CAMOSUN COLLEGE
School of Arts & Science
Department of Social Sciences

GEOG 272 - Weather and Climate
Winter 2020
COURSE OUTLINE

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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1. Instructor Information

Instructor:	Chris Ayles
Office Hours:	Tuesday and Thursday, 9:00 - 10:00. Other times available by chance or appointment.
Location:	Ewing 256
Phone:	370-3307
Email:	cayles@camosun.bc.ca
Website:	D2L (online.camosun.ca)

Note: On about five occasions this term, I will be away due to my work with the Camosun College Faculty Association. On these days, a substitute instructor will take my place. You will still be able to reach me by email.

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	Optional: Ahrens, C.D., P.L. Jackson and C.E. Jackson, 2016. *Meteorology Today: An Introduction to Weather, Climate and the Environment, Second Canadian Edition.* Toronto, ON: Nelson Education Ltd., 598 pp. plus appendices. • Similar introductory atmospheric science texts by Ahrens (American editions), Aguado & Burt, Lutgens & Tarbuck, Ross or others could be substituted, but details and examples will vary. • The key thing is to be reading on the subject matter at hand!

4. Course Content

- **Lectures:** Lectures are usually on Tuesdays. They will provide the background you need to understand the labs and pass the exams, so attendance is essential. I mostly use PowerPoint, and I will post the lecture slides on D2L. Be warned, however: the slides are heavy on images and light on words, so you must come to class and take your own detailed notes! I want class to be relaxed and fun, but I also want to optimize the learning experience for serious students. To this end:
    - Please turn off cell phones at the start of class.
    - If you use a laptop, please sit near the back or side so you don't distract others.
    - If you use a laptop, please don't distract yourself with email, facebook, gaming, etc.
    - Please avoid whispering to your neighbours.

- **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:** Thursday is generally lab day. There are eight real labs, plus Lab 0, which is a self-guided warm-up exercise. Regular labs will be given roughly two hours of class time. Download the labs from D2L and read them ahead of time.

  You may work in groups, but each student must write their own individual answers unless instructed otherwise. **Attendance is crucial**. No credit will be given for wrong answers or missed activities due to unexcused absence from lab. Please hand in a hard copy of your answers. Labs are generally due the following week, and late labs may be penalized 10% per day. 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. On lab days, you should bring pencils, paper, graph paper, calculator and ruler. Some labs involve outdoor field work. Read labs ahead of time and be prepared for the weather.

- **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.

- **Exams:** There will be three tests. The format for these will be a combination of multiple choice, short answer and long answer questions. They mainly will emphasize the lecture material, though lab material will also be covered. The last test will take place during exam period but will not be cumulative.

- **Illness, etc.:** If you miss a lab or exam due to illness or some other valid reason, I must ask you to provide a doctor's note or other documentation. Otherwise, a mark of zero for the missed assignment will be given. Exams and field activities are hard to reschedule, so try not to miss them unless you are too sick to function at a reasonable level. Students who are absent for a valid reason must contact me within 24 hours. For missed tests, one makeup opportunity will be scheduled, and all students needing it will be expected to attend.

5. Course Schedule

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

Week	Tuesday	Thursday	Reading
6 Jan	Course Introduction	Atmosphere Intro / Weather Balloon *(Do Lab 0 on your own.)*	Ch. 1
13 Jan	Atmospheric Composition / Structure	Lab 1: Weather Data (*Meet in E200 computer lab*.)	Ch. 18
20 Jan	Radiation	Lab 2: Radiation	Ch. 2
27 Jan	Temperature	Lab 3: Temperature	Ch. 3
3 Feb	Pressure and Wind	**Test #1**	Ch. 8
10 Feb	Atmospheric Circulation	Lab 4: Pressure and Wind	Ch. 9, 10
17 Feb	**No Class (Reading Week)**	**No Class (Reading Week)**	Catch Up.
24 Feb	Hydrology and Humidity	Lab 5: Humidity and Precipitation	Ch. 4, 5
2 Mar	Condensation and Precipitation	Lab 6: Uplift and Stability	Ch. 6, 7
9 Mar	Weather Systems 1	**Test #2** *(Start weather notes next Monday!)*	Ch. 11, 12
16 Mar	Weather Systems 2 *(Monitor weather this week.)*	Lab 7: Weather Maps	Ch. 13, 14
23 Mar	Work on Weather Project (*Meet in E200 computer lab*.)	Climate Classification (lecture) *(Weather project due today.)*	Ch. 16
30 Mar	Natural climate change	Global warming 1 (lecture)	Ch. 17
6 Apr	Lab 8: Climate Change (*Meet in E200 computer lab*.)	Global Warming 2 (discussion)	IPCC excerpt

Exam period: Test #3

6. 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	29% (1% for Lab 0, 3.5% for others)
Weather analysis project	11%
Exams	60% (20% each)
TOTAL	**100%**

7. 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 can be found at 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 and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

In addition, the School of Arts & Science publishes Academic Honesty Guidelines that outline definitions, expectations and consequences around cheating and plagiarism. These guidelines can be found at camosun.ca/as.

8. Grading System

[X] 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	*Incomplete*: 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	*In progress*: 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	*Compulsory Withdrawal*: 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.