Thermodynamics

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 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:

Assignments 10%
Lab 15%
Term-Test 1 20%
Term-Test 2 20%
Final Exam 35%

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.

Dropping a Class:

I hope you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Friday, November 4, 2011 is the last day to drop a class with an automatic grade of “W.”

Classroom/professional behavior:

Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

Grade Appeals:

As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University
Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules web site at http://www.tamucc.edu/provost/university_rules/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

**Disabilities Accommodations:**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Driftwood 101.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.