

Mechanical and Industrial Engineering 230
Spring 2012

Thermodynamics Course Syllabus

<u>Date</u>	<u>Topics to be Covered</u>	<u>Suggested Reading</u>
Week 1 (1/23/2012)	Introductory material	Chapter 1
Week 2 (1/30/2012)	Concepts of energy, work and heat transfer	Chapter 2
Week 3 (2/6/2012)	First Law of Thermodynamics	Chapter 2
Week 4 (2/13/2012)	Evaluating properties of pure substances p - v - T relations	Chapter 3
Week 5 (2/20/2012)	Ideal gas model	Chapter 3
Week 6 (2/27/2012)	Evening Exam #1 (Time TBA)	Chapter 4
Week 7 (3/5/2012)	Control volume analysis - open systems Conservation of mass and energy	Chapters 4&5
Week 8 (3/12/2012)	Second Law of Thermodynamics Heat engines and refrigerators	Chapter 6
Week 9 (3/19/2012)	SPRING BREAK!	
Week 10 (3/26/2012)	Carnot cycle	Chapter 6
Week 11 (4/2/2012)	Entropy Process efficiencies	Chapter 7
Week 12 (4/9/2012)	Vapor power systems	Chapter 10
Week 13 (4/16/2012)	Evening Exam #2 (Time TBA) <i>No class 4/16/2012 – Monday schedule followed on 4/17/2012</i>	Chapter 9
Week 14 (4/23/2012)	Internal combustion engine power cycles	Chapter 9
Week 15 (4/30/2012)	Refrigeration and heat pump systems	Chapter 11
Week 16 (5/7/2012)	Final Exam (Date and time TBA)	