Engr 211--Statics
Section 1 - 8:00 - 8:50 -- M, T, Th, F
Room S135
Fall Semester 2007

Instructor: Ali R. Moshgi
Office: C 219
Phone: 875-7211X484
Email: amoshgi@richland.edu

Text: ENGINEERING MECHANICS
STATICS & DYNAMICS, by R. C. Hibbeler, 11th Edition; 2007
ISBN: 0-13-221509-8

Student Audience : Students who take this course are majoring in physics and any discipline in engineering.

Prerequisites: The prerequisites for Engr 211 are Physics 151, Math 122 and concurrent enrollment in or completion of Math 221.
(Note: The letter grade for the prerequisite course must be at least a C.)
Note: Students who are interested in taking this course but do not have all the prerequisites, can make an appointment with me for obtaining a special permission to enroll in E211.

Course Description: Introduces basic concepts concerning force systems as applied to particles and rigid bodies in static equilibrium. Vector methods and calculus are used to examine two- and three-dimensional systems such as trusses, beams, and frames. Topics include resultants of force systems, moments of inertia, couples, distributed forces, center of mass, analysis of structures, and friction.

Applicable toward graduation where program structure permits:
Certificate or Degree - All Certificates and All Degrees
Group Requirement - Not Applicable
Area of Concentration - General Science, Physics, Mathematics, Engineering

Course Objectives: Upon completion of statics (Engr 211) students must have the knowledge of the concepts and applications of vectors in statics, equilibrium of a rigid body, structural analysis using the methods of joints and sections, free-body diagrams, equations and diagrams for shear and moment, dry friction, center of gravity, moment, moments of inertia, and work.

Method of Evaluation: There will be 4 one-hour exams each 100 points, homework assignments each 10 points, and a comprehensive final exam 200 points.

A	$90 \leq ave$
B	$80 \leq ave \prec 90$
C	$70 \leq ave \prec 80$
D	$60 \leq ave \prec 70$
F	$ave \prec 60$

Engr 211 Fall Semester 2007 Tentative Weekly Schedule Day by Day-
Instructor: Ali R. Moshgi

Text: Engineering Mechanics Statics & Dynamics, by R. C. Hibbeler, 11th Ed.

WEEK	SECTION	DATE
1	1.1, 2,3,4,5	8/20
	2.1,2.2,2.3	8/21
	2.4	8/23
	2.5, 2.6	8/24
2	2.7, 2.8	8/27
	Farm P S	8/28
	2.9	8/30
	3.1, 3.2	8/31
3	Labor Day	9/3
	3.3	9/4
	3.4	9/6
	Review	9/7
4	Exam 1	9/10
	4.1, 4.2	9/11
	4.3	9/13
	4.4	9/14
5	4.5	9/17
	4.6	9/18
	4.7, 4.8	9/20
	4.9	9/21
6	4.10	9/24
	5.1, 5.2	9/25
	5.3	9/27
	5.4	9/28
7	5.5	10/1
	5.6, 5.7	10/2
	Review	10/4
	Exam 2	10/5
8	Colum. Day	10/8
	6.1, 6.2	10/9
	6.3	10/11
	6.4	10/12
9	*6.5, 6.6	10/15
	6.6	10/16
	7.1	10/18
	*7.2	10/19

WEEK	SECTION	DATE
10	*7.3	10/22
	*7.4	10/23
	8.1, 8.2	10/25
	8.3	10/26
11	8.4	10/29
	8.5	10/30
	8.6, 8.7	11/1
	Review	11/2
12	Exam 3	11/5
	9.1, 9.2	11/6
	9.3	11/8
	*9.4	11/9
13	Vet. Day	11/12
	*9.5,*9.6	11/13
	10.1-10.4	11/15
	10.5	11/16
14	10.6	11/19
	10.9	11/20
	Thanksgiving	11/22
	Thanksgiving	11/23
15	11.1-11.3	11/26
	*11.4,*11.5	11/27
	*11.6,*11.7	11/29
	Review	11/30
16	Exam 4	12/3
	Review	12/4
	Review	12/6
	Review	12/7
17	Final Exams	12/10
	Final Exams	12/11
	Final Exams	12/12
	Final Exams	12/13
18		

Office Hours:

10:00 - 10:50 M, T, W, Th, F
Drop-in visits are welcomed.

Notes on Homework:

-There will be about 40 homework assignments.
-Each assignment is worth 10 points.
-You can find the assignments on this site.
-Students who are late one day will lose one point.
-If a homework assignment is turned in late more than one day it receives no credit.
- Students should help each other to understand the concepts presented in the text. Also, students are allowed to help each other on the given assignments.

Acceptable Homework Assignment: Students who want to receive full credit for homework must follow all these steps:

1. On the top left corner write your name. On the top right corner write the homework # given by me.
2. All the work must be done neatly step by step.
3. Anytime a formula is used, the formula must be written completely and correctly first.
4. The final answers must have only 3 significant digits.
5. A complete FBD must be shown (even if it is not necessary for the student to use it in order to solve a problem).
6. Students must have a ruler (to draw straight lines), Templates for geometric figures (such as a circle), and other tools necessary to present the work clearly and neatly.
7. The solution to a problem must be presented only on one side of each sheet (do not use front and back).

Instructor's Notes:

- There is no need for a particular type of a calculator.
- The successful completion of the course requires doing at least the exercises that are assigned at the end of each section.
- Students with an average of more than 95% at the end of the semester will not have to take the final exam.
- Attendance will be checked.
- Students with a grade of F on the first exam should make an appointment with me.
- Students with a grade of F at the mid-term exam with irregular attendance will be dropped administratively.
- If a student does not take a test on the scheduled date, I will replace the missing test with half of the score on the final exam at most once.
- None of the exams will be dropped.
- The course grade will be based only on one-hour exams, collected homework assignments, the final exam, and the extra credit problems (ECPs are usually challenging questions).
- Students are responsible for knowledge of and compliance with all announcements made in class, whether present or not.
- Attendance is very important. For every four hours of class missed the grade will be lowered one letter grade.

- Punctuality is very important. Being late twice is equivalent to being absent one hour.
- I appreciate any comments or reasonable suggestions throughout the semester.

How to study statics:

- The most effective way of learning the principals of statics is to solve problems.
- After the method of the section is applied to solve a problem you must review the solution. Then, think about any different methodologies and concepts you may have learned before to solve the same type of problem. This will help you remember the old concepts and it will enhance your problem-solving ability.
- All your work should be done neatly. Being neat generally stimulates clear and orderly thinking, and vice versa.
- It helps to study or do homework assignments with a partner. Remember that teaching others is an excellent way to learn a subject matter.
- It is not wise to spend a lot of time on one question. When you get stuck on a problem or a concept don't be frustrated; email me (amoshgi@richland.edu).
- If you solve a problem incorrectly do not erase it; instead, explain where you were wrong and have the correct solution next to the wrong one.
- The most effective way to fail statics is to fall behind; please don't do that.