

Last Revised: November 2019

COURSE INFORMATION

Course Title: Weather and Climate

Course Number: GEOG 101

Credits: 3

Total Weeks: 14 (Fall, Spring)
12 (Summer) **Total Hours:** 39

Course Level: First Year Second Year
 New Revised Course
 Replacement Course

Department: Social Sciences **Department Head:** A. McDougall

Former Course Code(s) and Number(s) (if applicable): N/A

Pre-requisites (If there are no prerequisites, type NONE): NONE

Co-requisite Statement (List if applicable or type NONE): NONE

Precluded Courses: N/A

COURSE DESCRIPTION

This course is an introduction to the study of the elements and processes of the atmosphere and atmospheric circulation which produce variations in weather and climate locally and around the globe. In addition, the hydrosphere which includes the interrelationships between water, weather and climate systems will be studied. The aim of this course is to develop an understanding of the interrelationships of these systems and their impact on the biosphere and lithosphere where most human activities take place. The course involves lectures, laboratory work, assignments, exams, and field trips.

LEARNING OUTCOMES

Upon successful completion of the course, students will be able to:

- Understand the geographical tradition and the various methods geographers use to describe the world around them.
- Gain a broader understanding of a variety of important contemporary topics such as globalization, economic development, population, urbanization, and human impacts on the environment.
- Develop your critical thinking abilities by reading and writing about a variety of issues at an academic level.
- Appreciate how a geographical perspective enriches and complicates one’s understanding of living in the world today

INSTRUCTION AND GRADING

Instructional (Contact) Hours:

Type	Duration
Lecture	39
Seminars/Tutorials	
Laboratory	
Field Experience	
Other (<i>specify</i>):	
Total	39

Grading System: Letter Grades Percentage Pass/Fail Satisfactory/Unsatisfactory Other

Specify passing grade: 50%

Evaluation Activities and Weighting (total must equal 100%)

Assignments: % <i>Specify number of, variety, and nature of assignments:</i>	Lab Work: 10%	Participation: 5% <i>Specify nature of participation:</i>	Project: 10% <i>Specify nature of project:</i> Weather Journal
Quizzes/Test: 30%	Midterm Exam: 20%	Final Exam: 25%	Other: %

TEXT(S) AND RESOURCE MATERIALS

Provide a full reference for each text and/or resource material and include whether required/not required.

Christopherson, R., Birkeland, G., Byrne, M. and P. Giles, 2018: Geosystems: An Introduction to Physical Geography, Updated Fourth Canadian Edition. Pearson Canada Inc., North York, Ontario, Canada, 669 pages.

COURSE TOPICS

List topics and sequence covered.

Week	Topic
Week 1	Class overview; shape of earth; latitude and longitude
Week 2	Essentials of geography; earth's atmospheric; composition; Atmospheric pressure and density
Week 3	Atmospheric layers; electromagnetic radiation; basics; inverse-square law
Week 4	Atmosphere and surface energy balances
Week 5	Temperature; water and atmospheric moisture; relative humidity
Week 6	Moisture effects on temperature
Week 7	Weather journal MIDTERM EXAM
Week 8	Atmospheric circulation; seasons
Week 9	Air parcel basics; atmospheric stability; lapse rates
Week 10	Weather: clouds and orographic precipitation
Week 11	Weather systems
Week 12	Climate change
Week 13	Catch up / Review for final exam
Week 14	FINAL EXAM

NOTES

1. Students are required to follow all College policies. Policies are available on the website at: [Coquitlam College Policies](#)
2. To find out how this course transfers, visit the BC Transfer Guide at: bctransferguide.ca