

**Meteorology 3510: Atmospheric Thermodynamics and
Boundary Layer Meteorology
Spring 2008**

Instructor: Steve Krueger
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Description: Thermodynamics of dry and moist air, including adiabatic processes, parcel theory, and thermodynamic diagrams; boundary layer structure and processes, including turbulence, surface fluxes, diurnal cycle, boundary layer clouds, and pollutant dispersion.

Prerequisites: MATH 1220 and PHYSICS 2220.

Classroom: INSCC 490

Class Hours: Tu Th 10:45 to 12:05

HELP! Tu Th 2:00 to 2:45, or by appointment. Email works well.

Holidays: March 18 and 20 (spring break)

Classes that may be rescheduled: (none)

Last day of class: Tuesday, April 22

Final exam: TBD

Format: Primarily lecture and weekly assigned problem sets. The students will use MATLAB programming skills to solve problems and to present results in graphical form.

Grading: The course grade will be determined from problem sets (35%), two mid-term exams (30%), a final exam (30%), and attendance (5%).

The exams may be weighted more or less, if this is to the student's advantage. The grading scale will be A: ≥ 90 , B: 80-89, C: 70-79, D: 60-69, F: < 60 .

Class policies: Students must take every exam with exceptions governed by University Policy. Plagiarizing, copying, cheating, or otherwise misrepresenting one's work will not be tolerated.

Missing class will not be penalized directly, but usually results in poor problem set and exam performance. Some course material that you are responsible for will only be presented during lectures (i.e., will not be found in the text or online notes).

Homework is due at the start of class on the due date, unless otherwise noted. Late homework will not be accepted.

Required Textbooks: (none)

Optional Textbook: *Atmospheric Thermodynamics*, 2d ed., by A. A. Tsonis.

Supplementary Material: *Thermodynamics Notes for Meteo 3510*, by S. K. Krueger.

Disability Services

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations.

All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.