

Department of Atmospheric Sciences

COURSE ANNOUNCEMENT – SUMMER SESSION 2 – 2003

ATMOS 120: Severe and Unusual Weather

Call number: 00065

Instructor: Donna Charlevoix, 111 Atmos. Sci. Bldg., 244-9575

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Room and Time: 112 Trans. Bldg; 11:00 a.m.-12:50 p.m. M Tu Th

Credit: 3 hours

Prerequisites: None

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 (floods, severe thunderstorms, hurricanes, tornadoes). Technological advances include satellites, weather radars, and computer models used for weather prediction. Daily weather discussions will track severe weather events occurring during the course.

Course Content:

1. Overview of Meteorology
2. Doppler radar, satellites, computer models and ASOS
3. Air masses, fronts and mid-latitude cyclones
4. Severe thunderstorms
5. Severe thunderstorm hazards: tornadoes, floods, downbursts, lightning
6. Hurricanes – impending coastal disasters

Text: *Severe and Hazardous Weather*, by Robert Rauber, John Walsh and Donna Charlevoix, 1st Edition, Kendall-Hunt, 2002 (required).

Active Learning Exercises for Severe and Hazardous Weather, by Robert Rauber, John Walsh and Donna Charlevoix, Kendall Hunt, 2003 (required).

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