
Instructor: Corin Segal, 320 MAE-A.
Meeting times: M, W, F, 6 period, CSE E118 (room changes may be possible as decided by the studio organizers).
Office hours: M, W, F, 8:30 – 9:30 am.

TA: TBA
Office hours: TBD.

Web site:
To the largest extent communication will be via e-learning. Additionally, all announcements will be made in class. In case of discrepancies the class announcements will have priority.

Content:

I. Review
   A. Thermodynamic States
   B. Equations of State
   C. Energy and Work

II. Fundamental Laws of Classical Thermodynamics
   A. First Law
   B. Second Law
   C. Application of First and Second Laws to Carnot Cycle

III. Entropy
   A. Entropy of a pure substance
   B. Entropy change.
   C. The polytropic process.

IV. Second Law analysis for a control volume
   A. Steady-state process.
   B. Available Energy.
   C. Processes involving chemical reactions.

V. Power and regeneration Cycles

VI. Mixtures of gases

VII. Thermodynamic Relations
   A. Maxwell Relations
   B. The Clapeyron Equation.
   C. Equations of state for real gases.
VII. Chemical Reactions
   A. Adiabatic Flame Temperature.
   B. Chemical Equilibrium.

GRADING:

Homework: 25%
Tests (3): 25% Each

Grading scale

<table>
<thead>
<tr>
<th>Average score</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90-100</td>
<td>A</td>
</tr>
<tr>
<td>75-85</td>
<td>B</td>
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<tr>
<td>60-70</td>
<td>C</td>
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<tr>
<td>50-60</td>
<td>D</td>
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HOMEWORK POLICIES:

1. You are encouraged to work with your classmates in this course, e.g. discussing concepts or approaches to problems. However, the homework papers which you submit must be your own individual work. Copying or comparison of final answers is not permitted. The University of Florida honor code is in force for this course (see below).

2. Homework papers are due at the beginning of the period unless prior arrangements with the instructor were made or a written medical excuse exists. The delay due to mailing is accepted for off-campus students.

Honesty Policy

All students admitted to the University of Florida have signed a statement of academic honesty committing to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others.

Accommodation for Students with Disabilities

Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

UF Counseling Services

Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:
- University Counseling Center, 301 Peabody Hall, 392-1575, Personal and Career Counseling.
- SHCC Mental Health, Student Health Care Center, 392-1171, Personal Counseling.
- Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, Sexual Assault Counseling.
- Career Resource Center, Reitz Union, 392-1601, Career Development Assistance and Counseling.

Software Use
All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.