UNIVERSITY OF SOUTH FLORIDA
DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

CES 4605, CONCEPTS OF STEEL DESIGN
Fall, 1998 Extended Syllabus

INSTRUCTOR:	Gray Mullins, Ph.D., P.E., Assistant Professor
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OFFICE HOURS:	Monday and Wednesday 11:00-12:00, or by appointment
CLASS MEETS:	Monday and Wednesday 12:30-1:45 LIF 261
TEXTBOOK:	AISC *Manual of Steel Construction-Load and Resistance Factor Design* McCormac, Jack C., *Structural Steel Design LRFD Method*, Harper and Row, NY. Bound copy of lecture topics available at Pro-Copy on Fowler Avenue.
CREDIT HOURS:	3 hours of Engineering Design

COURSE OBJECTIVES:

This course provides an introduction to structural steel design concepts through the use of the AISC design code. The course extends the concepts of Structures I through the design of tension members, compression members, beams, and beam columns; and bolted, welded, and riveted connections. The course objectives are as follows:

-To provide the students the tools necessary for designing steel structures
-To familiarize the students with local and national design codes.
-To provide an understanding of Load and Resistance Factor Design and differentiate it from Allowable Stress Design.

ATTENDANCE POLICY:

Students are strongly encouraged, but not required, to attend all class sessions. It is the student's responsibility to submit all homework assignments on time and to answer homework and exam questions on topics covered or discussed in class which are not covered in, or in contradiction with the textbook.

RELIGIOUS OBSERVANCE POLICY:

No student will be compelled to attend class or sit for an exam in conflict with his/her religious belief. In such situations, the student must provide prior notification to the instructor in writing. The student will be given a reasonable opportunity to make up such work. This will be done on a case-by-case basis only for those religious days listed in the University Calendar of Religious Holy Days. This policy will in no way contradict that of the university-wide policy for religious observance.

MAKE-UP, MISSED WORK POLICY:

All homework on a given topic must be submitted during class, one week after the completion of that lecture topic if the student wishes the work to be graded. Homework is not required to be submitted, but it is strongly recommended for the successful mastery of the topics on which the examinations are based. In the event of an exceptional circumstance, a student may submit late work on a case-by-case basis at the discretion of the instructor.

PERFORMANCE EXPECTATIONS:

All work, both homework and examination submissions, must be clear and orderly. Each problem must be accompanied by a reasonably scaled sketch of the design which is clearly lettered. Pertinent code references should be included where possible. Although no computer output is required, all penmanship must be clean; unclear work may be penalized. All work should stand alone and be self explanatory as if it were a final copy of design calculations for archival. Letter grades will be determined on the basis of two examinations as follows:

Mid-term	100 points
Final	100 points

Final course grades will be based on the average of the examination grades

90 - 100	A
80 - 89	B
70 - 79	C
60 - 69	D
0 - 59	F

DISPOSITION OF WORK:

Work that have not been collected by the students and exams will be discarded three months after the end of the semester. Students may obtain copies of their graded exams, but not the original.

ACADEMIC DISHONESTY POLICY:

Academic dishonesty is not tolerated under any circumstances. Cheating on an exam is an honors violation and will result in an F grade for the course.

S-U GRADE POLICY:

This course is not offered on an S-U grading basis for students in the CEE department. Students from other departments may request an S-U grade in writing within the first three weeks of the semester.

INCOMPLETE GRADE POLICY:

If a student feels that he/she will not be able to complete the minimum required work prior to the end of the semester, then the student may request in writing the assignment of an "I" grade (incomplete). An "I" grade will be granted only under extenuating circumstances provided the student has a "C" grade or better at the mid-term. This will be done on a case-by-case basis at the discretion of the instructor.

Summer Section 001

Date	Topic	Read	Problems
8/24	Introduction, Specifications, Loads, Methods of Design; Tension members	Ch. 1,2	
5/14	Tension members		
5/19	No Class		
5/21	Finish Tension members Compression members		
5/26	Compression members		
5/28	Compression members		
6/2	Beams		
6/4	Beams		
6/9	Beams		
6/11	Quiz I		
6/16	Beam Columns		
6/18	Beam Columns		
6/23	Beam Columns		
6/25	Bolted and Riveted Connections		
6/30	Bolted and Riveted Connections		
7/2	Bolted and Riveted Connections		
7/7	Welded Connections		
7/9	Building Connections		
7/14	Quiz II		

Date	Topic	Read	Problems
8/24/98	Introduction, Specifications, Loads, Methods of Design	Ch. 1,2	
8/26/98	Tension Members	Ch. 3	1, 3, 5, 7, 9, 11, 13, 15, 19, 21, 31, 33
8/31/98	Tension Members		
9/2/98	Tension Members		
9/7/98	Labor Day	Ch. 4	1, 5, 27
9/9/98	Compression Members		
9/14/98	Compression Members	Ch. 5	5a, 13, 15
9/16/98	Compression Members	Ch. 6	15,17
9/21/98	Compression Members	Ch. 7	7
9/23/98	Beams	Ch. 8	
9/28/98	Beams	Ch. 9	1,11,17,18
9/30/98	Beams	Ch. 10	11,13,19
10/5/98	Beams/Review		
10/7/98	Quiz I		
10/12/98	Beam Columns		
10/14/98	Beam Columns		
10/19/98	Beam Columns		
10/21/98	Beam Columns		
10/26/98	No Class		
10/28/98			
11/2/98	Bolted and Riveted Connections		
11/4/98	Bolted and Riveted Connections		
11/9/98	Bolted and Riveted Connections		
11/11/98	Veterans Day		
11/16/98	Bolted and Riveted Connections		
11/18/98	Welded Connections		
11/23/98	Welded Connections		
11/25/98	Thanksgiving Early Departures		
11/30/98	Welded Connections		
12/2/98	Review		
12/7/98	No Class		
12/9/98	Quiz II 1:00 - 3:00		

SUMMARY OF ABET OUTCOMES AND OBJECTIVES

OUTCOME/OBJECTIVE	METHOD OF ADDRESSING	METHOD OF ASSESSING	LEVEL OF STUDENT EFFORT
Ability to apply math, science, and engineering	Lecture-based instruction; Problems solving	Assignments and Exams	Large
Ability to design and conduct experiments, analyze, and interpret data	Lecture-based instruction; Field Trips	Class discussion	Small
Ability to design a system component or process to meet desired needs	Lecture-based instruction; Problems solving Open-ended design problems	Assignments and Exams	Large
Ability to function in teams	Classroom work groups	Group/class discussion	Medium
Ability to identify, formulate, and solve engineering problems	Lecture-based instruction; Problems solving	Assignments and Exams	Large
Understanding of professional and ethical responsibility	Lecture-based Class discussion	In class discussion	Small
Ability to communicate effectively	Problem statement/Problem solving	Solution presentation	Medium
Understanding of the impact of engineering solutions in a global and societal context	Classroom discussion on global, societal and economic issues	Minimal assessment bases on classroom discussion	Small
Recognition and ability to engage in life-long learning	Information on Professional Organizations and Graduate Programs	Field trip interaction and discussion of research sites and topics	Small
Knowledge of contemporary issues	Classroom discussion	Minimal assessment based on classroom discussion	Small
Ability to use techniques, skills, and engineering tools necessary for engineering practice.	Lecture-based instruction, problems solving, cost analysis	Assignments, Examinations	Large