Southern Polytechnic State University
CE 4103 - Design of Steel Structures
Course Syllabus – Spring 2012

Course Description

Behavior and design of structural members and connections using Load and Resistance
Factor Design (LRFD) methods; mechanical properties of structural steel; design of tension
members, compression members, beams and beam-columns; typical shear and moment connections,
welded and bolted; and steel joist design.

Instructor:

Wasim Barham, Ph.D.
Assistant Professor
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Office Hours: Monday 2:00 pm – 4:00 pm
                  Wednesday 1:00 pm – 3:00 pm
                  Friday 12 pm– 1 pm
                  Other times (By appointment – Walk in- Email me or Call me!!!)

Class Time and Location:

Lecture: Monday and Wednesday: 4:30pm –5:45pm
           Room: M137

Textbook (Required):

Segui, W. T. Steel Design, 5th Edition

Prerequisite:

CE3201: Structural Analysis

Learning Outcomes:

The student, upon completion of this course, will be able to:

1) Apply the basic requirements of the American Institute of Steel Construction (AISC) Design specifications.
2) Design steel tension members
3) Design concentrically loaded columns
4) Design column base plates
5) Design both laterally braced and unbraced beams
6) Design beam-columns
7) Design connections with bolts and welds
8) Design of steel joists.

Course Outcome Measures and Assessment:

Measures and assessment of the outcomes will be made by:
1- Periodic homework assignments.
2- Three one hour exams during the semester.
3- One 2-hour final exam.
4- Course and instructor evaluation at the end of the semester to provide student feedback on the quality of the course and effectiveness of the instructor.

Grading:

1. First exam (mid February)	15%
2. Second exam (mid March)	15%
3. Third exam (mid April)	15%
4. Homework	15%
5. Project	15 %
6. Final exam (during finals week)	25%

The Grading Scale is as follows:

90.0 % and up = A

77.0-89.0% = B

64.0-76.0% = C

52.0-63.0% = D

0.0 - 51.0% = F

- Late homework will <u>NOT</u> be accepted for credit. Work turned in late may be evaluated to provide you with feedback, but will not be graded / given credit except in cases of documented emergency.

Homework Preparation Guideline:

- Homework must be submitted on <u>engineering</u> calculation sheets and must be bounded or stapled

Class and lab Attendance Policy:

" … *The instructor may reduce the course grade of any student who fails to meet the attendance requirements as set forth in the instructor's attendance policy. Students should understand they are responsible for all course material covered and that they are responsible for the academic consequences of their absences.*" (*SPSU Student's handbook*)

Class attendance policy

# of Absence	0 - 3	More than 3
Point Deduction	0	1.5 points per absence

Disruptive Behavior and Academic Dishonesty

<u>*A faculty member reserves the right to remove any student from his or her course if the student's behavior is of a disruptive nature or where there is evidence of academic dishonesty*</u>. In instances of disruptive behavior and/or academic dishonesty, the faculty member will discuss the circumstances with the student(s) before taking final action. In the event the student cannot be reached, he/she will be given the grade of "Incomplete" until such time as he/she can be reached. The student shall have the right of appeal of the faculty member's decision first to the faculty member's department head and then to the appropriate college or school dean and, if necessary, to the Vice President for Academic Affairs. <u>Removal of a student from a course under this provision will result in the faculty member's issuing a grade of "F". A grade of "F" issued under these circumstances shall not be superseded by a voluntary withdrawal and will be included in the student's cumulative grade point average calculated for graduation purposes.</u> *(SPSU Student's Handbook)*

Lecture Topics:

1. Structural Steel and Properties

2. Concepts in Structural Steel Design

3. Tension Members

4. Compression Members, Columns

5. Beam Design

6. Beam-columns

7. simple Connections

8. Joist Design