

The University of New Mexico
Department of Mechanical Engineering
ME 302, Applied Thermodynamics
Spring 2007

Instructor: A. Razani
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Text: Fundamentals of Engineering Thermodynamics,
M.J. Moran and H.N. Shapiro, John Wiley and Sons,
Sixth Edition, 2006.

Class Objectives:

This course is designed to give understanding of thermodynamic relations, mixtures, chemical reactions, phase and chemical equilibrium, and design of power, refrigeration, and heat pump systems using thermodynamic software.

Tentative Course Outline:

<u>Topics</u>	<u>No. of Lectures</u>	<u>Chapters</u>
Review of thermodynamics 1	2	1 to 7
Vapor Power Plants	6	8
Gas Power Plants	6	9
Midterm 1	1 hr.	
Refrigeration and Heat Pump Systems	6	10
Thermodynamic Relations	3	11
Gas Mixtures and Psychrometrics Appl.	7	12
Midterm 2	1 hr.	
Combustion	5	13
Intro. to Chemical and Phase Equil.	2	14
Advanced Power Systems	2	notes
Review	2	
Final Exam	2 hrs.	

Grading policy: The final grade in the course will be based on homework assignments, class participation, two midterm exams, and a final. These will be weighted as follows:

Homeworks*	20%
Midterms(2)	40%
Class participation	10%
Final Exam	30%

*You may cooperate during the process of determining an analytical approach for a problem; however, the solution (including application of EES® software) and writing must be done individually.