

The University of New Mexico  
Department of Mechanical Engineering  
ME 301, Thermodynamics I  
Spring 2007

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

Course description:

Thermodynamic equilibrium, thermodynamic properties and equations of state, first and second laws of thermodynamics and their applications to engineering systems, exergy and irreversibility and their applications to second law analysis.

Tentative Course Outline:

<u>Topics</u>	<u>No. of Lectures</u>	<u>Chapters</u>
Introduction	1	1
Some Concepts and Definitions	3	1
Properties of Pure Substances	7	3
Midterm 1	1 hour	
Conservation of Energy (First Law of Thermodynamics)	11	2 and 4
Midterm 2	1 hour	
Entropy and the Second Law of Thermodynamics	10	5 and 6
Second Law Analysis of Thermodynamic Systems	7	7
Review	1	
Final Exam	2 hours	

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

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

\*You may cooperate during the process of determining an analytical approach for a problem, but the solution and writing must be done individually.