METR 4133, Atmospheric Dynamics III  
Fall 2008

Instructor: Dr. Kelvin K. Droegemeier  
Office: National Weather Center, Room 5349 (325-6561)  
Office Hours: Tues/Thurs, 12:45-1:30 pm; Other times by appointment  
Use of email is strongly encouraged (kkd@ou.edu)

Grader: Mr. Nathan Dahl (droughtman@ou.edu)

Class Web Site: http://kkd.ou.edu/METR_4133_Fall_2008/METR4133.htm

Classroom/Time: Room 5600, National Weather Center, Tues and Thurs, 11:30 am – 12:45 pm


Errata sheets are available at http://weather.ou.edu/~hblue/corrections.


Prerequisites: METR 3123 (Atmospheric Dynamics II) and METR 3223 (Physical Meteorology II) and or equivalents. IF YOU HAVE NOT RECEIVED A GRADE OF “C” OR BETTER IN THE PREREQUISITE COURSES, YOU CANNOT ENROLL IN THIS ONE.

Content: Review of elementary dynamics and thermodynamics  
Kinematics of the horizontal wind and scalar fields  
Quasi-geostrophic theory, applications to forecasting  
Extra-tropical disturbances and baroclinic instability  
Fronts, jets, and the dryline  
Linear perturbation theory and atmospheric waves (Holton text)

Grading:  
Homework problems 25%  
Two one-hour in-class exams (Oct 2 and Nov 13) 40%  
Comprehensive Final Exam (10:30 am-12:30 pm on Monday, Dec 15) 35%