UNIVERSITY OF ARIZONA
DEPARTMENT OF CIVIL ENGINEERING AND ENGINEERING MECHANICS

CE 408
ISSUES IN PROFESSIONAL ENGINEERING PRACTICE

Schedule – Fall 2002

Instructors:  Dr. Juan B. Valdés, P.E.               Tuesday and Thursday 5:00-6:15 PM
             Practitioners as noted.               Rm. CE 201
Office:         Civil Engineering Building Rm. 206
Final exam: Thursday, April 6, 2001 from 5:00 to 7:00 PM

Goals

Overall Educational Goal:  To introduce civil engineering students to the wide spectrum of non-technical issues that impact professional engineering practice in today's society.

Specific Instructional Goal:
1. Develop an understanding of how work is procured and an appreciation of bidding versus quality based selection (QBS) processes.
2. Develop an understanding of contracts, contract language, and contractual obligations.
3. Develop an appreciation for professional liability and the methods of dispute resolution, including litigation, arbitration, and mediation.
4. Develop an understanding of types of insurance required in engineering practice, methods for limiting liability, and loss prevention techniques.
5. Develop an understanding of engineering project structure, project tasks, scope and budgeting, and interactions among design professionals and other members of a project team.
6. Develop in the students an appreciation of professional ethics and its impact on engineering practice.
7. Introduce students to the QBS selection process by requiring student teams to prepare and present a Statement of Qualifications (report and oral presentation) to a review panel. An actual RFQ is used for this exercise.
8. Impress upon students the importance of professional licensure and the need for continuing education.

Fall 2002 Policies and Procedures

GRADING POLICY
Your numerical grade will be computed according to the following distribution:
<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Homework</td>
<td>15 %</td>
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<tr>
<td>Attendance</td>
<td>15 %</td>
</tr>
<tr>
<td>Final Exam</td>
<td>10 %</td>
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<tr>
<td>SOQ/Proposal Projects</td>
<td>60 %</td>
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Your individual letter grade ($G_i$) will be determined according to the following statistical distribution:

1. The mean numerical grade ($G_M$) will be computed for the class.
2. The standard deviation ($\sigma$) from that mean will be computed.
3. Provided the statistics are meaningful, letter grades for each individual ($G_i$) will be assigned as follows:
   - **A** $G_i > (G_M + 1\sigma)$
   - **B** $G_M \leq G_i \leq (G_M + 1\sigma)$
   - **C** $(G_M - 1\sigma) \leq G_i < G_M$
   - **D** $(G_M - 2\sigma) \leq G_i < (G_M - 1\sigma)$
   - **E** $G_i < (G_M - 2\sigma)$
4. If the statistics are not meaningful (e.g. if $\sigma$ comes out so large that a total grade > 100% is required for an "A"), then traditional cutoffs will be used to determine letter grades.

**HOMEWORK POLICY**

Homework assignments are due AT THE BEGINNING OF CLASS on the date that they are due. NO LATE HOMEWORK WILL BE ACCEPTED - NO EXCEPTIONS. This means that if you are late for class on the day a homework is due, it will not be accepted. All “written” homework is to be submitted typed on a word-processor. Hand calculations and hand-drawn figures are acceptable for homework assignments that require them, but you should not expect to have many assignments of this type.

**ABSENCE POLICY**

You are required to attend all lectures and you are expected to be on time for each lecture. You will be required to sign an Attendance Sheet for arbitrarily selected lectures. Your grade assigns a weight of 15% to attendance. Three (3) non-excused absences will be grounds for administrative drop with the grade of “E”.

**POLICY REGARDING DISHONEST SCHOLASTIC WORK**

The University's Code of Academic Integrity holds the student fully responsible for the content and integrity of all academic work related to examinations, homework, term projects, laboratory reports, and any other grading component associated with a course.

Furthermore, the Code of Ethics of ASCE and the ethical principles of the Engineering Profession specifically prohibit dishonest work and/or plagiarism. Therefore, if I am made aware of cheating taking place in this course, I will do all that I can to make sure that those involved are subjected to the most severe disciplinary sanctions permitted by the State of Arizona’s Administrative Code and the University of Arizona’s Administrative Manual.
REFERENCES

(References are on reserve in the Main Library for 2 hour)


(3) ASFE (1980), *Model General Conditions*, Silver Spring, MD.


(5) ASFE (1990), *Risk Allocation: A New Name...*, Silver Springs, MD.


The roman numerals followed by letters of the alphabet that are found after some of the topic titles in the syllabus refer to chapters (Roman numerals) and sections (letters of the alphabet) in the primary reference for this course: