MET 4230 Syllabus
Atmospheric Thermodynamics

Instructor: Stephen Mullens, stephen.mullens@ufl.edu
Office: Turlington Hall, Geography Department, Room 3126-B (room in a room)
Office Hours: MTWR period 3, TR period 4, MTR period 5, or by appointment.
It's best to let me know in class or via email if you're coming to office hours. You are also free to just stop by during those times. If you want to make an appointment at another time, just email me. I will try to accommodate you as my schedule permits.

Class times:
Mondays, Wednesdays, Fridays at 10:40-11:30am
Turlington 3012

Textbook:
Petty, Grant, 2008: *A First Course in Atmospheric Thermodynamics*. Sundog Publishing, 352 pp.

Course Objectives – What we're going to cover:
Students who successfully complete this course will be able to:

- Explain the basic principles of thermodynamics as they apply to dry and moist air-masses and describe how different phases of water affect thermodynamic processes in the atmosphere.
- Apply their understanding of the basic theory to describe how thermodynamic processes lead to the observed structure of the atmosphere globally and regionally.
- Calculate, from observations and models, the stability structure of the atmosphere and its implications for weather phenomena.
- Explain the mechanisms that lead to precipitation development and modulation of precipitation type and intensity.

Grading Structure: (definitely subject to change)
50% - Homework assignments and any in-class activities
20% - Midterm Exam
30% - Final Exam

Grades:

A	90.0-100%	B+	87.0-89.9%	C+	77.0-79.9%	D+	67.0-69.9%
		B	83.0-86.9%	C	73.0-76.9%	D	63.0-66.9%
		B-	80.0-82.9%	C-	70.0-72.9%	D-	60.0-62.9%

No classes on:

Labor Day is on September 4.
Homecoming is on October 6.
Veterans Day is on November 10.
Thanksgiving is on November 22-25.

Very Tentative Weekly Schedule:

Week	Tue 3-4; Thurs 3	Relevant Chapters
Aug	Overview, atmospheric context	Ch 1-4
	Thermodynamic diagrams	
Sep		
	First Law of Thermodynamics	Ch 5
	Second Law of Thermodynamics	Ch 6
Oct		
	Midterm Exam?	
	Dry and Moist Air	Ch 7
	Atmospheric Statics	Ch 8
Nov		
	Mixing and Stability	Ch 8
	Thanksgiving	
	Entrainment	
Dec		
	Final Exam: Dec 13 10:00am-12:00pm	

UF POLICIES

Procedure for Conflict Resolution

Any classroom issues, disagreements or grade disputes should be discussed first between the instructor and the student. If the problem cannot be resolved, please contact Dr. Jason Blackburn (jkblackburn@ufl.edu, N/A). Be prepared to provide documentation of the problem, as well as all graded materials for the semester. Issues that cannot be resolved departmentally will be referred to the University Ombuds Office (http://www.ombuds.ufl.edu; 352-392-1308) or the Dean of Students Office (http://www.dso.ufl.edu; 352-392-1261).

NOTE: This course complies with all UF academic policies. For information on those policies and for resources for students, please see UF's "Academic Policies and Resources" web page.

DISCLAIMER:

This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.