

**MCEN 5023/ ASEN 5012 Fall 2007**

**Course Calendar**

	<b>Date</b>	<b>Content</b>	<b>Note</b>
1	08/27 (M)	Chapter 1: Introduction	
2	08/29 (W)	Review of Undergraduate Mechanics	
3	08/31 (F)	Review of Undergraduate Mechanics	Hw1
<b>Concepts and Fundamentals of Tensor Analysis</b>			
4	09/03 (M)	No Class (Labor Day)	
5	09/05 (W)	Chapter 2: Vector and Vector Algebra	
6	09/07 (F)	Chapter 2: Tensor and Tensor Algebra	Hw2. Hw1 due
7	09/10 (M)	Chapter 2: Tensor and Tensor Algebra	
8	09/12 (W)	Chapter 2: Tensor and Tensor Algebra	
<b>Stress and Strain Tensors</b>			
09	09/14 (F)	Chapter 4: Strain Tensor- Deformation and strain	Hw3. Hw2 due
10	09/17 (M)	Chapter 4: Strain Tensor- Strain tensor and transformation of strain tensor	
11	09/19 (W)	Chapter 4: Strain Tensor- Strain tensor and transformation of strain tensor	
12	09/21 (F)	Chapter 4: Strain Tensor invariants and <b>compatibility of strain fields</b>	Hw4. Hw3 due
13	09/24 (M)	Chapter 4: <b>Stress Tensor – traction and stress</b>	
14	09/26 (W)	Chapter 4: Stress transformation, stress deviations	
15	09/28 (F)	Chapter 4: Stress invariant, Mohr's circles	Hw5. Hw4 due
16	10/01 (M)	Chapter 4: Equations of static equilibrium	
17	10/03 (W)	<b>Review of Vector, Tensor, Strain, and Stress</b>	<b>Hw5 due.</b>
18	10/05 (F)	<b>Exam 1</b>	
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<b>Linear Elasticity</b>			
19	10/08 (M)	Chapter 5: General Hooke's Law and constitutive models for linear elasticity	
20	10/10 (W)	Chapter 5: Governing Equations for Linear Elasticity	
21	10/12 (F)	Chapter 5: Governing Equations for Linear Elasticity	Hw6.
22	10/15 (M)	Chapter 6: Torsion	
23	10/17 (W)	Chapter 6: Torsion	
24	10/19 (F)	Chapter 7: Plane problems	Hw7. Hw6 due
25	10/22 (M)	Chapter 7: Example Problems	
26	10/24 (W)	Chapter 7: Example Problems	
<b>Energy Theorems and Variational Method</b>			
27	10/26 (F)	Chapter 8: Potential Energy	Hw8.Hw7 due
28	10/29 (M)	Chapter 8: Energy Theorems	
29	10/31 (W)	Chapter 8: Energy Theorems	
30	11/01(F)	Chapter 8: Variational Method	Hw9. Hw8 due
30	11/05 (M)	Chapter 8: Variational Method	
32	11/07 (W)	Chapter 8: Variational Method	
33	11/09 (F)	Chapter 8: Applications	Hw10. Hw9 due
34	11/12 (M)	Chapter 8: Applications	
35	11/14(W)	<b>Review of Elasticity, Energy Theorems, and Variational Principles</b>	<b>Hw10 due</b>
36	11/16 (F)	<b>Exam 2</b>	
37	11/19 (M)	No Class (Fall Break)	
38	11/21 (W)	No Class (Fall Break)	
39	11/23 (F)	No Class (Fall Break)	
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<b>Constitutive Equations</b>			
40	11/26 (M)	Chapter 9: Classification of Materials	
41	11/28 (W)	Chapter 9: Constitutive Equations for Plasticity	
42	11/30 (F)	Chapter 9: Constitutive Equations for Plasticity	Hw11.
<b>Advanced Topics</b>			
43	12/03 (M)	Chapter 10: Wave Propagation in Elastic Medium	
44	12/05 (W)	Chapter 10: Wave Propagation in Elastic Medium	
45	12/07 (F)	Chapter 10: Wave Propagation in Elastic Medium	Hw12. Hw11 due.
46	12/10 (M)	Introduction to Nanomechanics	
47	12/12(W)	Introduction to Nanomechanics	
48	12/14(F)	Course Summary	Hw12 due
49	12/20 (Thurs)	<b>Final Exam 7:30am – 10:00am</b>	Final Exam