

Department of Atmospheric Sciences

COURSE ANNOUNCEMENT – SEMESTER II – 2005–2006

ATMS 100/Sec. C: Introduction to Meteorology

Call number: 39351(CL1), 39352(CD1), 39353 (CD2), 39354(CD3), 39355(CD4),
39356 (CD5)

Instructor: Donna Charlevoix, 111 Atmospheric Science Bldg., 244-9575

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Room and Time: CL1: 112 Chem Annex, 2:00 pm M W (lecture)
CD1: 390 Lincoln Hall, 9:00 am R (discussion)
CD2: 390 Lincoln Hall, 10:00 am R (discussion)
CD3: 390 Lincoln Hall, 2:00 pm R (discussion)
CD4: 390 Lincoln Hall, 10:00 am F (discussion)
CD5: 390 Lincoln Hall, 11:00 am F (discussion)

Credit: 3 hours

Prerequisites: None

This course introduces basic concepts of meteorology in a hands-on, interactive format. The nature of the physical processes responsible for changes in daily weather will be discussed. Computer based exercises during discussion classes will use current and recent weather data to investigate phenomena.

Course Content:

1. Overview of the earth, atmosphere and weather systems
2. Understanding weather maps and charts
3. Energy – heating of the earth & atmosphere, seasons
4. Ozone hole, atmospheric greenhouse effect and global warming
5. Air temperatures near the ground and human comfort
6. Moisture in the atmosphere, precipitation
7. Formation of dew, frost, fog and clouds
8. Cloud development & dissipation and atmospheric stability
9. Why the wind blows – pressure, forces and wind; lake breezes; jet streams
10. Air masses, fronts and mid-latitude cyclones
11. Weather forecasting
12. Severe weather – thunderstorms, tornadoes and hurricanes

Text: *Essentials of Meteorology: An Invitation to the Atmosphere, 4th Edition, by D. C. Ahrens*

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