Course: MET 4306/5306 Dynamic Meteorology II (3 credits) Spring 2018
Instructor: Dr. Steven Lazarus
Pre-Requisite: MET 4305
Location: Link 325
Class meets: Tue/Thurs 8:00 - 9:15 a.m.
Office Hours: M/W 10:30-11:30 a.m. (or by appointment)
Office phone: 394-2160
email: slazarus@fit.edu

*Grading: Undergraduate: 1 midterm exam/25%, final 35%, homework 20%, quizzes 20%
Graduate: 1 midterm exam/30%, final 50%, homework 20%

For more info on class policies etc. see http://my.fit.edu/~slazarus/met4306/guidelines.html

**Graduate students taking this course will be presented with more rigorous exam questions with the expectation that their level of understanding of the material be more thorough.

Course description: Course material includes: vertical vorticity dynamics, severe storm dynamics, quasi-geostrophic theory, vertical motion, an introduction to Q-vectors, linear wave theory, and Rossby wave dynamics (Prerequisite: MET4305/5305 or permission of the instructor).

CRN: 17770 (MET 4306) / 17795 (MET 5306)

Textbooks: In addition to lecture notes, the primary text is:


For other dynamics texts go to http://my.fit.edu/~slazarus/met4306/refs.html

Course Objectives: The 4306 course is the second of a two part course sequence designed fulfill the requisites associated with a B.S. in meteorology. In part, the goal of this course is to broaden the scope and understanding of dynamic meteorology by expanding into areas not covered during the first semester (see below). The application of concepts first introduced in MET 4305 and the introduction to new tools, methods, and techniques is presented with a focus on providing insight on how the atmosphere really works. Despite the theoretical nature of dynamical meteorology, the course is designed with practical applications in mind. Students will have a better understanding of science, physical systems, and how these concepts can be applied to real-world problems.

Topics/Concepts Covered:
Large-scale vertical vorticity dynamics
Scaling
Linear wave theory
Introduction to Rossby waves
Severe storm dynamics
Quasi-geostrophic theory