make-up of missed quizzes. Quiz and examination exercises are not cooperative. Examinations are closed book, closed note and closed mouth. Calculators may be used if appropriate. You **MAY NOT** go on-line or communicate with other students. The first test covers financial issues. The second test/final exam covers ethics and legal issues. The date of the final exam is set by the university and cannot be changed.

Quizzes and examinations are given using scan-tron forms in a true-false/matching /multiple choice format. Some students complain that this does not allow for partial credit. However, I have found that there is a **VERY** high correlation between students who do well on essay/problem type tests and those that do well on objective tests. The **VERY** large number of questions helps to assure that random luck or guessing will not be a factor.

Attendance:

Attendance is not mandatory and is not taken but your failure to attend class may result in a missed quiz score. Participation is considered in administering the final course grades. I understand that students often have personal, family or employment obligations that may result in a class being missed. If this occurs, contact the instructor immediately. To repeat, after 30 years at USC , I will advise you that the best grades uniformly go to students who attend each class and do the homework assignments timely.

Taping of lectures and class presentations or discussions is not allowed. There is no term project or paper due either as a requirement or as "extra credit."

Additional Important Information:

Academic Integrity

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by the instructor, and the obligation both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own.

All students are expected to understand and abide by these principles. The Viterbi School adheres to the University's policies and procedures governing academic integrity described in the Student Conduct Code in section 11.00 of *Scampus*. The recommended violation sanctions are found at www.usc.edu/dept/pulibcations/SCAMPUS/gov/. Students are expected to be aware of and observe the academic integrity standards applicable to all students and will be enforced in this course. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The review process can be found at www.usc.edu/student-affairs/SJACS

Disability Accommodations

Any student requesting academic accommodations based upon a disability is required to register with the Disability Services and Programs Office (DSPO) each semester. A letter of verification for approved accommodations can be obtained from DSPO and should be delivered to the instructor as soon as possible. DSPO is located in STU 301 and the telephone number is 213-740-0776.

Personal Matters

Occasionally, a student will have a personal or family medical or other emergency, will have the necessity to travel for work related business, or will be compelled to miss a class due to a significant university sponsored event in which the student will participate including intercollegiate athletics (note: this does not include primarily social events....even if you are a business student). Contact the instructor as soon as the possible conflict is known and arrangements will be made, if appropriate, to the extent possible to allow the student to timely turn in homework assignments by fax or email or to take a quiz in advance.

ENGINEERING LAW, FINANCE AND ETHICS
CE 473
(Tentative)

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| Aug 27 | Understanding Financial Statements | H/O |
| Sep 03 | Understanding Financial Ratios and Capital Markets BEE 1, Ap. B | H/O |
| Sep 10 | How Time and Interest Affect Money BEE 2; 3.1-3.2 | |
| Sep 17 | Present Worth Analysis BEE 4 | |
| Sept 24 | Rate of Return Analysis BEE 6.1-6.5 | |
| Oct 01 | Breakeven and Replacement Analysis; Depreciation and Taxes BEE 8.1-8.2; 9.1-9.3 | |
| Oct 08 | Test #1 on Financial Issues; lecture after exam (40% of grade) | |
| Oct 15 | Introduction: Sources of law regulating engineers including the legislative, judicial and regulatory systems | H/O |
| Oct 22 | The legal system and legislative, judicial and administrative systems, criminal and civil law, etc. | H/O |
| Oct 29 | Contract introduction: principles of contract formation | H/O |
| Nov 05 | Contract parties, contract forms and purposes, effect of illegality performance and breach | H/O |
| Nov 12 | Intentional torts and principles of liability | H/O |
| Nov 19 | Negligence and Strict Liability, Insurance and Bonds | H/O |
| Nov 26 | Engineering Ethics | H/O |
| Dec 03 | Engineering Ethics | H/O |

Dec 10 Study Day/Review

Dec 17 Final Examination on Legal Principles (40% of grade)

H/O: Instructor prepared handout

BEE: Basics of Engineering Economy