ME323 MECHANICS OF MATERIALS, SPRING 2009

Lecture	Meets	Instructor	Office, Phone	Email
Division 1	MWF 10:30-11:20 AM, ME 156 Office hours MW 11:30-12:20	Prof. Pablo Zavattieri	ME 371, 494-3082	zavattie@purdue.edu
Division 2	MWF 1:30 – 2 :20 PM, ME 156 Office hours MF 2:30-3:20	Prof. Marisol Koslowski	ME 301, 496-1045	marisol@purdue.edu

Required Text:

Mechanics of Materials, by Roy Craig (2nd Edition), Publisher: John Wiley and Sons

Grading Policy:

Homework: 10%; Projects: 10%; Exam 1: 25%; Exam 2: 25%; Final Exam: 30%

Homework:

Homework problems will be assigned, and collected in class (lecture) according to the following schedule. All problem solutions submitted as homework must be on engineering paper and in a proper format (see attached example). *All homework counts. Homework handed in **after** the specified deadlines will receive **zero** credit.*

Home-work #	Assignment (All problems are from the required text)	Due Date
1	1.4.8, 1.4.16, 2.2.5, 2.2.6, 2.3.7, 2.3.12, 2.3.19,2.4.3, 2.6.7	1/21
2	2.7.4, 2.7.8, 2.7.12, 2.13.3, 2.13.8, 2.8.3, 2.8.10, 2.8.15	1/28
3	3.3.5, 3.3.10, 3.4.10, 3.5.5, 3.5.7, 3.5.13, 3.6.5, 3.6.9, 3.6.15	2/4
4	3.10.6, 3.10.9, 3.10.14, 4.3.3, 4.3.10, 4.5.3, 4.5.6, 4.5.10	2/11
5	4.6.6, 4.6.10, 4.7.4, 5.4.3, 5.4.17, 5.4.25, 5.4.32	2/25
6	6.3.14, 6.3.19, 6.3.32, 6.8.3, 6.8.8, 6.8.12, 7.3.3, 7.3.6, 7.3.11	3/4
7	7.4.5, 7.4.7, 7.4.10, 7.5.5, 7.5.8, 7.5.13, 7.5.17	3/11
8	8.3.11, 8.3.16, 8.3.22, 8.4.7, 8.4.12, 8.4.13, 8.5-3, 8.5-4, 8.5-7	3/25
9	8.5.13, 8.5-18, 8.5-21, 8.5.24, 8.5.34, 8.6.5, 8.6.12, 9.2.7, 9.2.14	4/8
10	9.4.5, 9.4.10, 9.4.13, 9.4.19, 9.4.22, 11.3.5, 11.3.22, 11.3.33	4/15
11	11.5.3, 11.5.14, 11.5.15, 11.5.17, 11.5.22, 12.3.4, 12.3.12, 12.3.13	4/22
12	10.2.4, 10.2.13, 10.2.16, 10.3.10, 10.3.12	4/29

Projects and lab tour:

Two projects will be assigned, and collected according to this schedule=> Students can work in groups on the projects, but *each student needs to write an independent report*.

Project #	Assigned on	Collected on
1	2/2	3/6
2	3/9	4/24

Examinations:

Exam 1	Mon., Feb. 16	8 - 9 PM	Room: WTHR 172
Exam 2	Mon., Mar. 30	8 - 9 PM	Room: WTHR 172
Final Exam	TBA		

Closed book and closed notes exams. A list of necessary formulas will be provided with the exams. If a test is missed, the grade will be recorded as zero. *Make-up exams will be given only in the event of serious illness or emergency*.

Regrade Requests:

Regrade requests *may* be considered for graded exams, homework, or projects but *only in cases* where (a) points were incorrectly added, or (b) the grader clearly did not read/misread part of the solution and *only after* the student reads up the correct solution on webCT. If you have a genuine regrade request, please contact your instructor and upon their approval, staple a sheet clearly explaining your case onto the exam/homework/project and return to the instructor. *Regrade requests will be considered only if submitted within a week (strict) of when you first receive your graded work*

Reading Assignment:

The reading assignment schedule lists the sections that are to be studied from the textbook *before* each class meeting.

