

MEEG 5033 – Advanced Mechanics of Materials Fall 2009 Course Schedule*

<u>Week</u>	<u>Dates (T, TH)</u>	<u>Sections</u>	<u>Topic(s)</u>
Week #1	8/25	1.1 – 1.2	Review of mechanics of materials
	8/27	1.3 – 1.4	1D stress-strain diagrams
Week #2	9/1	2.1 – 2.2	Advanced stress and strain concepts
	9/3	2.3 – 2.4	Mohr's circle / critical stresses
Week #3	9/8	2.5 – 2.8	Deformable bodies
	9/10	3.2, 3.3, 3.5	Anisotropic elasticity
Week #4	9/15	3.1, 3.4	Thermoelasticity
	9/17	5.1 – 5.2	Introduction to energy methods
Week #5	9/22	5.2 – 5.3	Energy methods – Castigliano's theorem
	9/24	5.4	Energy methods – statically determinate
Week #6	9/29	5.5	Energy methods – statically indeterminate
	10/1	5.4 – 5.5	Energy methods – applications
Week #7	10/6	7.1 – 7.2	Fundamentals of beam bending
	10/8		EXAM 1 (Chapters 1, 2, 3 and 5)
Week #8	10/13	7.2 – 7.3	Nonsymmetric beam bending
	10/15	7.3	Deflections in nonsymmetric beams
Week #9	10/20	8.1 – 8.2	Shear center for thin walled beams
	10/22	8.3 – 8.5	Shear center applications / examples
Week #10	10/27	9.1 – 9.3	Theory of curved beams
	10/29	9.4 – 9.5	Deflections in curved beams / examples
Week #11	11/3	11.1 – 11.2	Stresses in thick wall cylinders
	11/5	11.3	Radial displacement in thick wall cylinders
Week #12	11/10		EXAM 2 (Chapters 7, 8 and 9)
	11/12	12.1	Intro to column buckling
Week #13	11/17	12.2	Ideal elastic buckling
	11/19	12.3 – 12.4	Euler buckling and local stability
Week #14	11/24	12.1 – 12.4	Buckling applications and examples
	11/26		THANKSGIVING HOLIDAY
Week #15	12/1	4.1 – 4.3	Failure concepts and yield criterion
	12/3	4.4 – 4.5	Advanced yield criterion
Week #16	12/8	4.6	Elastic-plastic bending / examples
Finals Week	12/15 (7:30 – 9:30 am)		EXAM 3 (Chapters 11, 12 and 4)

* Course schedule may change slightly over the course of the semester; changes will be communicated in class and/or electronically