Instructor: Morteza Eslamian  
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Lectures: Tuesdays and Thursdays, 5:00-6:15 pm (lecture)- 3 Credit hours  
Office Hours: Tuesdays and Thursdays, 11-12 am

Course Description:

Thermodynamics deals with energy, which is essential for sustenance of life; thermodynamics has long been an essential part of engineering curricula all over the world. It has a broad application area ranging from microscopic organisms to common household appliances, transportation vehicles, power generation systems, and even philosophy.

The objectives of this course are

- To cover the basic principles of thermodynamics
- To present sufficient engineering examples to give students a feel for how thermodynamics is applied in engineering practice
- The course will cover the following topics (Chapters 1 to 7, and 9 to 11 of the Textbook):
  - Basic concepts of thermodynamic system
    - System, state variables, and properties of gases and liquids
    - First law of thermodynamics and how to apply it to thermodynamic systems
    - Second law of thermodynamics and Entropy
    - Work and heat exchange during reversible or irreversible processes
    - Analysis of the rated power and performance of gas power and vapor and combined cycles, such as internal combustion engines, gas turbines, power plants and refrigerators
Textbook:


Cengel/Boles explore the various facets of thermodynamics through careful explanations of concepts and its use of numerous practical examples and figures, having students develop necessary skills to bridge the gap between knowledge and the confidence to properly apply knowledge.

The media package for this text is extensive, giving users a large variety of supplemental resources to choose from. A Student Resources DVD is packaged with each new copy of the text and contains the popular Engineering Equation Solver (EES) software. McGraw-Hill's new Connect is available to students and instructors. Connect is a powerful, web-based assignment management system that makes creating and grading assignments easy for instructors and learning convenient for students.

Evaluation:

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<th>assignments</th>
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<td>Term-Test 1</td>
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<td>Term-Test 2</td>
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Academic Integrity/Plagiarism:

University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials,
falsification, forgery, and complicity or plagiarism. In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in Grade F. Students are expected to do their assignments individually unless specified otherwise.