



School of Arts & Science
SOCIAL SCIENCES DEPARTMENT

GEOG 204
Atmosphere and Biosphere
Fall 2009

COURSE OUTLINE

1. Course Description

This course will provide students with a first exposure to two of the major subjects of physical geography: Earth's atmosphere and biosphere. The material is primarily theoretical, but a substantial lab component will introduce some practical skills relevant to these subjects. Topics will include earth systems, atmospheric composition and structure, atmospheric processes and weather, climate classification and change, soil processes and classification, and ecosystem structure, function and classification.

My classes tend to be quite informal, and I encourage participation and discussion. My goal is to have you think and understand, so please speak up if you are confused! Group work is encouraged, and you should help each other learn. But this does not mean you can copy! Each student must do their own individual assignment reports, and if I catch people copying, all parties involved will get a mark of zero.

Note: The official Approved Course Description is available on the web at <http://www.camosun.bc.ca/calendar/current/web/geog.html#GEOG204>

- *Please note: this outline will be electronically stored for five (5) years only. It is strongly recommended students keep this outline for your records.*

2. Instructor Information

Instructor:	Chris Ayles
Office Hours:	Mon. 12:30 – 1:30. Tue. 12:30 – 1:30. Wed. 12:30 – 1:30. Fri. 11:30 – 12:30. Other times available by chance or appointment.
Location:	Fisher 342B
Phone:	370-3393
Email:	cayles@camosun.bc.ca
Website:	cayles.disted.camosun.bc.ca

3. Intended Learning Outcomes

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

1. Describe the structure and function of Earth's atmosphere and related weather and climate systems.
2. Describe the distributional characteristics of global biomes, specifically their evolutionary history, extinction vulnerability and local characteristics.
3. Interpret meteorological, climatological and biogeographical data to display and integrate this information.

4. Course Materials

(a)	Textbook	<p><u>Required:</u> Christopherson, R.W. and M. Byrne, 2009. <i>Geosystems, 2nd Canadian Edition</i>. Toronto: Pearson Education Canada, 709 pp. plus appendices.</p> <ul style="list-style-type: none"> This book is available in the book store, and there will also be a reserve copy in the library. Older versions are around, but ultimately you are responsible for the material from the new edition.
(b)	Other	<u>Required:</u> GEOG 204 Lab Manual.

5. Course Content

- Lectures:** This class has two three-hour blocks on Mondays and Wednesdays. Usually, these will be evenly split between lecture and lab time. Lectures will generally provide the theory you need to understand the labs and pass the tests, so attendance is essential. I mostly use PowerPoint, and I will post basic lecture outlines on my web site: cayles.disted.camosun.bc.ca.
- Readings** are an essential part of your learning in this course – they provide indispensable depth and context. Reading assignments are detailed below.
- Labs:** There are ten labs. Each will be given roughly three hours of class time. You must buy a lab manual at the bookstore! 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. 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. Some labs involve some basic math - simple formulas, conversions, graphing, etc. I am happy to coach these skills. See the lab skills handout if you want some practice. 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 with warm clothes, rain gear, snacks and water.
- Weather Analysis Project:** Students will monitor the local weather for a few days, and analyze what happened using weather data and maps. The project requires a formal written report. See details in weather journal handout.
- Nature Walk:** We will do a guided biogeography nature walk at Mt Douglas Park. Students are expected to participate and hand in a completed data form.
- Exams:** There will be a midterm and a final exam. 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 final exam will be cumulative.
- Illness, etc.:** If you miss a lab or exam due to illness or some other serious 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 trips are hard to reschedule, so try not to miss them unless you are too sick to perform at a normal level. Students who are absent for a valid reason must contact me within 24 hours. In such cases, one makeup exam time will be scheduled, and all students needing it will be expected to attend.

6. Basis of Student Assessment

Evaluation will be based on accuracy, thoroughness, and neatness. Always show your work and keep track of units of measure! When grading, 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, feel free to come to my office and ask about it.

(a)	Labs	31.5% (3.5% each)
(b)	Weather Analysis Project	8.5%
(c)	Nature Walk data form	2%
(d)	Midterm exam	20%
(e)	Final exam	38%

7. COURSE SCHEDULE (Subject to change at instructor's discretion):

<u>Week of</u>	<u>Monday</u>	<u>Wednesday</u>
Sep. 7	Labour Day: no class	Course Intro / Earth Systems <i>No lab</i> <i>Reading: Ch. 1</i>
Sep. 14	Atmospheric Structure & Composition <i>Lab 1: Insolation and Weather Data</i> <i>Reading: Ch. 2, 3</i>	Radiation and Temperature <i>Lab 1 cont'd</i> <i>Reading: Ch. 4, 5</i>
Sep. 21	Pressure and Wind <i>Lab 2: Temperature and Wind</i> <i>Reading: Ch. 6</i>	Atmospheric Circulation <i>Lab 2 cont'd</i>
Sep. 28	Atmospheric Humidity <i>Lab 3: Humidity and Uplift</i> <i>Reading: Ch. 7</i>	Clouds and Precipitation <i>Lab 3 cont'd</i>
Oct. 5	Weather Systems <i>Lab 4: Weather Maps</i> <i>Reading: Ch. 8</i>	Violent Weather <i>Lab 4 cont'd</i>
Oct. 12	Thanksgiving: no class	Ocean Currents (lecture and video) <i>No lab</i> <i>Reading: Ch. 6 (pp. 169-172)</i>
Oct. 19	Climate <i>No lab: review for midterm</i> <i>Reading: Ch. 10 (pp. 284-314)</i>	Midterm exam <i>No lab</i>
Oct. 26	<i>Lab 5: Data Analysis</i> <i>Meet in GP lab E113.</i> <i>Start Weather Analysis Project.</i>	Climate Change (lecture and video) <i>Optional: do Lab 9 now.</i> <i>Reading: Ch. 10 (pp. 315-325, Ch. 17 (pp. 581-589))</i>
Nov. 2	Soils 1 <i>Lab 6: Soil Analysis (<u>outdoors</u>)</i> <i>Reading: Ch. 18</i>	Soils 2 <i>Lab 6 cont'd (in class)</i>
Nov. 9	Organisms and Environments <i>No lab (Weather Analysis project due)</i>	Remembrance Day: no class
Nov. 16	Energy and Nutrient Cycles <i>Lab 7: Vegetation Assessment (<u>outdoors</u>)</i> <i>Reading: Ch. 19</i>	Ecosystem Description and Classification <i>Lab 7 cont'd (<u>outdoors</u>)</i> <i>Reading: Meidinger & Pojar Ch. 2</i>
Nov. 23	Biomes 1 <i>Lab 8: Ecosystem Maps</i> <i>Reading: Ch. 20</i>	Biomes 2 <i>Lab 8 cont'd</i>
Nov. 30	Historical Biogeography <i>Lab 9: Island Biogeography</i> <i>Reading: Strahler & Archibold pp. 554-564</i>	Biodiversity (lecture and video) <i>Lab 9 cont'd</i>
Dec. 7	Mt. Douglas Nature Walk (<u>outdoors</u>) <i>Travel details TBA</i>	Review for final exam <i>No lab</i>
Exam Week	Final Exam	

8. Grading System

Standard Grading System (GPA)

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

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 camosun.ca or 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.

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 E-1.5 at camosun.ca for information on conversion to final grades, and for additional information on student record and transcript notations.

8. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services or the College web site at camosun.ca.

STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services and on the College web site in the Policy Section.