

INSTRUCTOR: Thomas Sputo, Ph.D., P.E.
 Lecturer of Structural Engineering and Owner, Sputo Engineering
 Campus Office: Weil 480B 392-9537 x 1496
 Consulting Office: Phone: 378-0448 Fax: 373-1331
 E-mail: sputo@ufl.edu

TEACHING ASSISTANT: Primary Rachel Conn Weil 480A gatorrac@ufl.edu
Secondary Jenny Turner Weil 465 hyper2@ufl.edu

OBJECTIVE: Introduction to the basics of structural design in structural steel using current design codes. Students are expected to become proficient in this basic knowledge.

TIME: M, W, F 2nd Period Weil 234

TEXTS : Segui, William T., *LRF D Steel Design*, 3rd Edition, Thomson-Brooks/Cole, 2003.
 (ISBN 0-534-39373-x)

Manual of Steel Construction, LRF D, 3rd Edition, American Institute of Steel Construction, 2001.

Available for purchase through instructor during first week of class - \$95.00 -
 Check made payable to "AISC" - NO CASH WHATSOEVER

Class Notes and Supplemental Material (Available for purchase through ASCE)

WEB PAGES:

<http://ces4605.home.mindspring.com> For homework and quiz solutions
<http://www.mindspring.com/~sputoeng/default.htm> Sputo's general web page
<http://www.aisc.org> American Institute of Steel Construction

GRADING CRITERIA:

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|----------------------|-----|
| (7) One-Hour Quizzes | 75% |
| Homework / Projects | 21% |
| Attendance | 04% |

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

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|------------|----|
| 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 |

CLASS RULES:

1. Attendance at lecture is mandatory and timeliness is important. Attendance will be taken at the beginning of class. Attendance grade will be based on the percentage of class sessions attended. For basis of computing grades, there will be no “excused absences”.
2. Each lesson requires preparation by the student prior to the lecture. The AISC Manual and textbook are required for all lectures.
3. Quiz Information: Quizzes are closed textbook, closed note. You are allowed to have your copy of the *Manual of Steel Construction*, calculator, straightedge, pencil(s), eraser, 1 sheet of white paper with whatever you want on it (to be turned in with quiz and not returned) and green calculation paper to write on.
4. Homework will be assigned, typically at each class meeting. Working with fellow students on homework will be allowed as “self-help”, but the final homework which is turned in must represent the work of the individual student. Do not copy another student’s work. Homework will be compared and violations will be dealt with. Assigned homework will be due the second following class meeting date, at the beginning of the 2nd period class meeting. **Late homework may be turned in no later than the start of the next class meeting after the due date with a 25% penalty.** Homework not turned in by that date will not be accepted.
 - a. Homework will be submitted on engineering computation paper or as computer output (**DO NOT RE-USE PAPER!**) **ONLY ONE PROBLEM PER SHEET**. Number and label all pages. **Work neatly. All work 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 AISC (i.e.: AISC Eqn. H1-1a). List assumptions or rationale for your work. **Sloppy or difficult to follow work will be returned ungraded. No exceptions.**
5. The lowest of the 7 quiz grades will be dropped for purposes of computing final grades.
6. No make-up work or quizzes 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. The decision of the instructor is final.
7. 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.
8. Solutions will be posted to the class web site for a period of 2 weeks after the due date, at which time they will be removed.
9. Grade Appeals:

General: At any time that you do not understand the solution to a quiz or homework problem, please see either Rachel Conn or Dr. Sputo. We will be happy to assist. However, if you believe that a grade was assigned in error, please comply with the following procedures:

Quiz: Please carefully consider what you did wrong. If you still believe that an incorrect grade has been assigned, you must make your case in writing only. Verbal requests will not be

considered. You must provide substantial information as to why your grade should be changed. Your request for re-grade must be received no later than 10 calendar days after the quiz date. After that date, no requests will be considered. Turn in your request to Dr. Sputo.

Homework: Please carefully consider what you did wrong. If you still believe that an incorrect grade has been assigned, you must make your case in writing only. Verbal requests will not be considered. You must provide substantial information as to why your grade should be changed. Your request for re-grade must be received no later than 10 calendar days after the homework due date. After that date, no requests will be considered. Turn in your request to Rachel Conn.

General Grading Rules

It is not the responsibility of the course instructor or TA to try to decipher your work. It should be clear what your intent is, and easy to follow in a logical sequence. Due to recurring problems each semester, the following criteria are set.

The following criteria will be used in grading homework:

| | |
|----------------------------------------------|-------------------------------|
| Homework with more than 1 problem per sheet: | Minus 2 points out of 10 |
| Lines drawn freehand (i.e.: no straightedge) | Minus 1 points out of 10 |
| Work otherwise sloppy or difficult to follow | Minus 1 to 7 points out of 10 |

For quizzes, the following criteria will be used in grading:

| | |
|----------------------------------------------|----------------------------------|
| Lines drawn freehand (i.e.: no straightedge) | Minus 10 points out of 100 |
| Work otherwise sloppy or difficult to follow | Minus 10 to 25 points out of 100 |

These point deductions will be applied as the instructor or TA sees fit. We like to assign partial credit for problems with incorrect answers, but if we cannot follow or otherwise decipher your work to find the incorrect step without expending excessive effort, we cannot assign partial credit.

