



CAMOSUN COLLEGE  
School of Arts & Science  
Department of Social Sciences

GEOG 272 - Weather and Climate  
Winter 2021  
COURSE OUTLINE

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The course description is online @ <http://camosun.ca/learn/calendar/current/web/geog.html>

Ω Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.

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### ABOUT THE PANDEMIC

It's an unusual time, to say the least. Everyone is under extra stress, with worries about ourselves and loved ones getting sick, loss of employment, and no clear end in sight. We are all getting used to online education, and trying to make the best of it. For your instructor, that means doing everything I can to deliver quality education, but in a new mode and with limited time to prepare. It may not be perfect. I will try to check in regularly, listen to your feedback, and adjust if it seems called for.

One thing that has become clear over the past ten months is that quality online education requires engagement. It's difficult to maintain the connection and sense of community that you get in face-to-face classrooms. That's why we have synchronous labs in this class. Please attend so you can meet and interact with me and your peers; it will make a big difference to everyone's experience. Let's also make this as easy as possible by being extra kind, patient and respectful with each other.

A general goal of any college class is to develop your abilities to learn and to demonstrate that learning as professionally as possible. For you, that means showing up, participating, doing your best and being on time. It's also important for us to maintain normal educational standards, so that you are prepared for higher level courses. However, under this year's circumstances, we all need to be more flexible than usual. If you are struggling, please contact me ASAP so we can talk it over.

Having said all that, I think this will be a great class, and I look forward to working with you. See you on Collaborate!

(Also see the abundance of COVID-19 information on Camosun's web site: [http://camosun.ca/covid19/.](http://camosun.ca/covid19/))

### 1. Instructor Information

Instructor:	Chris Ayles
Office Hours:	Wednesday 10:30 - 11:30, or by appointment.
Location:	'The Office' on Collaborate (access via D2L)
Phone:	N/A (working from home, please email)
Email:	<a href="mailto:cayles@camosun.bc.ca">cayles@camosun.bc.ca</a>
Website:	D2L ( <a href="https://online.camosun.ca">online.camosun.ca</a> )

## 2. Intended Learning Outcomes

Upon completion of this course the student will be able to:

1. Describe the structure and function of Earth's atmosphere in order to understand weather and climate systems.
2. Describe the influence of water and the hydrologic cycle on weather and climate.
3. Discuss human influence on the atmosphere.
4. Collect and analyze weather and climate data in order to interpret atmospheric conditions.

## 3. Required Materials

(a)	Textbook	<p><u>Optional</u>: Ahrens, C.D., P.L. Jackson and C.E. Jackson, 2016. <i>Meteorology Today: An Introduction to Weather, Climate and the Environment, Second Canadian Edition</i>. Toronto, ON: Nelson Education Ltd., 598 pp. plus appendices.</p> <ul style="list-style-type: none"><li>• Similar introductory atmospheric science texts by Ahrens (American editions), Aguado &amp; Burt, Lutgens &amp; Tarbuck, Ross or others could be substituted, but details and examples will vary.</li><li>• This online text is not bad: <a href="#">Fundamentals of Physical Geography</a>.</li><li>• <u>The key thing is to be reading</u> on the subject matter at hand!</li></ul>
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The official textbook is available in the bookstore or on reserve in the Camosun library. They also have a number of other suitable books for longer term loan. However, note that library service is a little different this year: <http://camosun.ca/services/library/>

## 4. Course Content

- **Lecture material** will be posted on D2L. There will be PowerPoint slides, detailed notes and recorded videos. It will be up to you to read / listen to this material, preferably before the week's lab. This is the main substance of the course, and provides the background you need to understand the labs and pass the quizzes and final exam. I strongly suggest you make your own detailed notes, as that will engage your brain more than passive reading and listening.
- **Readings** are an essential part of your learning in this course – they provide indispensable depth and context, and a different perspective on the subject matter. Reading assignments are detailed below. If you opt to use a textbook other than Ahrens, Jackson and Jackson, make sure you are reading the relevant chapters for the week's material.
- **Labs**: There are seven labs to complete, plus Lab 0, which is a self-guided warm-up exercise. We have scheduled lab time from 10:00 to 12:00 on Tuesdays, where I will introduce the labs and you will have the chance to ask questions as you work. These sessions will take place in 'The Lab' on Collaborate, accessed from our D2L site. Please attend! Consistent participation will improve the learning experience, and increase the odds of success for you and everyone else. Please read the lab assignments ahead of time.

