

*Department of Atmospheric Sciences*

COURSE ANNOUNCEMENT – SEMESTER II – 2002–2003

**ATMOS 120/Sec. C: Severe and Unusual Weather**

*Call number:* 00814

*Instructor:* Donna Charlevoix, 218 Atmos. Sci. Bldg., 244-9575

*E-mail:* charlevo@atmos.uiuc.edu

*Room and Time:* 314 Altgeld; 8:30–9:45 a.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 (winter storms, floods, severe thunderstorms, hurricanes, El Niño). Technological advances include satellites, weather radars and profilers, and computer models used for weather prediction.

Course Content:

1. Overview of the atmosphere
2. Weather instrumentation: satellites, Doppler radar, and computer models
3. Winter weather: blizzards, lake effect snow, ice storms, cold outbreaks and mountain snowstorms
4. Fronts and cyclones
5. Severe thunderstorms: tornadoes, lightning, downbursts, floods and hail
6. Hurricanes – impending coastal disasters
7. Large-scale severe weather: Drought, heat wave, El Nino

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

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