COURSE CALENDAR DESCRIPTION

An introduction to atmospheric radiation and thermodynamics, clouds and precipitation. Vertical soundings and an introduction to the analysis and interpretation of tephigrams. Atmospheric motion on the global, synoptic, meso- and micro-scales. Two lecture hours and three laboratory hours, or three lecture hours per week; one tutorial hour in alternate weeks. One term. Three credits. Prerequisites: LE/EECS 1540 3.00; SC/MATH 1013 3.00 and SC/MATH 1014 3.00, or equivalents; SC/PHYS 1010 6.00 or SC/PHYS 1410 6.00. Prior to Fall 2014: Prerequisites: LE/CSE 1540 3.00; SC/MATH 1013 3.00 and SC/MATH 1014 3.00, or equivalents; SC/PHYS 1010 6.00 or SC/PHYS 1410 6.00. Prior to Summer 2013: Prerequisites: SC/CSE 1540 3.00; SC/MATH 1013 3.00 and SC/MATH 1014 3.00, or equivalents; SC/PHYS 1010 6.00 or SC/PHYS 1410 6.00. Prior to Fall 2009: Prerequisites: AK/AS/SC/CSE 1540 3.00 (formerly COSC); AS/SC/MATH 1013 3.00 and AS/SC/MATH 1014 3.00, or equivalents; SC/PHYS 1010 6.00 or SC/PHYS 1410 6.00.

F99 is effective term for course view above

INSTRUCTOR(S)

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<th>Name</th>
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<tr>
<td>Gordon, Mark D</td>
<td>Sec. M / LECT / W</td>
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TOPICS AND CONCEPTS

For more information on this course, please visit the following website: https://learn.lassonde.yorku.ca/

Topics for this course include:
1. Introduction to Weather: Weather and Climate, Observing the Atmosphere, Weather Prediction
2. Atmospheric Thermodynamics: Ideal Gas Law, Geopotential Height, Thermodynamics, Stability
3. Clouds and Radiation: Cloud Development and Types, Cloud Physics, Radiative Balance
4. Atmospheric Dynamics: Kinematics, Wind Dynamics, Primitive Equations
5. Weather Systems: General Circulation, Extratropical Cyclones, Air Masses and Fronts, Deep Convection and Thunderstorms, Tropical Cyclones

LIST OF LEARNING OUTCOMES AND EXAMPLES OF

By the end of the course, students should be able to
1. Describe the characteristics and evolution of various atmospheric phenomena
2. Explain the roles of dynamics and thermodynamics in atmospheric processes
3. Utilize observations, numerical forecasts, and dynamical concepts to diagnose the atmospheric condition and make weather predictions.
ADDITIONAL INFORMATION

References: *Meteorology Today For Scientists and Engineers*, R.B. Stull (West Publishing); *An Introduction to Atmospheric Physics*, D.G. Andrews (Cambridge University Press 2000)

ACADEMIC INTEGRITY LINKS

- Senate Policy on Academic Honesty - 
  [http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/](http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/)
- Academic Integrity - [http://lassonde.yorku.ca/academic-integrity](http://lassonde.yorku.ca/academic-integrity)

STUDENT LINKS

- Student Rights and Responsibilities - [http://oscr.students.uit.yorku.ca/student-conduct](http://oscr.students.uit.yorku.ca/student-conduct)
- Religious Observance - [https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/wa/regobs](https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/wa/regobs)
- Academic Accommodation for Students with Disabilities - 
- Counselling and Disability Services - [http://cds.info.yorku.ca/](http://cds.info.yorku.ca/)

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Many courses utilize Moodle, York University’s course website system. If your course is using Moodle, click here to access it.

*Moodle @ York University*