Architecture 334
Fall 2012
Steel Design

Instructor – Steve Kibler (kibler@iit.edu), 202 M&M Building
773-544-2965

Teaching Assistant – Bhumika Suthar – (bsuthar@hawk.iit.edu)

Class Hours – 1:50-3:05 pm Tu. & Thurs. 111 Stuart
Office Hours – TBA

Attendance – Only excused absences will not be penalized for missing quizzes or turning in homework late. 8-10 pop quizzes will be given throughout the semester rather than a daily sign-in sheet. These will be given at the beginning of class and will be multiple choice and they will be graded. You can miss 2 pop quizzes. If you miss 3 or more, your grade will be dropped by one letter grade. If you take all quizzes, 3 points will be added to your final score. If you miss one quiz, 2 points will be added to your grade. I will drop the lowest quiz score.

Examples of excused absences are as follows:
- Illness of student or significant others (may require documentation)
- Personal problem of student or significant others (may require documentation)
- Religious holidays
- Unforeseen emergency

Examples of unexcused absences are as follows:
- interference/conflict with personal job/work
- traffic issues/car troubles in commuting
- failure to arrive to class on time

Objectives and Goals – The purpose of this course is to provide the student with an understanding of the behavior of steel members and the structures that comprise them. In order to accomplish this, the course will teach the student about structural loadings, load combinations, and load paths, about material behavior issues specific to steel structures, about how to design structural steel systems, and how to use the current design specification. The course will also introduce the student to the different building codes and model codes and some design aides that are commonly used by practicing engineers.

Homework

Homework will be assigned on a regular basis and will be due at the beginning of class. Typically homework will be given every class period and due the next class period. Homework must be neat and clear. Any sketches should be done with a straight edge.
- Late assignments will be penalized 25% per day up to a maximum of 2 days.
- Homework will no longer be accepted after 2 days.
- Develop problems in a clear, logical sequence, showing steps taken and also all of the calculations.
- Units must be shown for all numerical values which have units. Box or circle all answers.
- The lowest homework will be dropped.
- You must turn in all homework.
Tests

3 tests will be given throughout the semester. You can bring in one page of notes or equations and you can use your steel manual. These tests will cover both the reading material and the written examples (calculations) done in class.

Final Exam

The final exam will cover the entire semester.

Grading

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Pop Quizzes</td>
<td>15%</td>
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<tr>
<td>Homework</td>
<td>20%</td>
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<tr>
<td>Tests</td>
<td>45%</td>
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<tr>
<td>Final Exam</td>
<td>20%</td>
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</tbody>
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Grading Breakdown

A - 90-100
B - 80-89
C - 70-79
D - 60-69
E < 59

Required Texts

AISC Manual of Steel Construction, 14th Addition
(This book is available for a discounted price of $135. See Blackboard for ordering information.)

Reference Books


Steel Structures Design and Behavior, Salmon and Johnson, ISBN 0-13-607444-8


ASCE 7-10, Minimum Design Loads for Buildings and Other Structures, American Society of Civil Engineers

International Building Code (IBC) 2006

Why Buildings Fall Down, Mario Salvadori

Why Buildings Stand Up, Mario Salvadori

Informal, Cecil Balmond

The Architect’s Studio Companion, 3rd Edition by Edward Allen
ISBN: 0471392359

Structure, Daniel Schodek

Structural Analysis, R.C. Hibbeler

Modern Steel Construction, a trade publication published by AISC with case studies and design guides

WWW.AISC.ORG – structural steel

WWW.VULCRAFT.COM – steel decks and joists