ME 337 Spring 2020
Introduction to Thermal Sciences
Department of Mechanical Engineering
Colorado State University

Instructor: Jason Quinn
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Office Hours: M, F 8:00-9:00 am, Engineering A111
LA office Hours MS-Teams
Telephone: 970-581-7992 (cell)

Class Info
Time: 9:00-9:50 am, M,W,F
Location: MS-teams/zoom
Prerequisite: MATH 261; PH 141 (may be taken concurrently)
Credits: 4

Recitation:
Time: 4:00-4:50 pm, W.
Location: MS-teams/zoom

We will use the Connect interface

Delivery: The course will be delivered online through a combination of synchronous and asynchronous formats. All lectures will be recorded with class attendance not required.

Grading:
Exam 1-15%
Exam 2-20%
Exam 3-20%
Reading-5%
Homework & Quizes-19%
Course Eval-1%
Final Exam-20%

Standard grading system-{100-93.33} A, {<93.33-90.0} A-, {<90.0-86.67} B+, {<86.67-83.33} B, {<83.33-80.0} B-, {<80.0-76.67} C+, {<76.67-70} C, {<70.0-60.0} D, {<59.0} F

Inquires concerning grading of exams and homework must be brought to the attention of the instructor within five days after graded papers returned. There will be no extra credit opportunities.

The guidelines provided in the Colorado State University Department of Mechanical Engineering Student Academic Integrity Policy apply in matters concerning this course. Violations of academic integrity will result in dismissal.
from the course and an incomplete grade in the class at a minimum. Use of homework solutions is a violation of academic integrity and will result in an F in the class.

Exams: Exams will be take home, open note, open book, closed friend. Exams are cumulative with a focus on new material. Final is Cumulative. Exams can be rescheduled for students with an instructor approved absence, rescheduled exam will be an oral exam with the instructor.

Homework & Quizes: Homework assignments will be through Connect. Quizzes will be announced at least 2 class periods prior to the quiz. The two lowest scores will be dropped.

Course Topics:
- Fundamental thermodynamic concepts including system, state, state postulate, equilibrium, process and cycle
- Heat, work, 1st law of thermodynamics
- Properties of substance
- Energy balance for idealized closed systems
- Energy and mass balance for idealized control volumes
- 2nd law of thermodynamics, Carnot cycle, thermal efficiencies
- Entropy, isentropic processes, isentropic efficiencies
- Idealized cycles: Otto, Diesel, Rankine
- Idealized Refrigeration cycles (vapor compression cycle) and heat pumps

Course objectives: This course supports the following student outcomes
- Ability to apply knowledge of math, science and engineering principles to engineering problems
- Ability to identify, formulate, and solve engineering problems
- Ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Disabilities: If you are a student who will need accommodations in this class due to a disability or chronic health condition, I will need an accommodation letter from the Student Disability Center (SDC) before they are implemented. Please meet with me during my office hours to give me the letter and/or to further discuss your needs.
If you do not already have these letters, please contact the SDC as soon as possible to initiate the accommodation process. The SDC is located in room 121 of the TILT building. Contact them at 970-491-6385 or visit www.disabilitycenter.colostate.edu

Peer Tutors: One Learning Assistant (LA) has been hired in support of this class. The LA will be holding additional office hours.