

Thermodynamics I (ME 398), Fall 2013

Department of Mechanical Engineering, Wichita State University

Instructor:	Dr. Gisuk Hwang
Office location/hours:	EB 101C, T/R 10:30am 12pm or by appointment
Email:	Gisuk.Hwang@wichita.edu
Phone:	316-978-6022
Webpage:	TBA
Class schedule	4:10 5:25 pm, Room 127 Jabara Hall
Prerequisites:	MATH 243 (Calc II), PHYS 313 (Phys I), or by instructor permission
Grader:	Anusha Chakraborty (axchakraborty@wichita.edu)

Textbook: *Fundamentals of Engineering Thermodynamics*, 7th Ed., Wiley, by Moran, Shapiro, Boettner, and Bailey

References: *Fundamentals of Thermodynamics*, Wiley, 8th Ed., 2012, and *Thermodynamics* 6th Ed., Wark, McGraw-Hill, 2001

Course Description: the laws of thermodynamics including properties of substances and phase equilibrium, the first and second laws of thermodynamics, entropy, power cycles, refrigeration cycles, and chemical and phase equilibrium.

Objectives:

To gain an understanding of heat, work, and the First and Second Laws of Thermodynamics

To apply the above concepts to simple processes, including phase changes, control mass and control volume processes

Grading:

Homework	10%
Midterm exam I	25%
Midterm exam II	25%
Final exam	40%

Reading assignments & homework:

Students are strongly encouraged to go through the reading assignments before the class. Homework problems are assigned in Blackboard. Homework due is given at the following week, same date unless it is specified. Students are strongly encouraged to come to office hours for homework related issues, and to form study groups with your peers.

No extra credit work will be assigned/accepted.

Make-up exams will be administered only upon the submission of the relevant documents, explaining the reasons for the missing ones.

Homework Format:

- Simple restatement of problem, noting information given: include sketches
- State assumptions and indicate non-obvious logic
- Write governing equations when used, note reasons why terms are neglected
- Carry units in all calculations (this helps eliminate logic and math errors)
- Clearly indicate final answer (box or underline)
- Discuss answer (Note any particular behavior or significant points demonstrated by the problem)

Class Schedule

Week	Date	Subject	Reading
1	8/20	Introductions: motivation and application	1.1-1.2
	8/22	Properh	