Blackboard Vista for ME323:

Projects, and grades, will be posted on Blackboard Vista (**http://www.itap.purdue.edu/tlt/blackboard/index.cfm**)

Tutoring and Office Hours: Three teaching assistants will hold scheduled tutorial hours in Room ME 242, starting Wednesday 1/14. In addition, the two instructors are available for consultation during their office hours.

Switching Sections: To switch from one section to another, you must go through the formal drop and add process.

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Course Schedule: (◄: *Dates on which homework are due in class;* ¶: *Dates on which project are due in class*)

Lecture #		Date	Topic	Reading
1 M		1/12	Introduction; Review of Static Equilibrium	1.1-1.4
2 W		1/14	Stress and Strain	2.1-2.3
3 F		1/16	Mechanical Properties	2.4-2.6
M		1/19	**NO CLASS - Official University Holiday (Martin Luther King Jr. Day)**	
4 W	◄(1)	1/21	Shear Stress and Strain	2.7
5 F		1/23	General Definitions of Stress and Strain	2.12-2.13
6 M		1/26	Introduction to Design of Deformable Bodies	2.8
7 W	◄(2)	1/28	Axial Deformation	3.1-3.4
8 F		1/30	Statically Indeterminate Structures	3.5
9 M		2/2	Thermal Effects on Axial Deformation	3.6
10 W	◄(3)	2/4	Analysis of Planar Trusses	3.10
11 F		2/6	Torsion of Circular Bars	4.1-4.3
12 M		2/9	Stresses in Torsion Members	4.4-4.5
13 W	◄(4)	2/11	Torsion of Statically Indeterminate Members	4.6
14 F		2/13	Review	
M		**2/16**	**NO CLASS** **EXAM 1 (*Covers Lectures 1 through 14*) 8.00 – 9.00 PM, WTHR 172**	
15 W		2/18	Equilibrium of Beams	5.1-5.3
16 F		2/20	Shear Force and Bending Moment Diagrams	5.4
17 M		2/23	Stresses in Beams	6.1-6.3
18 W	◄(5)	2/25	Flexural Stresses	6.3
19 F		2/27	Shear Stresses	6.8
20 M		3/2	Deflection of Beams - Integrations Method	7.1 - 7.4
21 W	◄(6)	3/4	Deflection of Beams - Integrations Method	7.1 - 7.4
22 F	¶	3/6	Deflection of Beams - Discontinuity Functions	7.5
23 M		3/9	Slope and Deflections - Discontinuity Functions	7.5
24 W	◄(7)	3/11	Transformation of Stresses	8.1 ~~8.3~~
25 F		3/13	Principal Stresses and Max. Shear Stress	~~8.1 8.3~~8.3,8.4
M		**3/16**	**NO CLASS – Spring Vacation**	
W		**3/18**	**NO CLASS – Spring Vacation**	
F		**3/20**	**NO CLASS – Spring Vacation**	
26 M		3/23	Mohr's Circle	8.5
27 W	◄(8)	3/25	Mohr's Circle	8.5
28 F		3/27	Review	
M		3/30	**NO CLASS** **EXAM 2 (*Covers Lectures 15 through 28*) 8.00 – 9.00 PM, WTHR 172**	
29 W		4/1	Absolute Maximum Shear Stress	8.6
30 F		4/3	Thin-Walled Pressure Vessels	9.1-9.2
31 M		4/6	Stresses due to combined loads	9.4
32 W	◄(9)	4/8	Stresses due to combined loads	9.4
33 F		4/10	Stresses due to combined loads	9.4
34 M		4/13	Energy methods	11.1 – 11.4
35 W	◄(10)	4/15	Energy methods	11.1 – 11.4
36 F		4/17	Energy methods	11.5
37 M		4/20	Failure theories	12.3
38 W	◄(11)	4/22	Failure theories	12.3
39 F	¶	4/24	Buckling of columns	10.1-10.3
40 M		4/27	Buckling of columns	10.1-10.3
41 W	◄(12)	4/29	Buckling of columns	10.1-10.3
42 F		5/1	Review	
TBA		**TBA**	**COMPREHENSIVE FINAL EXAM, TBA**	

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