Syllabus

Instructor: Prof. Bryan W. Weber
Engineering II Room 311
bryan.weber@uconn.edu
860-486-8043
TAs: Mr. Jeremy Brine jeremy.brine@uconn.edu
Ms. Jiqin Li jiqin.li@uconn.edu
Ms. Lauren Marshall lauren.marshall@uconn.edu
Mr. Ji-Woong Park ji-woong.park@uconn.edu

Lecture: (001) TR 1230–1345 — UTEB 175
(002, 003) MWF 0800–0850 — ROWE 122

Office Hours: Updated Office Hours can be found at this calendar: ME 2234 Office Hours Spring 2017 and on HuskyCT

Course Text: Fundamentals of Engineering Thermodynamics, Eighth Edition, by Moran, Shapiro, Boettner, and Bailey.

Attendance: Attendance at lecture will not be taken. However, your attendance and participation are strongly suggested to ensure a complete understanding of the material. If you have to miss a lecture, make friends with your classmates and get the notes from them. In addition, a portion of your grade is dependent on your participation with in-class questions.

Course Objectives: ME 2234 is the second in a two-part series at UConn on one of the most central subjects in Engineering. In this course, we will extend the principles learned in ME 2233 to apply them to vapor and gas cycles, property relations for simple pure substances, properties of ideal gas mixtures, and psychrometry. In addition, we will cover the fundamentals of reacting and non-reacting mixtures. The most important portions of this course will cover the application of the thermodynamic principles to designing thermal engineering systems. The ABET course syllabus for ME 2234 is available at http://www.engr.uconn.edu/me/cms/images/prod/pdf/me2234appliedthermodynamics.pdf and can provide you with further information about the objectives of this course. This document will also be linked from the HuskyCT site.

HuskyCT: Go to huskyct.uconn.edu. After logging in, you can access all of the information for this course. On HuskyCT I will post lecture notes, homework assignments, and quizzes. I will also post further reading for your information. In addition, you can retrieve your grade information for specific assignments.

General Policies:

1. My office and office hours are listed at the top of this syllabus. If you stop by outside of office hours, it is unlikely that I will be available to help, due to other teaching, research, and administrative responsibilities. Therefore, if you need to meet outside of office hours or class time, please email to set up a meeting.

2. When you email me, send email to bryan.weber@uconn.edu and include in the subject the text "[ME 2234]" (without the quotes, but with the brackets). If you send email to a different account or without

"[ME 2234]" in the subject, I may not see it in a timely manner. In addition, email sent after 6PM may not get a response until the next day.

3. Late assignments will be assigned a penalty based on the time they are turned in relative to the original due date. Assignments handed in between 0–24 hours late will have a penalty of 10% of the maximum score; 24–48 hours late will have a penalty of 30% of the maximum score; 48–72 hours late will have a penalty of 50% of the maximum score; more than 72 hours late will not be accepted. Thus, if a 50 point assignment is due at 1200 on Wednesday, and you hand it in at 1500 on Thursday, there will be a penalty of 15 points (50 points * 30%) subtracted from your grade (with a lower limit at zero). These penalties can be avoided by requesting an extension, detailed below.

4. Requests for extensions on assignments will only be granted in extenuating circumstances that have been explained at least **24 hours** in advance of the due date. Please request extensions via email and attach a copy of my approval to the assignment when you turn it in.

5. Participation will be graded by problem solutions collected at the end of class periods. There will be approximately 7-15 problems completed during the semester, and you will be graded with 2/3 point for participation and 1/3 point for correctness. If you need to miss a class, you must email Prof. Weber as soon as possible.

6. In cases where more than one solution is presented on a homework or exam problem, the one with the most errors will be the one that is graded.

7. Requests for regrading of exam questions must be made in writing within one week of the exam return date. The request should detail where the mistake was made and why the grade should be changed. Regrade requests for additional partial credit on a problem or because your grade is "so close" to the next letter will not be considered unless there are serious mistakes. In general, regrade requests should be submitted in the cases where your answer is the same as the answer key and the grader made a mistake; or your answer is different from the answer key, but equally as correct. All regrade scores are final, unchangeable, and non-negotiable.

8. No cell phones or electronic devices should be used when class is in session. Electronic devices are generally a distraction for you and your classmates. Please set your phone to silent (not vibrate). The pre-exam keyword is maxwell. If you receive a call that is a true emergency, please step out to take it. The third time anyone's phone rings, I will answer it; if it is an emergency, I will happily return the phone to you. The same policy applies to me—if I forget to silence my phone and it rings, a student will be allowed to answer!

9. Absolutely no cell phones, smart watches, or other electronic devices, except calculators, will be allowed during the exam. If you need to go to the bathroom during the exam, you will be required to hand your phone and exam to me for the duration of your sabbatical.

10. If you have any special needs related to a disability, qualified and certified by the Center for Students with Disabilities, you must notify the instructor, so that arrangements may be made to accommodate such a disability. Policies for the Center for Disabilities can be found at: http://www.csd.uconn.edu

Grading System:

Projects	50%
Homework	20%
Quizzes	20%
Pre-Exam	5%
Participation	5%
Total	100%

Letter Grade	Percent	Letter Grade	Percent	Letter Grade	Percent
		A	93 – 100	A-	90 – 92
B+	87 – 89	B	83 – 86	B-	80 – 82
C+	77 – 79	C	73 – 76	C-	70 – 72
D+	67 – 69	D	63 – 66	D-	60 – 62
F	≤ 59				

Academic Integrity:
It is expected that all students will maintain the highest level of academic integrity and honesty throughout this course. The Academic Integrity policy of the University of Connecticut can be found in The Student Code, Appendix A available online at http://community.uconn.edu/the-student-code-appendix-a/. Cheating, copying, or plagiarism on the homework, projects, or any of the exams is unacceptable and will be dealt with appropriately. **This may include but is not limited to a failing grade on the assignment, exam, or in the course.**
Most instances of cheating are blatantly obvious, such as copying from your neighbor's exam, but some are more subtle. My rule is: Any occasion where you hand in work that is not entirely your own is considered academic dishonesty. In this course, you are permitted to work on the homework problems with your classmates. However, it is recommended that you make an effort to do the problems individually before discussing them with a classmate so that you can fix the concepts in your head. If you work with your classmates on the homework, each of you must perform the calculations for every problem independently; one student plugging the numbers into their calculator and telling everyone else the answer is considered cheating. The work and final presentation that you turn in must be yours!

Schedule:

- There will be approximately weekly quizzes assigned on HuskyCT. They will typically cover the reading assignment for each week. These quizzes are meant to prepare you for the following week's lectures, so it is important for you to thoroughly consider each quiz.
- There will be approximately weekly homework assignments on HuskyCT. You are responsible for ensuring that each homework assignment is submitted on time. The homeworks are your chance to practice problem solving techniques, so it is important for you to complete each assignment fully.
- There will be approximately 5 projects. More detail of these will be provided as the semester progresses.

Tentative Schedule of Topics:

Topics	Reading Material
Vapor Power Systems	8.1–8.5
Gas Power Systems	9.1–9.11
Refrigeration and Heat Pump Systems	10.1–10.6
Thermodynamic Relations	11.1–11.9
Ideal Gas Mixtures	12.1–12.4
Psychrometric Applications	12.5–12.9
Reacting Mixtures & Combustion	13.1–13.5
Chemical & Phase Equilibrium	14.1–14.6