

CANKAYA UNIVERSITY
FACULTY OF ENGINEERING
MECHANICAL ENGINEERING DEPARTMENT

ME 211 THERMODYNAMICS I

Fall 2018

COURSE POLICY

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1. OBJECTIVES: The objectives of this course are as follows.

- To provide a through understanding of the classical thermodynamics
- To apply the basic concepts of thermodynamics to the solution of practical problems
- To develop a systematic approach to problem-solving skills

TEXTBOOKS:

a) **Principles of Engineering Thermodynamics, 8th Ed., SI Version Moran, Shapiro ,Boettner and Bailey , John Wiley and Sons Inc., 2015.**

b) **Principles of Engineering Thermodynamics, 9th Ed., SI Version Moran, Shapiro ,Boettner and Bailey , John Wiley and Sons Inc., 2017.**

b) Engineering Thermodynamics, 2nd , P.Chattopadhyay, Oxford University Press, 2016

An accompanying book of thermodynamics tables (which consists of the appendices from the textbook) is also required for your use during ME 211 examinations and quizzes.

IMPORTANT: Please be sure to bring your thermodynamic tables to all lectures.

IMPORTANT: You must satisfy the Cankaya University Policies including the Attendance Requirement.

3. PREREQUISITE: The material in ME 211 is based on the understanding of:

1. Calculus, including ordinary differentiation, integration, and partial differentiation;
2. Physics, including Newton's laws, concepts of work and energy, simple DC circuits, gravity, and mass (molecular weight), and ideal gas law.

If you cannot meet these requirements, you should drop this course immediately.

Because a background in physics and chemistry is assumed, you will be required to be familiar with such material or review it on your own. The ME 211 class time and resources will be reserved for developing your understanding and appreciation of thermodynamics.

4) ASSIGNMENTS: In addition to this course policy statement, please see the course syllabus. The course syllabus provides a detailed listing of the topics to be covered in each lecture. As basic preparation for each lecture, you should read the assigned section of the textbook before coming to class. The problems assigned from the textbook are illustrative of the general material and problems found on exams. You should attempt to solve the assigned homework problems before each lecture period. This will help you to formulate questions about the material to be discussed in lecture and help you understand the lecture discussions.

There are homework problems assigned for you to work outside of lecture. A file of solutions for assignments up to the current one will be kept in ME 211 web page.

In addition to the weekly reading and homework problem assignments, it is suggested that you review your class notes on a daily basis. You are responsible for all material listed in the syllabus and discussed in lecture. Finally, your instructor may not cover every single topic on the course syllabus in the order that it is listed, or may not have time in lecture to cover all the material listed in the syllabus. You are responsible for all the material listed in the syllabus.

5. EXAMINATIONS: There will be three two-hour midterm exams, seven quizzes and one two-hour comprehensive final exam. The comprehensive final exam will be given during the final exam period.

COURSE GRADING:

The course grade will be based on the score obtained from the following the distributions:

Attendance	5%
Two midterms	30%
Quizzes	25%

Final exam 40%

All examinations, including the final, will be closed book and closed notes.

IMPORTANT: Please be sure to bring your thermodynamic tables to all exams. **Do not add anything to the book of tables in any form.**

6. PREPARATION FOR EXAMINATION: In order to be properly prepared for examination, you should:

1. Attend and participate in all lectures;
2. Read the textbook and your class notes on a regular basis ;
3. Complete and study the homework assignments.

If you neglect any aspect of this trilogy, you will almost guarantee yourself a poor performance. In order to perform well on exams, you must not only know how to solve problems in thermodynamics, but you must be comfortable with the basic concepts of the material. This is because the exams are developed in order to test your understanding of thermodynamics through problem solving, short answer, conceptual, and other types of questions.

On the exams, points will be deducted if you do not start with a basic equation, if you do not clearly indicate your assumptions, if you do not provide sufficient detail during your analysis, if you do not carry units through during your analyses, and if you make sign errors, or incorrectly identify the direction of work and heat terms.

7. HELP: Help is available outside of the lecture period which is office hours.

When you bring a question to me , I will ask to see what you have accomplished and where you got stuck. If you have not started yet, you will only receive a suggestion as to where to start. The office hours is not available to provide easy answers that will boost your homework score. It only exists to assist you in the process of learning thermodynamics.

8. COURSE GRADING: The course grade will be based on the higher score obtained from the following two distributions:

Attendance	5%
Two midterms	25%
7 Quizzes	25 %
Final exam	45%

The above grading scheme allows the student to get a good grade from the course if the student does poorly on one examination, but does well on all others.

It is expected that you attend your registered lecture on a regular basis. If you have to miss class on occasion, i.e. you overslept, were snowed in, or had a medical problem, etc., and then you should try and get the class notes from one of your colleagues.

9.CLASSROOM RULES: Common courtesy while in the classroom is a pre-requisite for learning. The following is expected of students in ME 211.

- Turn off all cell phones, pagers, beepers, etc. before entering classroom. It distracts and annoys those sitting near you when your phone, beeper or pager goes off during lecture.
- Do not read the newspaper once lecture has started. Those behind you cannot see the board/overhead screen through the paper. It is also insulting to your instructor.
- Remove the newspapers, soda cans, candy wrappers and anything else you bring into classroom when you leave. There are trashcans outside for any refuse. Smoking will not be permitted.

- Class time is not for socializing. Please restrict your conversations to subjects related to ME 211. It is distracting and annoying to those sitting near you if you're talking about non-class issues while lecture and discussion is going on. Plus, you'll invariably miss important information. Finally, it's disrespectful of your instructor as well as your friends.

10.SOME ADVICE: Reading your textbook and taking class notes, and working the homework problems on a daily basis is the best way to ensure you learn the material and are prepared for exams. Hard work and struggle is generally required, especially in the early stages of the class, so try and get into the swing of things as soon as possible.

Good luck!

Prof.Dr.Nevzat Onur