

The University of Western Ontario
Department of Geography
GEOG 2310A: Weather and Climate
Fall 2018

1. Course Information

Lecture Information

Location: Social Science Centre 2036
Time: Thursdays 11:30 AM – 1:20 PM

Lab Information

Location: Social Science Centre 1004
Time: Tuesdays 10:30 AM – 12:30 PM or
Tuesdays 2:30 – 4:30 PM or
Wednesdays 4:30 – 6:30 PM

Contact Information

Instructor: Mark Moscicki
Office: SSC 2219
Office Hours: Thursdays 1:30 – 3:30 PM
E-mail: mmoscic@uwo.ca

2. Calendar Description

Course Description

Fundamentals of the physical processes underlying weather and climate; radiant energy, energy balances, clouds, atmospheric dynamics and thermodynamics; principles of the greenhouse effect, mid-latitude cyclones and aspects of weather forecasting, severe weather phenomena and atmospheric optics.

2 lecture hours, 2 laboratory hours, 0.5 course weight

Prerequisite: 1.0 course from GEOG 1100, 1300A/B, 1400F/G, 1500F/G, 2131A/B, 2153A/B (taken after Sep. 2012), or the former GEOG 020E; or 0.5 course from Mathematics, Applied Mathematics, Calculus, Environmental Science or Physics at 1000-1999 level; or enrolment in the Major in Physical Geography or in an Honours Earth Science Program for Professional Registration.

Senate Regulations

Unless you have either the prerequisites for this course or written special permission from your dean to enrol in it, you will be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

3. Online Textbook

The MindTap website will be used in this course; this is a comprehensive and interactive site that includes the full electronic version of the textbook listed below.

Ahrens, C., Jackson, P., and Jackson, C. (2016): *Meteorology Today: An Introduction to Weather, Climate, and the Environment* (2nd Canadian Edition), Nelson: Toronto, ON.

4. Course Objectives

The objectives of this course are to provide students with:

- an understanding of the fundamental basis of weather and climate phenomena
- an appreciation of the impact of weather and climate on our daily lives
- an introduction to numerical based meteorological problem solving skills
- improved map reading skills and geographic awareness

5. Evaluation

<i>Component</i>	<i>Date</i>	<i>Value</i>
Laboratory Exercises	Weekly	27%
MindTap Activities	Weekly	8%
Midterm Exam	Oct 25	20%
Final Exam	TBA	45%

Students are responsible in lectures as well as the assigned readings. The midterm exam covers material from Sep 6 through Oct 18. The final exam is cumulative but weighted toward material studied in the second half of the semester. Exams will consist of multiple choice, definition, fill in the blank, short answer, discussion, and weather map analysis questions.

6. Missed Assessments

Students seeking academic accommodation on medical grounds for missed assessments worth 10% or more of the course grade must apply to the Academic Counselling office of their home faculty and provide documentation. Academic accommodation cannot be granted by the instructor or department for these types of assessments. For missed assessments worth less than 10% of the course grade, documentation will also be required and the instructor may grant an accommodation.

For the university's policy on accommodation for medical illness and a downloadable student medical certificate please refer to the [Academic Handbook](#).

7. Schedule

<i>Lecture</i>	<i>Date</i>	<i>Topic</i>	<i>Reading: Chapter</i>
1	Sep 6	Scales and Symbols	Apx B
		The Atmosphere	1
2	Sep 13	Energy	2
		Air Temperature	3
3	Sep 20	Climatic Controls	3
		Atmospheric Moisture	4
4	Sep 27	Clouds and Fog	5
		Stability	6
5	Oct 4	Tephigrams	6
		Precipitation Development	7
6	Oct 18	Precipitation	7
		Air Pressure	8
	Oct 25	Midterm Exam	
7	Nov 1	Winds	8
		Small Scale Winds	9
8	Nov 8	Global Circulation Patterns	10
		Air Masses and Fronts	11
9	Nov 15	Mid-Latitude Cyclones	12
		Weather Forecasting	15
10	Nov 22	Thunderstorms	13
		Severe Weather	13
11	Nov 29	<i>Video: Tornadoes</i>	
		Hurricanes	14
12	Dec 6	Air Pollution	18
		Atmospheric Optics	19

8. Make-up Examinations

A make-up exam will be granted with approved documentation only. All documentation for missed exams must be provided to the Academic Counselling Office within 48 hours of the scheduled exam. Otherwise, a grade of zero on the exam will be assigned. The format and content of make-up exams may differ substantially from the originally scheduled exam.

9. Use of Electronic Devices

No electronic devices will be allowed during exams.

10. Academic Offences

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a [scholastic offence](#). Computer graded multiple choice exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

11. Commitment to Accessibility

The Department of Geography strives at all times to provide accessibility to all faculty, staff, students and visitors in a way that respects the dignity and independence of people with disabilities. Please contact the instructor if you require material in an alternate format or if you require any other arrangements to make the course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 519-661-2147 for any specific question regarding an accommodation. Information regarding [accommodated exams](#) is available. More information about [accessibility](#) is available as well.

12. Medical Issues

The university recognizes that a student's ability to meet academic responsibilities may, on occasion, be impaired by medical illness. The Student Services website provides greater detail about the university's policy on [medical accommodation](#); this site provides links to the necessary forms. In the event of illness, you should contact Academic Counselling as soon as possible. The counsellors will determine, in consultation with the student, whether or not accommodation should be requested. A counsellor will subsequently contact the instructors in the relevant courses about the accommodation. Once the instructor has made a decision about whether to grant an accommodation, the student should contact the instructor to determine a new due date for the assessment. Students must see an [academic counsellor](#) and submit all required documentation in order to be approved for a specific accommodation.

13. Mental Health

If you or someone you know is experiencing distress, there are several resources at Western to assist you. Please visit the university's [Health and Wellness](#) site for more information on mental health resources.

14. Support Sites

[Student Support Services](#)

[Student Development Services](#)

15. Important Dates

Sep 6: Classes resume

Sep 14: Last day to add a full course or a first term half course

Oct 8: Thanksgiving Day

Oct 9-13: Fall Reading Week (no classes; department office open)

Nov 12: Last day to drop a first term half course without penalty

Nov 30: Last day to drop a full course without academic penalty

Dec 7: Classes end

Dec 8-9: Study days

Dec 10-21: Examination period

Dec 21: Fall term ends