

**INSTRUCTOR:** Thomas Sputo, Ph.D., P.E.  
 Instructor of Structural Engineering and Owner, Sputo Engineering  
 Consulting Office Phone: 378-0448 Fax: 373-1331  
 E-mail: sputoeng@gainv.mindspring.com  
 Campus Office: Weil 204

**OBJECTIVE:** Develop a working understanding of the basics of analysis and design of reinforced concrete beams and columns.

**TEXTS:** Reinforced Concrete Design, 3rd Edition, Leet and Bernal, McGraw-Hill  
*ACI 318-02, Building Code Requirements for Structural Concrete*

**TIME:** Tu, Th 2nd Period M 8-10th Period

**LECTURES:**

**READING (TEXT):**

1	Introduction	Ch. 1
2	Design Methods	Ch. 1
3	Material Properties	Ch. 2
4	Analysis under Service Loads	3.1 - 3.4
5	Analysis under Service Loads	3.1 - 3.4
6	Deflections	3.5
7	Cracking	3.6
8	Flexure - Strength Design	3.7 - 3.10
9	Singly Reinforced Rectangular Sections	3.11 - 3.13
10	Singly Reinforced Rectangular Sections	3.11 - 3.13
11	Doubly Reinforced Rectangular Sections	3.14
12	T - Beam Sections	3.15
13	One Way Slabs, Temperature Steel	3.16 - 3.17
14	Shear and Diagonal Tension	4.1 - 4.5
15	Shear and Diagonal Tension	4.1 - 4.5
16	Shear and Diagonal Tension	4.1 - 4.5
17	Bond, Anchorage, Development Length	6.1 - 6.7
18	Anchorage, Development Length	6.1 - 6.7
19	Standard Hooks	6.8
20	Cut-off Points, Splices	6.9 - 6.10, 6.11-6.12
21	Short Columns	7.1
22	Short Columns	7.1
23	Short Columns	7.6 - 7.9
24	Short Columns	7.6 - 7.9
25	Short Columns	7.6 - 7.9
26	Slenderness Effect	7.2 - 7.5
27	Slenderness Effect	7.10 - 7.13
28	Introduction to Footing Design	8.1 - 8.4
29	Introduction to Footing Design	8.6
30	Closure	

**MAXIMUM GRADING SCALE:** (May be relaxed at the option of the instructor)

93 - 100	A
90 - 92.99	B+
85 - 89.99	B
83 - 84.99	C+
77 - 82.99	C
75 - 76.99	D+
70 - 74.99	D
00 - 69.99	E

Quizzes	84%	(Weekly at lab, lowest grade dropped) (Final quiz is comprehensive and counts for 2 quiz grades)
Homework	10%	
Attendance	06%	

**CLASS RULES:**

1. Please be nice. As a class, you will only get out of this what you collectively put in. You have the opportunity to learn about engineering from a practicing engineer. Take advantage of this opportunity!
2. Be on-time to class. The instructor will start class on-time. The instructor will endeavor to end class on-time.
3. Attendance at lecture and lab is mandatory. Attendance will be taken. Grade will be based on the percentage of class sessions attended. For basis of computing grades, there will be no excused absences .
4. Each lesson requires preparation by the student prior to the lecture. At a minimum, read the assigned material from the textbook prior to the lecture.
5. The textbook and ACI 318 are required for all lectures and lab sessions.
6. Lab sessions will consist of a short (1 hour max) quiz at the start of lab. Occasionally a make-up lecture will be presented before the quiz. Homework will be assigned after the quiz, and help will be available after the quiz. Working with fellow students on homework will be allowed as self-help. Homework will be due at the beginning of the following lab session. Late homework will be accepted up to 1 week late, with a 25% penalty.
7. Homework will be submitted on engineering computation paper. Number and label all pages. All work, including quizzes and assignments will be graded on the basis of content and neatness. Use straightedges, reasonable scales, use pencil (that means also using an eraser), and print and label clearly. Reference equations to ACI 318 or textbook (i.e.: ACI Eqn. 10-2). List assumptions or rationale for your work.
8. Textbooks are not allowed during quizzes. Homework and ACI 318 will be allowed. The use of another persons notes or materials is not allowed.

9. No make-up work will be allowed, except in cases of emergencies or civic responsibilities (jury duty, etc.), provided that the instructor is notified by e-mail in advance. Provisions for make-up work will be determined on a case-by-case basis.
10. Some class communication will be by means of e-mail. Check your e-mail regularly (at least daily). Keep the instructor informed of any changes to your e-mail address. Failure on the part of the student to keep-up with e-mail communications is not excusable.

## **IMPORTANT UNIVERSITY INFORMATION**

### *Academic Honesty:*

All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a student at the University of Florida and to be honest in all work submitted and exams taken in this class and all others.

### *Accommodations for Students with Disabilities:*

Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation.

This short paper by Professor Yao from Texas Tech is a pretty good summary of my thoughts and philosophy on grades. I could not have said it better than this.

**Sputo**

## **ON GRADES AND GRADING**

**by James T. P. Yao for his students and interested colleagues**

The grade in a given course is a measure of the student's performance in that endeavor. The overall grade point averages are indeed important considerations for all students. When I was a student at the University of Illinois in Urbana-Champaign, I did care about my grades at that time. However, I never complained about any of my grades though, at times, I felt that the grade I received in a particular course might not be fair. The fact is, on the average, the overall grade point average did reflect the knowledge gained and the effort that I put into my college education. There were courses for which I thought that I deserved a better grade than the one on my record. On the other hand, I also had grades that were better than what I expected and/or deserved. In the long run, they all averaged out at the end of my college career. Most importantly, I learned from each professor and from each course that I had.

A few years after I graduated, I forgot all my grades. No one has ever asked for my grades just a few years after I graduated from college. To date, however, I have kept all the basic knowledge that I gained from my college education. Especially, the method of learning new things on my own has been useful. If the students aim at learning as much as they can from each course and each professor, the good grades will come as a result of their diligent work, on the average. On the other hand, if the students waste their time arguing about their grades, they will lose time for studying new lessons and thus hurt their future grades.

As a teacher, I try very hard to be fair and consistent in grading student papers. The student will get a perfect score if he/she gives a correct answer. If the answer is not correct, the teacher is the one who judges how serious the error is and assigns a partial score accordingly. As a student, I had several professors who did not give partial scores. The reason was that, the engineering system could fail with the wrong answer, no matter how close the answer is to the correct one (e.g., exactly the same number but with a wrong sign). I do not agree with that policy but respect their judgement in those courses. In any event, partial scores are subjective depending on the experience and viewpoints of the individual teachers. It is counter-productive to argue about it.

Please be careful in doing your homework, tests, and other assignments. People's lives and properties will depend on your work someday in the near future. Try to learn as much as you can while you are in school. Communicate with your teachers and classmates frequently, and concentrate on the learning process. With knowledge, you will become a successful and proud engineer soon. **HAVE KNOWLEDGE, WILL SUCCEED!**