

## MEEG 5033 – Advanced Mechanics of Materials Fall 2010 Course Schedule\*

<u>Week</u>	<u>Dates (M,W,F)</u>	<u>Sections</u>	<u>Topic(s)</u>
Week #1	8/23, 8/25, 8/27	1.1 – 1.4	Review of mechanics of materials 1D stress-strain diagrams
Week #2	8/30, 9/1, 9/3	2.1 – 2.4	Advanced stress and strain concepts Mohr's circle / critical stresses
Week #3	9/8, 9/10	No class	Labor Day Dr. Spearot at conference
Week #4	9/13, 9/15, 9/17	2.5 – 2.8 3.2, 3.3, 3.5	Deformable bodies Anisotropic elasticity
Week #5	9/20, 9/22, 9/24	3.1, 3.4	Thermoelasticity
Week #6	9/27, 9/29, 10/1	5.1 – 5.2 5.2 – 5.4	Introduction to energy methods Energy methods – Castigliano's theorem Energy methods – statically determinate
Week #7	10/4, 10/6, 10/8	5.5	Energy methods – statically indeterminate <b>EXAM 1 (Chapters 1, 2, 3 and 5)</b>
Week #8	10/11, 10/13, 10/15	7.1 – 7.2 7.2 – 7.3	Fundamentals of beam bending Nonsymmetric beam bending
Week #9	10/18, 10/20, 10/22	7.3 8.1 – 8.2	Deflections in nonsymmetric beams Shear center for thin walled beams
Week #10	10/25, 10/27, 10/29	8.3 – 8.5	Shear center applications Shear center examples
Week #11	11/1, 11/3, 11/5	9.1 – 9.5	Theory of curved beams Deflections in curved beams / examples <b>EXAM 2 (Chapters 7, 8 and 9)</b>
Week #12	11/8, 11/10, 11/12	11.1 – 11.3	Stresses in thick wall cylinders Radial displacement in thick wall cylinders
Week #13	11/15, 11/17, 11/19	12.1 – 12.3	Intro to column buckling Ideal elastic buckling / Euler buckling
Week #14	11/22	12.4	Buckling applications and examples Thanksgiving holiday
Week #15	11/29, 12/1, 12/3	4.1 – 4.5	Failure concepts and yield criterion Advanced yield criterion
Week #16	12/6	4.6	Elastic-plastic bending Elastic-plastic examples
Finals Week			<b>EXAM 3 (Chapters 11, 12 and 4)</b>

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