

Faculty of Science Course Syllabus (Section A)
Department of *Physics and Atmospheric Science*
Synoptic Meteorology 1 (PHYC 4540)

Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq. We are all Treaty people.

We acknowledge the histories, contributions, and legacies of the African Nova Scotian people and communities who have been here for over 400 years.

Instructor(s): Tina Simpkin tsimpkin@dal.ca tina.simpkin@gmail.com

902 221-5632 (text) No calls texts after 7PM thanks

Office hours: 10:00 to 11:00 AM Tuesday and Thursdays. Office is Dunn 209.

Lectures: 1135 to 12:35 PM Tues and Thurs

Laboratories: 12:35 to 2:25 PM Tues and Thurs

Tutorials: 3 (1.5 hours in length)

Course delivery: In Person

Course Description

This course introduces the practical skills of meteorological observation and analysis. Emphasis is on developing skills in drawing and interpreting weather maps, and on studying the three-dimensional structure of weather systems. Satellite and radar remote sensing of the atmosphere is also introduced. Case studies of atmospheric systems and processes are carried out during the tutorial-laboratory period.

FORMAT:

- Lecture
- Lab
- Tutorial

FORMAT COMMENTS: lecture/tutorial-lab 3 hours

COREQUISITES: PHYC 4411.03

CROSS-LISTING: PHYC 5540.03, OCEA 4541.03/5541.03

Course Prerequisites

COREQUISITES: PHYC 4411.03

PREREQUISITES: At least one third-year physics course

CROSS-LISTING: PHYC 5540.03, OCEA 4541.03/5541.03

Learning Objectives

Application and understanding of the basics of atmospheric dynamics/thermodynamics and how it applies to weather forecasting.

Course Materials

Class notes. Reference Materials Meteorology Today

Course structure

Course Delivery - In-person lectures

Lectures/Labs

11:35 to 2:25 PM Tues and Thurs in Sir James Dunn Building 221C starting Sept 2, 2025

Course Assessment

Assessment	Weight (% of final grade)
<i>Weather Briefing Presentations (in Class)</i>	15%
<i>Maps/Assignments</i>	15%
<i>3 Tests (Oct 7th, Nov 13, Dec 2)</i>	45%
<i>Comet Modules</i>	15%

Other course requirements

-Weather briefings are in class presentations about the work on the labs/maps. It is a weather brief meant to explain your knowledge of the material and to bring your fellow Mets up to speed on the forecasts and forecast conditions.

- Maps/Assignments: will be done in class. There may be some out of class but most of this will be done during class time.

Coloured pencils and markers are needed. Blue, red, brown, purple and black.

-Tests are 1-2 hours in class as scheduled

-Test Grades are averaged and converted to a grade out of 45. The assignment /tutorial grade is calculated the same way out of 15.

-Comet Modules required: You need to create an account

<https://www.meted.ucar.edu/index.php>

Intro to Met Charting - Due September 19th (5%)

https://www.meted.ucar.edu/education_training/lesson/1147

Thermal Wind - Due October 3rd (5%)

https://www.meted.ucar.edu/education_training/lesson/889

Tephigrams - November 27th (this is long) (10%)

https://www.meted.ucar.edu/education_training/lesson/1018

Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale

A+ (90-100)	B+ (77-79)	C+ (65-69)	D (50-54)
A (85-89)	B (73-76)	C (60-64)	F (<50)
A- (80-84)	B- (70-72)	C- (55-59)	

Course Policies on Missed or Late Academic Requirements

Students are encouraged to work together on assignment materials and labs. Missed tests or other deadlines require notification before the requirement takes place. A formal medical note is required to miss a test or other deadline.

Course Policies related to Academic Integrity

Academia is a serious issue in university education. Breaches such as plagiarism or cheating are taken seriously and could result in course failure or worse. Please read and respect the information provided below on Academic Integrity.

Course Content

Class notes, Meteorology Today

University Policies and Statements

This course is governed by the academic rules and regulations set forth in the University Calendar and by Senate

Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.

Information: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and accommodation. The advising team works with students who request accommodation as a result of a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (Canada and Nova Scotia).

Information: https://www.dal.ca/campus_life/academic-support/accessibility.html

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

Code: https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness

Statement: <http://www.dal.ca/cultureofrespect.html>

Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit or e-mail the Indigenous Student Centre (1321 Edward St) (elders@dal.ca).

Information: https://www.dal.ca/campus_life/communities/indigenous.html

Important Dates in the Academic Year (including add/drop dates)

<https://academiccalendar.dal.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=117&chapterid=-1&topicgroupid=31821&loaduseredits=False>

University Grading Practices

https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html

Student Resources and Support

Advising

General Advising https://www.dal.ca/campus_life/academic-support/advising.html

Science Program Advisors:

<https://www.dal.ca/faculty/science/current-students/undergrad-students/degree-planning.html>

Indigenous Student Centre: https://www.dal.ca/campus_life/communities/indigenous.html

Black Students Advising Centre: https://www.dal.ca/campus_life/communities/black-student-advising.html

International Centre: https://www.dal.ca/campus_life/international-centre/current-students.html

Academic supports

Library: <https://libraries.dal.ca/>

Writing Centre: https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html

Studying for Success: https://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html

Copyright Office: <https://libraries.dal.ca/services/copyright-office.html>

Fair Dealing Guidelines <https://libraries.dal.ca/services/copyright-office/fair-dealing.html>

Other supports and services

Student Health & Wellness Centre: https://www.dal.ca/campus_life/health-and-wellness.html

Student Advocacy: <https://dsu.ca/dsas>

Ombudsperson:

https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html

Safety

Biosafety: <https://www.dal.ca/dept/safety/programs-services/biosafety.html>

Chemical Safety: <https://www.dal.ca/dept/safety/programs-services/chemical-safety.html>

Radiation Safety: <https://www.dal.ca/dept/safety/programs-services/radiation-safety.html>

Scent-Free Program: <https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html>

Dalhousie COVID-19 information and updates:

<https://www.dal.ca/covid-19-information-and-updates.html>