EXPANDED COURSE DESCRIPTION
Earth, Space Science and Engineering
Lassonde School of Engineering
Earth and Space Science and Engineering
LE / ESSE 4120 3.0 SECTION A
CLOUD PHYSICS AND RADAR METEOROLOGY
FALL 2019 / WINTER 2020

Last Modified Date: 07/18/2019

COURSE CALENDAR DESCRIPTION

INSTRUCTOR(S)

<table>
<thead>
<tr>
<th>Name</th>
<th>Section / Format / Term</th>
<th>Contact Email</th>
<th>Contact Phone</th>
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<tbody>
<tr>
<td>Gordon, Mark D</td>
<td>Sec. A / LECT / F</td>
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ADDITIONAL INFORMATION

COURSE LEARNING OUTCOMES
CL01: Use thermodynamic variables to describe the atmosphere and express the relationship between these variables.
CL02: Analyze thermodynamic processes of the atmosphere though fundamental equations and graphical tools (such as tephigrams).
CL03: Evaluate cloud droplet and crystal growth and evaporation using fundamental knowledge of micro-physical processes
CL04: Critique the principals of Radar use relating to precipitation.
CL05: Apply differential equations to relate radar signals to distributions of precipitators.

GRADING
Homework Assignments: 40%
Quizzes: 10% each or nothing
Final Exam: 40% if term tests help assessment or 50% or 60% if quizzes hurt assessment

ASSIGMENTS
Assignments are given to Professor just before or after lecture hour. Photos of assignment will be accepted as placeholders if the identical hard copy is handed in later.
Forewarned: Unless instructed otherwise, 10% deducted for each class period that an assignment is late.
HOWEVER, ONCE ASSIGNMENT IS TAKEN-UP IN LECTURE PERIOD, assignment will no longer be accepted for marking.
You are encouraged to discuss the assignment problems with others, however if you copy work of others or allow your work to be copied by others, then by Senate policy the Professor must report you to the Chair of
the Committee on Examinations and Academic Standards (CEAS). Any penalty must be officially sanctioned by CEAS and is not decided by your Professor. Plagiarism has occurred in previous years and was dealt with in the same fashion.

REQUIRED TEXT

RECOMMENDED TEXT
Mesoscale Meteorology in Midlatitudes, Markowski and Richardson, Wiley, 2010, $85 to $105.

COURSE CONTEXT
Material covered during class, on slides at moodle.yorku.ca, and by required text(s). Supplementary material (outside of text) may be covered.

CLASS MATERIALS
Available through moodle.yorku.ca/. Check your Learn Lassonde account regularly to receive class announcements, up-to-date scheduling of events, lecture notes, and assignments.

ACADEMIC INTEGRITY LINKS
• Senate Policy on Academic Honesty - http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/
• Academic Integrity - http://lassonde.yorku.ca/academic-integrity

STUDENT LINKS
• Student Rights and Responsibilities - http://oscr.students.uit.yorku.ca/student-conduct
• Religious Observance - https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/wa/regobs
• Academic Accommodation for Students with Disabilities - http://secretariat-policies.info.yorku.ca/policies/academic-accommodation-for-students-with-disabilities-policy/
• Student Accessibility Services (SAS) - https://accessibility.students.yorku.ca/
• York University’s Policies on Sexual Violence - http://secretariat-policies.info.yorku.ca/policies/sexual-violence-policy-on/
• York University’s Policies on Gender/LGBTQ*/Positive Space - http://rights.info.yorku.ca/lgbtq/

LAND ACKNOWLEDGEMENT
• We acknowledge our presence on the traditional territory of many Indigenous Nations. The area known as Tkaronto has been care taken by the Anishinabek Nation, the Haudenosaunee Confederacy, the Huron-Wendat, and the Métis. It is now home to many Indigenous Peoples. We acknowledge the current treaty holders, the Mississaugas of the New Credit First Nation. This territory is subject of the Dish With One Spoon Wampum Belt Covenant, an agreement to peaceably share and care for the Great Lakes region.
• The Indigenous Framework for York University: A Guide to Action can be found here: http://indigenous.info.yorku.ca/
• Meaning of a land acknowledgement: http://healthydebate.ca/opinions/indigenous-land-acknowledgements

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