

MCEN 5023/ ASEN 5012 Fall 2006

Course Calendar

	Date	Content	Note
1	08/28 (M)	Chapter 1: Introduction	
Concepts and Fundamentals of Tensor Analysis			
2	08/30 (W)	Chapter 2: Vector and Vector Algebra	Hw1.
3	09/01 (F)	Chapter 2: Tensor and Tensor Algebra	
	09/04 (M)	<i>Labor Day</i>	No class.
4	09/06 (W)	Chapter 2: Tensor and Tensor Algebra	Hw2. Hw1 due.
5	09/08 (F)	Chapter 2: Tensor and Tensor Algebra	
Stress and Strain Tensors			
6	09/11 (M)	Chapter 3: Stress Tensor- Traction and stress	
7	09/13 (W)	Chapter 3: Stress Tensor- Stress transformation and Mohr's circle	Hw3. Hw2 due.
8	09/15 (F)	Chapter 3: Stress Tensor-2D Mohr's circle	
9	09/18 (M)	Chapter 3: Stress Tensor- Stress invariant and stress deviations	
10	09/20 (W)	Chapter 3: Equation of static equilibrium	Hw4. Hw3 due.
11	09/22 (F)	Chapter 4: Strain Tensor- Deformation and strain	
12	09/25 (M)	Chapter 4: Strain Tensor- Deformation and strain	
13	09/27 (W)	Chapter 4: Strain Tensor- Strain tensor and transformation of strain tensor	Hw5. Hw4 due.
14	09/29 (F)	Chapter 4: Strain Tensor- Stress invariant and stress deviations	
15	10/02 (M)	Chapter 4: Compatibility of strain fields	
Linear Elasticity			
16	10/04 (W)	Chapter 5: General Hooke's Law and constitutive models for linear elasticity	Hw6. Hw5 due.

	10/06 (F)	Exam 1	No class.
17	10/09 (M)	Chapter 5: General Hooke's Law and constitutive models for linear elasticity	
18	10/11 (W)	Chapter 5: Governing Equations for Linear Elasticity	Hw7. Hw6 due.
19	10/13 (F)	Chapter 5: Governing Equations for Linear Elasticity	
20	10/16 (M)	Chapter 6: Torsion	
21	10/18 (W)	Chapter 6: Torsion	Hw8. Hw7 due.
22	10/20 (F)	Chapter 7: Plane problem	
23	10/23 (M)	Chapter 7: Airy Stress Function	
24	10/25 (W)	Chapter 7: Airy Stress Function	Hw9. Hw8 due.
Energy Theorems and Variational Method			
25	10/27 (F)	Chapter 8: Potential Energy	
26	10/30 (M)	Chapter 8: Energy Theorems	
27	11/01 (W)	Chapter 8: Energy Theorems	Hw10. Hw9 due.
28	11/03 (F)	Exam 2	
29	11/06 (M)	Chapter 8: Variational Method	
30	11/08 (W)	Chapter 8: Applications	Hw11. Hw10 due.
Constitutive Equations			
31	11/10 (F)	Chapter 9: Classification of Materials	
32	11/13 (M)	Chapter 9: Constitutive Equations for Plasticity	
33	11/15 (W)	Chapter 9: Constitutive Equations for Plasticity	A: Hw12, Hw11 due. B: Hw11 due.
Advanced Topics			
34	11/17 (F)	Chapter 10: Finite deformation	
35	11/20 (M)	<i>Fall Break</i>	No Class
36	11/22 (W)	<i>Fall Break</i>	No Class
37	11/24 (F)	<i>Thanksgiving</i>	No Class

38	11/27 (M)	Chapter 10: Finite deformation	
39	11/29 (W)	Chapter 10: Finite deformation	A: Hw13, Hw12 due. B: Abstract due.
	12/01 (F)	Chapter 10: Fracture Mechanics	
40	12/04 (M)	Chapter 10: Fracture Mechanics	
41	12/06 (W)	Chapter 10: Plate Theory	A: Hw14, Hw13 due. Hw 14 not collected.
42	12/08 (F)	Chapter 10: Plate Theory	
43	12/11 (M)	Summary of the class	B: presentation (3h).
44	12/13 (W)	Summary of the class	A: No class. B: presentation (3h).
45	12/15(F)	Office Hour	
45	12/16 (F)	Final Exam 1:30pm – 4:00pm	Final Exam