“The capacity to design includes more than mere technical competence. It involves a willingness to attack a situation never seen or studied before and for which data are often incomplete; it also includes an acceptance of full responsibility for solving the problem on a professional basis.”


“A human being should be able to change a diaper, plan an invasion, butcher a hog, conn a ship, design a building, write a sonnet, balance accounts, build a wall, set a bone, comfort the dying, take orders, give orders, cooperate, act alone, solve equations, analyze a new problem, pitch manure, program a computer, cook a tasty meal, fight efficiently, die gallantly. Specialization is for insects.”


INSTRUCTOR: Thomas Sputo, Ph.D., P.E., S.E.
Senior Lecturer of Structural Engineering and
Structural Engineer, Sputo and Lammert Engineering, LLC
Campus Office: Weil 480C 392-9537 x 1496
Off-campus Office: Phone: 378-0448 Fax: 373-1331
E-mail: sputo@ufl.edu
Office Hours: 2nd Period, Tu, Th; or by appointment.

DESCRIPTION: Advanced topics in structural steel design. Simulation of a design office experience through the completion and presentation of a comprehensive steel building design. Students will work in groups to complete a total structural building system design.

Designing with Vulcraft Steel Joists, Joist Girders, and Steel Deck
Download from: http://www.vulcraft.com/products/catalogs/designing/
Vulcraft Joist and Deck Catalogues
Download from: http://www.vulcraft.com/products/catalogs/
Class notes and references (E-learning site)

TIME: Tu, Th 5th and 6th Period Weil 234

WEB PAGES:
http://www.sputoandlammert.com Sputo and Lammert Engineering webpage
http://www.aisc.org American Institute of Steel Construction
http://steeljoist.org Steel Joist Institute
http://www.sdi.org Steel Deck Institute

PREREQUISITES: Working knowledge of basic steel and concrete design
Working knowledge of basic structural analysis
Working computer knowledge:
(MS Word; Excel, Frame analysis software) - required
(AutoCad; MathCad) - helpful
COURSE OBJECTIVES:

1. Develop skills in structural steel design and analysis beyond those taught in the basic steel design course.
2. Through the use of student design teams, develop the comprehensive design of a steel-framed building, including connections. Present the results of that design in a professional manner, both written and orally.

TOPICS TO BE COVERED: (Subject to Change - addition or deletion or change of order)

1. Beam-columns
2. Building Loads
3. Floor System Design
4. Roof System Design
5. Frame Analysis and Design
6. Connections

The general course flow will consist of approximately 25% of the course on floor framing design (primarily composite beam design) and the remainder of the course on single story buildings using joists and deck.

COURSE “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 structural engineering practice from a practicing engineer. Take advantage of this opportunity!

2. Attendance at lecture is “mandatory.” The instructor retains the right to reduce final letter grades for excessive absences or lack of participation, regardless of total points earned.

3. Be on-time to class. The instructor will start class on-time. The instructor will endeavor to end class on-time, however, class is over when the instructor says it is over. Do not start closing books, etc., as a way of informing the instructor that you feel that class is over. The instructor takes great offense to this.

4. Each lesson requires preparation by the student prior to the lecture. Study / read the assigned material prior to the lecture.

5. The textbooks and notes are required for all lectures. HEY, This means you!

6. Homework will be assigned. 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 have a due date. 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.

7. 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.

8. Some (a lot) class communication will be by means of e-mail. Check your e-mail regularly (at least daily). The email address that is on record with this university will be used. Failure on the part of the student to keep-up with e-mail communications is not excusable.

9. Grade Appeals:

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

   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 Dr. Sputo.

**General Grading Rules**

It is not the responsibility of the course instructor or grader 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:

- Lines drawn freehand (i.e.: no straightedge) Minus 5% of total available
- Work otherwise sloppy or difficult to follow Minus 10% to 70% of total available

These point deductions will be applied as the instructor or grader 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.
GRADING:  GRADING SCALE:  (May be relaxed at the option of the instructor)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>95 - 100</td>
<td>C</td>
<td>79 – 82.99</td>
</tr>
<tr>
<td>A -</td>
<td>93 – 94.99</td>
<td>C -</td>
<td>77 – 78.99</td>
</tr>
<tr>
<td>B +</td>
<td>91 – 92.99</td>
<td>D +</td>
<td>75 – 76.99</td>
</tr>
<tr>
<td>B</td>
<td>87 – 90.99</td>
<td>D</td>
<td>71 – 74.99</td>
</tr>
<tr>
<td>B -</td>
<td>85 – 86.99</td>
<td>D -</td>
<td>69 – 70.99</td>
</tr>
<tr>
<td>C +</td>
<td>83 – 84.99</td>
<td>E</td>
<td>00 – 68.99</td>
</tr>
</tbody>
</table>

Homework and Assignments  30%
2 Quizzes               40 %
Final Project            30 %  (Includes presentation and written submittal) - GET STARTED EARLY!

GRADE POINTS:  Undergraduate students, in order to graduate, must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: a C- average is equivalent to a GPA of 1.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit:
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

IMPORTANT UNIVERSITY INFORMATION

Honesty Policy – 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 UF student and to be honest in all work submitted and exams taken in this course and all others.

Accommodation for Students with Disabilities – Students Requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

UF Counseling Services – Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:
·       UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, psychological and psychiatric services.
·       Career Resource Center, Reitz Union, 392-1601, career and job search services.

Software Use – All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.