

ENG ME305 Mechanics of Materials**Fall 2011**

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Text: S. H. Crandall et al., *An Introduction to the Mechanics of Solids*,
McGraw-Hill, SI ed., 2007.

<u>Week Beginning</u>	<u>Topics</u>	<u>Reading</u>
9/5	Statics of deformable bodies	Secs. 1.1–1.11, 2.1–2.7
9/12	Shear force and bending moment distributions	Secs. 3.1–3.6
9/19	Stress components	Secs. 4.1–4.3
9/26	"	Secs. 4.4–4.7
10/3	Strain components	Secs. 4.8–4.10
10/10	"	Secs. 4.11–4.14
10/17	Stress-strain-temperature relations	Secs. 5.1–5.6
10/24	Torsion	Secs. 6.1–6.5
10/31	"	Secs. 6.6–6.12
11/7	Stresses in beams	Secs. 7.1–7.5
11/14	"	Secs. 7.6–7.10
11/21	Deflections of beams	Secs. 8.1–8.3
11/28	"	Secs. 8.4–8.7
12/5	Elastic stability; buckling	Secs. 9.1–9.4
12/12	"	"

Grading: Three examinations, each worth 20% of final grade.
Homework assignments, together worth 10% of final grade.
Structural design project, worth 15% of final grade.
Laboratory exercises, together worth 15% of final grade.

Requirements for Homework Assignments

1. Do your homework on clean $8\frac{1}{2}'' \times 11''$ paper. Staple all sheets together.
2. Write carefully and neatly.
3. Buy two triangles, a template for drawing circles, and a scale. Draw all figures and diagrams with these instruments.
4. All numerical values of dimensional quantities must include units.
5. When practical, develop an algebraic result before substituting numerical values.
6. Homework assignments are due in class on the due date. Late homework will not be accepted.