You are welcome to collaborate with others, but each student must write their own individual answers unless instructed otherwise. Please submit answers via D2L. If you want to work by

hand, you can scan your answers, as long as they are legible. Labs are generally due the following week, and late labs are subject to a penalty of 1 mark per day – a token amount, but hopefully some incentive so stay on track. Late assignments will not be accepted after I have returned them marked.

Most labs involve basic math, computer and/or map skills - simple formulas, conversions, graphing, scale calculations, etc. Lab 0 will help you assess your lab skills, and if you find any weak spots, I am happy to provide coaching. Just ask. Some labs may require you to go outside.

Please note that I have scheduled a few tutorials during lab times. These will be opportunities to clarify any course material, including lecture content as well as labs. Depending on how things are going, these may be Q&A sessions, or instructor-led segments.

- **Weather Project:** Students will monitor the local weather for a week, and analyze what happened using weather data and maps. The project requires a formal written report. See details in the project handout.
- **Tests:** There will be four non-cumulative quizzes on recently covered lecture material, and a cumulative final exam that covers both lecture and lab content. The format for these will be a combination of multiple choice, short answer and long answer questions.
- **Illness, etc.:** If you miss a lab or test due to illness or some other valid reason, contact me ASAP so we can discuss and adjust. Otherwise, a mark of zero for the missed assignment will be given.

## 5. Basis of Student Assessment

Evaluation will be based on accuracy, clarity and thoroughness. Whenever applicable, always show your work and keep track of units of measure! When grading your work, I look for proof of your understanding, so work clearly and carefully. I endeavour to mark fairly and consistently, but if you have a question about my assessment, please ask.

Labs	36% (1% for Lab 0, 5% for others)
Weather analysis project	14%
Quizzes	20% (5% each)
Exams	30%
<b>TOTAL</b>	<b>100%</b>

## 6. Course Schedule

- This is our blueprint for the semester. It is subject to change, as events may dictate.

Week	Lecture topic	Tuesday lab activity	Reading	Other
11 Jan	None - Work on Lab 0	Course Introduction	-	
18 Jan	Atmospheric Composition / Structure	Lab 1: Weather Data	Ch. 1 (18 optional)	
25 Jan	Radiation	Lab 2: Radiation	Ch. 2	
1 Feb	Temperature	Tutorial	Ch. 3	<b>Quiz 1</b> Thu-Fri
8 Feb	Pressure and Wind	Lab 3: Temperature	Ch. 8	
15 Feb	<b>No Class (Reading Week)</b>		-	
22 Feb	Atmospheric Circulation	Lab 4: Pressure and Wind	Ch. 9, 10	<b>Quiz 2</b> Thu-Fri
1 Mar	Hydrology and Humidity	Lab 5: Humidity and Precipitation	Ch. 4, 5	
8 Mar	Condensation and Precipitation	Tutorial	Ch. 6, 7	<b>Quiz 3</b> Thu-Fri
15 Mar	Weather Systems 1	Lab 6: Uplift and Stability	Ch. 11, 12	
22 Mar	Weather Systems 2	Lab 7: Weather Maps	Ch. 13, 14	<b>Quiz 4</b> Thu-Fri
29 Mar	Climate Classification	Tutorial	Ch. 16	<b>Monitor weather</b> this week
5 Apr	Natural Climate Change	Weather Project	Ch. 17	
12 Apr	Global Warming	Climate Change Discussion / Review for Final Exam	IPCC excerpt	

**Exam period: Final exam**

## 7. Grading System

Standard Grading System (GPA)

Competency Based Grading System

(FOR GRADING SYSTEMS, SEE <http://camosun.ca/about/policies/index.html>)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

## 2. Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at <http://camosun.ca/about/policies/index.html> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

## 8. College Supports, Services and Policies



### Immediate, Urgent, or Emergency Support

If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ <http://camosun.ca/about/mental-health/emergency.html> or <http://camosun.ca/services/sexual-violence/get-support.html#urgent>

### College Services

Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at <http://camosun.ca/>

### College Policies

Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at <http://camosun.ca/about/policies/>. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence, Student Ancillary Fees, Academic Integrity, Grade Review & Appeals, Student Misconduct and Academic Accommodations for Students with Disabilities and Student Penalties and Fines.