ME 398, Thermodynamics I, Fall, 2016

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M/W 2:00 3:30 pm or by appointment
JH 127; M/W 3:30 4:45 pm
MATH 243, and PHYS 313
TBA
TBA

This syllabus provides you with information specific to this course, and it also provides information about important university policies. This document should be viewed as a course overview; it is not a contract and is subject to change as the semester evolves.

Students are responsible for knowing and following the Student Code of Conduct http://webs.wichita.edu/inaudit/ch8_05.htm and the Student Academic Honesty policy http://webs.wichita.edu/inaudit/ch2_17.htm. will be given to the student's assignment and/or exam, associated with cheating activity and/or attempt.

This course is an introduction to the study and analysis of thermodynamics, energy, and entropy, and their interactions relevant to engineering, centered on the first and the second laws of thermodynamics.

Success in this 3 credit hour course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally 3 hours per unit per week with 1 of the hours used for lecture) for instruction and preparation/studying or course related activities for a total of 135 hours.

- Recognize and use the terminology, symbols, and units specific to thermodynamics.
- Identify and interpret the interaction of a system and its surroundings, and apply the First Law of thermodynamics.
- Evaluate, calculate, and approximate the properties of engineering substances.
- Classify and interpret processes and cycles, and analyze the energy balance for both closed systems and open systems (control volumes).
- Identify and interpret the concept of entropy, and apply the Second Law of thermodynamics.
- Evaluate and calculate the entropy of engineering substances, and analyze the entropy balance for both closed systems and open systems (control volumes).

Fundamentals of Engineering Thermodynamics, 7th Ed., Wiley, by Moran et al.

The aminations of the textbook are strongly encouraged to view:
http://bcs.wiley.com/he-bcs/Books?action=mininav&bcsId=6124&itemId=0470495901&assetId=236674&resourceId=23141&newwindow=true

Attendance is strongly recommended.

The use of laptops is allowed only for class-related activities.

Discussions related to the grade will take place ONLY in in-person meetings scheduled by appointment via e-mail or during office hours.

Students are expected to behave courteously and professionally, and disciplinary infractions will be reported to the university authorities.

The final letter grade will be given based on the student performance on assignments and exams. The details are given as follows

Homework (10-12 assignments) In-class Quiz	10%

4-6 in-class quizzes will be given based on the homework problems.
Two midterm exams and one (comprehensive) final exam will be given.
All the quizzes/exams are tests, and formula sheet will be given by the instructor.
Calculator is required, and _____

Wichita State University students are subject to Board of Regents and University policies (see http://webs.wichita.edu/inaudit/ch9_10.htm) regarding intellectual property rights. Any questions regarding these rights and any disputes that arise under these policies will be resolved by the President of the University, or the President's designee, and such decision will constitute the final decision.

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Week	Date	Subject	Reading
1	8/22	Introductions: overview and backgrounds	1.1-1.3
	8/24	Unit and measuring properties	1.4-1.9
2	8/29	Energy and work	2.1-2.3
	8/31	Energy transfer by heat and first law of thermodynamics	2.4-2.5
3	9/5	No class (Labor day holiday)	-
	9/7	Energy analysis of cycles and energy storage	2.6-2.7
4	9/12	State properties: pressure, specific volume, and temperature	3.1-3.3
	9/14	Evaluating properties	3.4-3.8