

UNIVERSITY OF SOUTHERN CALIFORNIA  
AME 201, Statics  
Spring 2013

Time and Location	MW 12:00 PM to 1:20 PM, KAP 145 (section 1, 28720R)
Instructor:	Babak Boloury bboloury@hotmail.com
Office Hours:	MW 9:00 AM to 10:00 AM, and by appointment BHE 315
TA:	N/A
Textbook:	Ferdinand P. Beer; J. E. Russell Johnston; Elliot R. Eisenberg, David Mazurek, <u>Vector Mechanics for Engineers - Statics</u> , McGraw-Hill, 10 <sup>th</sup> edition, 2012
Prerequisite:	Math 125.
Recommended Preparation:	AME 101, PHYS 151L

Grading:

Homework:	18%
2 Midterm Exams:	26% each
Final Exam:	30%

Homeworks will be collected and graded randomly. Late homework will not be accepted.

The midterm exams are at the end of chapters 3 (6<sup>th</sup> week) and 6 (10<sup>th</sup> week).

All exams are closed book and closed notes. Make-up exams will not be given under any circumstances.

Generally, an average score of mid to high 60's (out of 100) is a C.

Contesting of grading of all materials (exams and homework) must be done within one week after the graded material is returned. After 7 days, the material in question will not be regraded.

Other Issues:

Be respectful to your classmates and the instructor. Students are expected to be on time for class and to remain once class starts. Cell phones and pagers should be turned off during class.

Regular class attendance is obviously recommended.

Final Exam is on Friday, May 10, 2013, from 11:00 AM to 1:00 PM

The week of March 18 – 22, 2013 is Spring Recess, so the class will not meet. Also, Monday January 21, 2013 and Monday February 18, 2013 are school holidays.

<u>Topics (Reading)</u>	<u>Problems Assigned</u>	<u>Week</u>
1. Introduction 1.1 – 1.6	-----	1
2. Statics of Particles – Forces in a Plane (2.1 – 2.11) – Forces in Space (2.12 – 2.15)	See Blackboard	1, 2
3. Rigid Bodies: Equivalent systems of Forces 3.1 – 3.21	See Blackboard	3, 4
4. Equilibrium of Rigid Bodies – Equilibrium in Two Dimensions (4.1 – 4.7) – Equilibrium in Three Dimensions (4.8 – 4.9)	See Blackboard	4, 5
5. Analysis of Structures – Trusses (6.1 – 6.5, 6.7) – Frames and Machines (6.9 – 6.12)	See Blackboard	6, 7
6. Friction 8.1 – 8.5, 8.10	See Blackboard	7, 8
7. Distributed Forces : Centroids and Center of Gravity – Areas and Lines (5.1 – 5.8) – Volumes (5.10 – 5.12)	See Blackboard	9, 10
8. Distributed Forces : Moments of Inertia – Moments of Inertia of Areas (9.1 – 9.7) – Moments of Inertia of a Mass (9.11 – 9.15)	See Blackboard	10, 11, 12
9. Forces in Beams – Internal Forces in Members (7.1 – 7.2) – Beams (7.3 – 7.6)	See Blackboard	13, 14
10. Method of Virtual Work (Time Permitting) – 10.1 – 10.9	Assigned later	15

**Homework Suggested Format:**

Work only one problem per page. **Do NOT use the back of the page.** The homework should be done and presented very clearly and neatly. Sloppy work on homework assignments, as well as the exams, will be harshly graded or not graded at all.

All homework problems should contain the following:

- (a) Problem Number and Page Number, or Chapter Number and Problem Number.
- (b) **Solution:** Solve the problem in a neat and logical manner. Sketch all required free-body-diagrams (FBD), if applicable. Write each general equation before substituting in the appropriate values in a specific equation. This procedure allows you and others to follow what you have done.
- (c) Each calculated value should have a unit (not just the final answer). Enclose the answer(s) in a box including the appropriate units and direction (if applicable).