

King Saud University
Mechanical Engineering Department
ME 371 Thermodynamics -I-

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Course Objectives:

Thermodynamics is a basic course that serves as the background for many thermo-fluid courses. The main objective of the course is to provide the engineering student with the basic principles of thermodynamics through the study of the first and second laws of thermodynamics and their applications.

Credit hours: 3

Textbook: Thermodynamics: An Engineering Approach, by Cengel and Boles

Course Content

Chapter	
1	Introduction and Basic Concepts
2	Energy, Energy Transfer, and General Energy Analysis
3	Properties of Pure Substances
4	Energy Analysis of Closed Systems
5	Mass and Energy Analysis of Control Volumes
6	The Second Law of Thermodynamics
7	Entropy

Design Content: None

Lectures: 100 %

Assessment Tools:

Quizzes: 10%

Classwork: 10%

2 Midterm Exams: 30%

Project: 10% (5% report, 5% discussion and presentation)

Final Exam: 40%

Estimated ABET Category Content:

Engineering Science: 3.0 credit units (100%)

Engineering Design: 0 credit units (0%)