

The University of Western Ontario
Department of Geography
GEOG 2310A: Weather and Climate
Fall 2017

Instructor:	Mark Moscicki	Lectures:	Thu 11:30 am – 1:20 pm SSC 2036
E-mail:	mmoscic@uwo.ca	Labs:	Tue 10:30 am – 12:20 pm Tue 2:30 – 4:20 pm Wed 4:30 – 6:20 pm All labs are in SSC 1004
Office:	SSC 2219		
Office Hours:	Thu 1:30 – 3:30 pm		

Overview:

The course is an introduction to the study of the atmosphere and its processes. Various aspects of meteorology and climatology are emphasized including the structure and behaviour of the atmosphere, radiant energy, energy balances, clouds, precipitation processes, atmospheric dynamics and thermodynamics, weather systems, and severe weather.

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 knowledge

Prerequisites:

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

Unless you have a proper prerequisite for this course or written special permission from your Dean to enroll in it, you will be removed from the course and it will be deleted from your record. There will be no adjustment to your fees and this decision may not be appealed.

MindTap Resource and Online Textbook:

The MindTap website will be used in this course; this is a comprehensive interactive website that includes the 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, Ont.

Schedule:

<i>Lecture</i>	<i>Date</i>	<i>Topic</i>	<i>Chapter</i>
1	Sep 7	Scales and Symbols	Apx B
		The Atmosphere	1
2	Sep 14	Energy	2
		Air Temperature	3
3	Sep 21	Climatic Controls	3
		Atmospheric Moisture	4
4	Sep 28	Clouds and Fog	5
		Stability	6
5	Oct 5	Tephigrams	6
		Precipitation Development	7
6	Oct 19	Precipitation	7
		Air Pressure	8
	Oct 26	Midterm Exam	
7	Nov 2	Winds	8
		Small Scale Winds	9
8	Nov 9	Global Circulation Patterns	10
		Air Masses and Fronts	11
9	Nov 16	Mid-Latitude Cyclones	12
		Weather Forecasting	15
10	Nov 23	Thunderstorms	13
		Tornadoes	13
11	Nov 30	Hurricanes	14
		Climate Change	17
12	Dec 7	Air Pollution	18
		Atmospheric Optics	19

Assessment:

<i>Assessment Method</i>	<i>Value</i>
Laboratory Exercises	27%
MindTap Activities	9%
Midterm Exam	22%
Final Exam	42%

The midterm exam covers material from Sep 7 through Oct 19. The final exam is cumulative thus covering material from the entire course. Exams will consist of multiple choice, fill in the blank, short answer, and discussion questions.

Laboratory Exercises:

There are 9 laboratory exercises; each one will be introduced at the beginning of the lab session and is due one week later. Each exercise is worth 3% of your grade. You are encouraged to complete these during the time allotted in the laboratory classroom of your weekly laboratory session.

Laboratory Schedule:

<i>Exercise</i>	<i>Date (Tue)</i>	<i>Date (Wed)</i>	<i>Topic</i>
1	Sep 12	Sep 13	Station Symbols
2	Sep 19	Sep 20	Radiation Balances
3	Sep 26	Sep 27	Climate Indices
4	Oct 3	Oct 4	Atmospheric Moisture
5	Oct 17	Oct 18	Tephigrams
6	Nov 7	Nov 8	Climate Data
7	Nov 14	Nov 15	Winds
8	Nov 21	Nov 12	Surface Map Analysis
9	Nov 28	Nov 29	Severe Weather

Accommodation Policy:

Students seeking academic accommodation on medical grounds for missed assessments must notify the instructor within 48 hours of the missed assessment. Students must then apply to the Academic Counselling office of their home faculty and provide documentation. For the University of Western Ontario policy on accommodation for medical illness and a downloadable Student Medical Certificate, see this link:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf

Make-up Exams:

Students with special accommodation will write make-up exams administered by the department on Fridays during a respective period of the semester. To prevent prior disclosure, the content of the make-up exam will differ from the originally scheduled exam.

Accessibility:

The University of Western Ontario is committed to achieving barrier free accessibility for everyone studying, visiting and working at the university. 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 ssd@uwo.ca for any specific questions regarding an accommodation.

Mental Health:

If you or someone you know is experiencing distress, there are several resources at the University to assist. Visit this site for more information on mental health resources:

<http://www.uwo.ca/uwocom/mentalhealth/>

Academic Integrity:

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a scholastic offense at this site:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

Computer marked 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 academic misconduct.

Electronic Devices:

No electronic devices other than calculators will be permitted during examinations.

Support Services:

Registrarial Services: <http://www.registrar.uwo.ca/>

Student Development Services: <http://www.sdc.uwo.ca>