MET 3503 Syllabus
Weather and Forecasting

Instructor: Stephen Mullens, stephen.mullens@ufl.edu
My 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:
Time: Monday 1:55-3:50pm; Wednesday 1:55-2:45pm
Location: Turlington Hall 3018

Textbook:
Cox, John D., 2002: *Storm Watchers: The Turbulent History of Weather Prediction from Franklin's Kite to El Niño*. Wiley, 252 pp.

Fleming, James Rodger, 2020: *First Woman: Joann Simpson and the Tropical Atmosphere*. Oxford University Press. 224 pages. isbn 978-0198862734.

Stull, Roland, 2018: *Practical Meteorology: An Algebra-based Survey of Atmospheric Science*. version 1.02b. Univ. of British Columbia. 940 pages. isbn 978-0-88865-283-6.

… and more

Course Objectives – What we're going to cover:
- Analyze current weather through satellite and radar imagery.
- Evaluate weather conditions through hand-analyzed meteorological observations.
- Explain the physics underlying current synoptic storm developments.
- Explain wind-related forces and how they contribute to geostrophic, gradient, and hydrostatic force balances.
- Plot meteorological rawindsonde observations onto thermodynamic charts.
- Analyze thermodynamic charts and evaluate the potential weather that might occur.
- Explain how common meteorological indices are calculated from thermodynamic charts.
- Explain how radar and satellite observation can inform meteorological analysis.
- Apply the forecast process when making your own weather forecasts.
- Evaluate numerical model output to make a weather forecast.
- Discuss the historical evolution of meteorological knowledge.
- Calculate common meteorological relationships.

Grading Structure:

40% - Homework
10% - Book Homework
10% - Readings Quiz
15% - Exam
25% - Final Project

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%

Schedule

The precise dates may change. I will update you as we go.

Aug 18 – (Class is not scheduled this Thursday or Friday.)
Aug 25 – Introduction, Temperature, Dewpoint, Map Analysis
Sep 1 – Temperature
Sep 8 – Precipitation, Pressure
Sep 15 – Wind forces, Upper Air Map Analysis
Sep 22 – Extratropical Cyclones
Sep 29 – Extratropical Cyclones, continued
Oct 7– Midterm Exam
Oct 14– Soundings
Oct 21– Sounding applications
Oct 28– Satellite, Radar
Nov 4– Jet Streams
Nov 11– Numerical Weather Models
Nov 25– Thanksgiving Week
Dec 2– Review for Reading Quiz, Work on Final Projects
Dec 9– Final Project due

UF POLICIES

ACCOMMODATIONS:

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

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.