

## ME 3310/5310: Thermodynamics I

**Instructor:** Professor Scott K. Thomas, Ph.D., (937) 775-5142, Room 124 Russ Engineering Center  
[scott.thomas@wright.edu](mailto:scott.thomas@wright.edu)

**Course Homepage:** <http://cecs.wright.edu/~sthomas/thermodynamics.html>

**Class Hours:** MW 1:30 to 3:10 p.m., Room 144 Russ Engineering Center

**Office Hours:** MW 12:20 to 1:20 p.m. or by appointment, Room 124 Russ Engineering Center

**Text:** Cengel and Boles; *Thermodynamics: An Engineering Approach*, McGraw-Hill

**Problem Sets:** Use Handouts for the Problem Sets, which are due as indicated in the Course Schedule below. Each homework assignment will be submitted as a single PDF file using the Dropbox feature within Pilot. Late homework assignments will not be accepted by the Dropbox feature within Pilot or by the instructor.

*Homework Handouts:*

<http://cecs.wright.edu/~sthomas/thermohandouts.html>

*Homework Solutions:*

<http://cecs.wright.edu/~sthomas/thermohomeworksolutions.html>

**Mid-Term Exams:** Mid-term exams are scheduled as indicated in the Course Schedule below. Mid-term exams will not be rescheduled for any individual for any reason. If you miss a mid-term exam, the weight of that exam will be placed onto the final exam. If you take a mid-term exam, you can choose to not have it graded. Simply take the bluebook with you as you exit the room. If your exam is not graded, the weight of that exam will be placed onto the final exam.

**Final Exam:** The final exam is scheduled as indicated in the Course Schedule below. The final exam will not be rescheduled for any individual for any reason. You cannot miss the final exam. If you miss the final exam, you will receive a FAILING GRADE FOR THE CLASS.

*Previous Exams:*

<http://cecs.wright.edu/~sthomas/thermopreviousexams.html>

*Items that ARE allowed during mid-term exams and the final exam:*

- Bound textbook
- Calculator that does not have electronic communication capabilities
- Instructor-supplied paper
- Pen or pencil
- Eraser

*Items that ARE NOT allowed during mid-term exams and the final exam:*

- Cell phones or other electronic communication devices or methods (e-mail, instant messaging, etc.)
- The electronic version of the book
- Photocopies of the bound textbook
- Print-outs of the electronic version of the book

- Extra sheets of paper of any kind

I reserve the right to move any individual to another seat at any time during mid-term exams and the final exam. It is not permitted to pass your book or calculator to someone else during the exam.

### **Student Conduct During Mid-Term Exams and the Final Exam:**

- If you have a cellphone or other electronic communication device out during a mid-term exam, you will receive a ZERO FOR THE MID-TERM EXAM.
- If you decide to share your work with someone else during a mid-term exam, both people will receive ZEROES FOR THE MID-TERM EXAM.
- If you have a cellphone or other electronic communication device out during the final exam, YOU WILL RECEIVE A FAILING GRADE FOR THE CLASS.
- If you decide to share your work with someone else during the final exam, BOTH PEOPLE WILL RECEIVE A FAILING GRADE FOR THE CLASS.

Each type of incident outlined above will be referred to the Office of Community Standards and Student Conduct as a case of academic dishonesty.

### **Academic Integrity Standards:**

<http://www.wright.edu/community-standards-and-student-conduct/code-of-student-conduct/academic-integrity>

**Course Grade:** 10% Problem Sets, 30% Mid-Term Exam 1, 30% Mid-Term Exam 2, 30% Final Exam.

A: 100 to 90, B: 89 to 80, C: 79 to 70, D: 69 to 60, F: < 60

### **Student Evaluations of Prof. Scott K. Thomas for Thermodynamics I:**

<http://cecs.wright.edu/people/faculty/sthomas/thermodynamicsevals.html>

### **Lecture Notes:**

<http://cecs.wright.edu/people/faculty/sthomas/thermonotes.html>

### **Pilot Tutorials:**

[www.wright.edu/ctl/tutorials/pilot/](http://www.wright.edu/ctl/tutorials/pilot/)

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### Course Schedule:

Class Period	Date	Subject	Chapter	Homework Due Date
1	5/9	Introduction and Basic Concepts	1	
2	5/11	Introduction and Basic Concepts	1	
3	5/16	Properties of Pure Substances	3	Chapter 1
4	5/18	Properties of Pure Substances	3	
5	5/23	Properties of Pure Substances	3	
6	5/25	Energy, Energy Transfer, and General Energy Analysis	2	Chapter 3
7	5/30	<b>Memorial Day Holiday</b>		
8	6/1	Energy, Energy Transfer, and General Energy Analysis	2	
9	6/6	<b>Mid-Term Exam: Chaps. 1,2,3</b>		Chapter 2
10	6/8	Energy Analysis of Closed Systems	4	
11	6/13	Energy Analysis of Closed Systems	4	
12	6/15	Energy Analysis of Closed Systems	4	
13	6/20	Mass and Energy Analysis of Control Volumes	5	Chapter 4
14	6/22	Mass and Energy Analysis of Control Volumes	5	
15	6/27	Mass and Energy Analysis of Control Volumes	5	
16	6/29	<b>Mid-Term Exam: Chaps. 4,5</b>		Chapter 5
17	7/4	<b>Independence Day Holiday</b>		
18	7/6	Second Law of Thermodynamics	6	
19	7/11	Second Law of Thermodynamics	6	
20	7/13	Entropy	7	Chapter 6
21	7/18	Entropy	7	
22	7/20	Gas Power Cycles	9	Chapter 7
23	7/25	Gas Power Cycles	9	
24	7/27	<b>Final Exam: Chaps. 6,7,9</b>		Chapter 9