

Department of Atmospheric Sciences

COURSE ANNOUNCEMENT – SEMESTER I – 2006–2007

ATMS 120/Sec. B: Severe and Hazardous Weather

Call number: 31291

Instructor: John Walsh, 209 Atmos. Sci. Bldg., 244-9575

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Room and Time: 112 Chem Annex; 10:30 – 11:50 a.m. T R

Credit: 3 hours

Prerequisites: None

The most extreme manifestations of weather and climate are analyzed in terms of their physical basis and their historical, economic and human consequences. Emphasis is placed on the interplay between technological advances, the evolution of meteorology as a science and the impacts of extreme weather (winter storms, floods, severe thunderstorms, hurricanes, El Niño).

Course content will include the following.

1. Overview of the atmosphere
2. Instruments used in monitoring and forecasting severe weather
3. Hurricanes
4. Fronts and cyclones
5. Severe thunderstorms: tornadoes, lightning, downbursts, floods and hail
6. Large-scale severe weather: Drought, heat waves, El Niño
7. Winter weather: blizzards, lake effect snow, ice storms, cold outbreaks, mountain snowstorms and windstorms

Text: *Severe and Hazardous Weather*, 2nd Edition, by Robert Rauber, John Walsh and Donna Charlevoix, Kendall-Hunt, 2005 (required).

Active Learning Exercises for Severe and Hazardous Weather, 2nd Edition, by Robert Rauber, John Walsh and Donna Charlevoix, Kendall Hunt, 2005 (required).

*This course is approved for General Education credit in the category of
Natural Sciences and Technology: Physical Science*