Faculty of Science Course Syllabus
Department of Physics and Atmospheric Science
Physics 1600
Understanding Weather
Fall 2016 (CRN 14197)

Instructor(s): Glen Lesins   glen.lesins@dal.ca   Office: Dunn 127   Phone: 2231


Laboratories: None

Tutorials: None

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Course Description
The changing weather is a topic of almost universal interest. This course provides an introductory explanation for the basic processes that comprise the day to day weather changes in a non-mathematical way. Topics include weather maps and the wide range of atmospheric phenomena.

Course Prerequisites
None

Course Objectives/Learning Outcomes
A basic understanding of the Earth’s atmosphere with an emphasis on the day-to-day changes that comprises meteorology.

Course Materials
All lectures and assignments will be posted on the BrightSpace course webpage.

Course Assessment

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight (% of final grade)</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Midterm exam</td>
<td>20 %</td>
<td>Oct 14 (in class)</td>
</tr>
<tr>
<td>Final exam</td>
<td>40 %</td>
<td>Dec 5 (in class)</td>
</tr>
<tr>
<td>8 Assignments</td>
<td>8 x 5 (OnLine)</td>
<td>Due: Sep23, 30, Oct7, 8, Nov4, 18, 25, Dec2</td>
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</tbody>
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Other course requirements
None
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

Late or missed assignments are not accepted (count as zero). If midterm is missed for health reasons (doctor’s note needed) the final exam will count for 60% of the final grade. There is no alternative date for the final exam.

Course Content

(ROUGH GUIDE ONLY)

1. Introduction
2. Atmospheric Composition
3. Behaviour of Gases
4. Energy
5. Radiation 1
6. Radiation 2
7. Energy Balance
8. Water Vapour
9. Adiabatic Processes
10. Stability
11. Condensation
12. Precipitation
13. Forces
14. Geostrophy
15. General Circulation
16. Vorticity
17. Air Masses and Fronts
18. Extratropical Cyclones
19. Tropical Cyclones
20. Thunderstorms
21. Forecasting
22. Climate
23. Climate Change

ACCOMMODATION POLICY FOR STUDENTS

Students may request accommodation as a result of barriers related to disability, religious obligation, or any characteristic protected under Canadian Human Rights legislation. The full text of Dalhousie’s
Student Accommodation Policy can be accessed here: http://www.dal.ca/dept/university_secretariat/policies/academic/student-accommodation-policy-wef-sep-1--2014.html

Students who require accommodation for classroom participation or the writing of tests and exams should make their request to the Advising and Access Services Centre (AASC) prior to or at the outset of the regular academic year. More information and the Request for Accommodation form are available at www.dal.ca/access.

ACADEMIC INTEGRITY

Academic integrity, with its embodied values, is seen as a foundation of Dalhousie University. It is the responsibility of all students to be familiar with behaviours and practices associated with academic integrity. Instructors are required to forward any suspected cases of plagiarism or other forms of academic cheating to the Academic Integrity Officer for their Faculty.

The Academic Integrity website (http://academicintegrity.dal.ca) provides students and faculty with information on plagiarism and other forms of academic dishonesty, and has resources to help students succeed honestly. The full text of Dalhousie’s Policy on Intellectual Honesty and Faculty Discipline Procedures is available here:

http://www.dal.ca/dept/university_secretariat/academic-integrity/academic-policies.html

STUDENT CODE OF CONDUCT

Dalhousie University has a student code of conduct, and it is expected that students will adhere to the code during their participation in lectures and other activities associated with this course. In general:

“The University treats students as adults free to organize their own personal lives, behaviour and associations subject only to the law, and to University regulations that are necessary to protect

- the integrity and proper functioning of the academic and non–academic programs and activities of the University or its faculties, schools or departments;
- the peaceful and safe enjoyment of University facilities by other members of the University and the public;
- the freedom of members of the University to participate reasonably in the programs of the University and in activities on the University’s premises;
- the property of the University or its members.”

The full text of the code can be found here:

COPYRIGHT

All members of the Dalhousie community are expected to comply with their obligations under Canadian copyright law. Dalhousie copyright policies and guidelines, including our Fair Dealing Guidelines, are available at http://www.dal.ca/dept/copyrightoffice.html. Copyright questions should be directed to the Copyright Office at copyright.office@dal.ca.
SERVICES AVAILABLE TO STUDENTS

The following campus services are available to help students develop skills in library research, scientific writing, and effective study habits. The services are available to all Dalhousie students and, unless noted otherwise, are free.

<table>
<thead>
<tr>
<th>Service</th>
<th>Support Provided</th>
<th>Location</th>
<th>Contact</th>
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</table>
| General Academic Advising | Help with - understanding degree requirements and academic regulations - choosing your major - achieving your educational or career goals - dealing with academic or other difficulties | Killam Library Ground floor Rm G28 Bissett Centre for Academic Success | In person: Killam Library Rm G28
                              |                                                                                  |                               | By appointment:                                                        |
|                           |                                                                                  |                               | - e-mail: advising@dal.ca                                               |
|                           |                                                                                  |                               | - Phone: (902) 494-3077                                                 |
|                           |                                                                                  |                               | - Book online through MyDal                                             |
| Dalhousie Libraries       | Help to find books and articles for assignments Help with citing sources in the text of your paper and preparation of bibliography | Killam Library Ground floor Librarian offices | In person: Service Point (Ground floor)
                              |                                                                                  |                               | By appointment:                                                        |
|                           |                                                                                  |                               | Identify your subject librarian (URL below) and contact by email or phone to arrange a time: |
| Studying for Success (SFS)| Help to develop essential study skills through small group workshops or one-on-one coaching sessions Match to a tutor for help in course-specific content (for a reasonable fee) | Killam Library 3rd floor Coordinator Rm 3104 Study Coaches Rm 3103 | To make an appointment:
                              |                                                                                  |                               | - Visit main office (Killam Library main floor, Rm G28)                |
|                           |                                                                                  |                               | - Call (902) 494-3077                                                  |
|                           |                                                                                  |                               | - email Coordinator at: sfs@dal.ca or                                  |
|                           |                                                                                  |                               | - Simply drop in to see us during posted office hours                 |
|                           |                                                                                  |                               | All information can be found on our website:                           |
|                           |                                                                                  |                               | www.dal.ca/sfs                                                          |
| Writing Centre            | Meet with coach/tutor to discuss writing assignments (e.g., lab report, research paper, thesis, poster) - Learn to integrate source material into your own work appropriately - Learn about disciplinary writing from a peer or staff member in your field | Killam Library Ground floor Learning Commons & Rm G25 | To make an appointment:
                              |                                                                                  |                               | - Visit the Centre (Rm G25) and book an appointment                    |
|                           |                                                                                  |                               | - Call (902) 494-1963                                                  |
|                           |                                                                                  |                               | - email writingcentre@dal.ca                                           |
|                           |                                                                                  |                               | - Book online through MyDal                                            |
|                           |                                                                                  |                               | We are open six days a week                                            |
|                           |                                                                                  |                               | See our website: writingcentre.dal.ca                                  |