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.

TENTATIVE LECTURE SCHEDULE

(Subject to modification)

| Class No. | Date | Topic | Text (Segui) | HW | HW Due |
|-----------|---------------|-----------------------------------------------------------------------------------------------------|---------------|----|--------|
| 1 | 5 Jan | Introduction | | | |
| 2 | 7 Jan | Specifications and Codes | Chapter 1 | | 12 Jan |
| 3 | 10 Jan | Steel Properties, Safety, LRFD | Chapters 1, 2 | | 14 Jan |
| 4 | 12 Jan | Tension Members | 3.1 - 3.3 | | 19 Jan |
| 5 | 14 Jan | Tension Members | 3.4, 3.7 | | 21 Jan |
| | 17 Jan | MLK Day (No Class) | | | |
| 6 | 19 Jan | Quiz 1 | | | 24 Jan |
| 7 | 21 Jan | Tension Members | 3.6 | | 26 Jan |
| 8 | 24 Jan | Tension Members: Block Shear | 3.5 | | 28 Jan |
| 9 | 26 Jan | Compression Members | 4.1 - 4.3 | | 31 Jan |
| 10 | 28 Jan | Compression Members | 4.1 - 4.3 | | 2 Feb |
| 11 | 31 Jan | Compression Members | 4.1 - 4.3 | | 4 Feb |
| 12 | 2 Feb | Quiz 2 | | | 7 Feb |
| 13 | 4 Feb | Column Design | 4.4 - 4.5 | | 9 Feb |
| 14 | 7 Feb | Column Design | 4.4 - 4.5 | | 11 Feb |
| 15 | 9 Feb | Column Design | 4.4 - 4.5 | | 14 Feb |
| 16 | 11 Feb | Column Design | 4.6 | | 16 Feb |
| 17 | 14 Feb | Valentine's Day (Remember your Significant Other) Built-up Compression Members | 4.7 | | 18 Feb |
| 18 | 16 Feb | Quiz 3 | | | 21 Feb |
| 19 | 18 Feb | Simple Beam Bending - Shape Factor, Compact Section, Plastic Action | 5.1 - 5.2 | | 23 Feb |
| 20 | 21 Feb | Simple Beam Bending | 5.3, 5.5 | | 25 Feb |
| 21 | 23 Feb | Simple Beam Bending - Beam Tables (Sputo @ AISI COS Meeting Rachel in charge ... Beware!) | 5.5, 5.10 | | 7 Mar |

| Class No. | Date | Topic | Text | HW | HW Due |
|------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------|----------------|-----------|---------------|
| 22 | 25 Feb | Lateral-Torsional Buckling | 5.5, 5.7, 5.10 | | 9 Mar |
| | | Spring Break 28 Feb - 4 Mar | | | |
| 23 | 7 Mar | Laterally Unbraced Beams | 5.5, 5.7, 5.10 | | 11 Mar |
| 24 | 9 Mar | Quiz 4 | | | 14 Mar |
| 25 | 11 Mar | Laterally Unbraced Beams | 5.5, 5.7, 5.10 | | 16 Mar |
| 26 | 14 Mar | Beams - Shear, Deflection, Web Crippling and Yielding | 5.8, 5.9, 5.14 | | 18 Mar |
| 27 | 16 Mar | Beams - Local Buckling, Non-Compact Flanges | 5.4, 5.6 | | 21 Mar |
| 28 | 18 Mar | Day after St. Patrick's Day (Designated Hangover Day) Combined Axial and Bending Forces, Interaction Formulas | 6.1, 6.2 | | 23 Mar |
| 29 | 21 Mar | Beam-Columns | 6.3, 6.5, 6.6 | | 25 Mar |
| 30 | 23 Mar | Quiz 5 | | | 28 Mar |
| 31 | 25 Mar | Beam-Columns | 6.3, 6.5, 6.6 | | 30 Mar |
| 32 | 28 Mar | Beam-Columns | 6.7, 6.8 | | 1 April |
| 33 | 30 Mar | Beam-Columns | 6.7, 6.8 | | 4 April |
| 34 | 1 April | Connections | 7.1 - 7.9 | | 6 April |
| 35 | 4 April | Quiz 6 | | | 11 April |
| 36 | 6 April | Structural Bolts, Loads, Installation | 7.1 - 7.9 | | 13 April |
| | 8 April | No Class ASCE Southeast Region Student Conference in Tuscaloosa, AL Be there ... or miss the fun! | | | |
| 37 | 11 April | Bolted Connections | 7.1 - 7.9 | | 15 April |
| 38 | 13 April | Welding, Joint Types, Design Stresses | 7.10, 7.11 | | 18 April |
| 39 | 15 April | Welded Connections | 7.10, 7.11 | | 20 April |
| 40 | 18 April | Connection Design | 7-10, 7.11 | | 20 April |
| 41 | 20 April | Quiz 7 - Instructor Evaluation | | | |

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!**