

Exams:

All exams will be OPEN TEXTBOOK but no other materials and devices (except a calculator) will be allowed. Cell phones, laptops, and tablets are prohibited during exams. The Exams may include conceptual questions and numerical calculations. Final exam will be comprehensive. Any cheating in exams, in any form, will result in an automatic F for semester grade. Also, all such activities will be reported to the disciplinary committee for further investigation. If you are uncertain as to what constitutes academic dishonesty, please consult "The Golden Rule", the University of Central Florida's Student Handbook (<http://www.goldenrule.sdes.ucf.edu/>) for further details. Medical emergencies will be accepted for absence in exams only with a supporting letter from your physician. Make-up exams will be given on a case by case basis under the discretion of the instructor.

Homework (HW):

Homework is an important part of the learning process. Homework problems will be assigned and solutions will be posted. Homework problems are the best way to apply your concepts. *Note that mastering homework problems may help performance in exams.* HW will normally be assigned on Tuesdays and due the following Tuesday in class. LATE HW will not be graded- there is no exception. Instructor may choose not to grade all homework problems.

Course Outline

The thermodynamic concepts and basic equations

Waves and isentropic flows of a perfect gas

Flows in variable cross-sectional area channels

Stationary and moving Normal shock waves

Oblique shock waves

Prandtl-Meyer flows (expansion waves)

Fanno-line flows (flows with friction)

Rayleigh- line flows (flows with heat addition)

Applications to wind tunnels, airfoils, supersonic inlets, ramjets, and scramjets

Note: The instructor reserves the right to modify the information contained in this document at his discretion. Such modifications will be announced via webcourses.