GEOG-101 – Introduction to Physical Geography

University Arts and Science

Effective Term & Year: Fall 2025
Course Outline Review Date: 2030-04-01

Program Area: Math and Sciences

Description:

This course examines the concepts and processes of physical geography that govern the function of the atmosphere, lithosphere, hydrosphere, and biosphere using an earth-systems approach. Students will explore the sciences of cartography, meteorology, climatology, geomorphology, hydrology, biogeography, and soils through lectures and lab activities. They will also examine how human activities impact the environment, with a focus on real-world issues such as climate change. Completion of this course fulfills a lab science requirement and provides a strong foundation for advanced studies in Geography and related disciplines.

Program Information:

This course is intended for University Arts and Science and Business Management diploma and degree students. It can also be used as an elective for BMGT diplomas and the Bachelor in Business Administration (Sustainable Business Practices) degree.

Delivery Methods: On-campus (Face-to-Face), Online

Credit Type: College of the Rockies Credits

Credits: 3

Course type/s: Sciences, Lab Sciences

Instructional Activity and Hours:

Activity	Hours

Classroom, Directed Studies or Online Instruction	45
Seminar/Tutorials	
Laboratory/Studio	45
Practicum/Field Experience	
Co-op/Work Experience	
Other	
Total	90

Course Requisites:

None

Prior Learning and Recognition: Yes

Students are able to request formal recognition of their prior learning or experience outside the classroom. Challenge examination, portfolio-assisted assessment, work-based assessment or a combination of assessments that is appropriate to identify, assess, and recognize prior skills, competencies, and knowledge to achieve course credit. Tuition fees apply, refer to Policy 2.5.5 Prior Learning Assessment and Recognition (PLAR) or contact an education advisor for more information.

Course Transfer Credit:

For information about receiving transfer credit for courses taken at either British Columbia or Alberta institutions, please see https://www.bctransferguide.ca/ or https://transferalberta.alberta.ca . For more transfer credit information, please visit https://www.cotr.bc.ca/Transfer

All requests for course transfer credit from institutions in British Columba or elsewhere should go to the College of the Rockies Enrolment Services office.

Textbook Resources:

Textbook selection varies by instructor and may change from year to year. At the Course Outline Effective Date the following textbooks were in use:

Gervais, B. 2024. Living Physical Geography with Achieve Online Platform. MacMillan Learning. 2nd edition with digital update.

Please see the instructor's syllabus or check COTR's online text calculator https://textbook.cotr.bc.ca/ *for a complete list of the currently required textbooks.*

Learning Outcomes:

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

- reflect upon the Ktunaxa story of creation, contrasting it with other Indigenous science and western scientific worldviews;
- outline respective ways to visit and learn from the homelands and waterways in Ktunaxa ?amak?is, the traditional territory of the Ktunaxa Nation;
- explain physical geography processes and concepts in all four major spheres of the Earth using an earth-systems approach;
- evaluate the impact of human activities on the physical environment in relation to selected United Nations Sustainable Development Goals;
- describe the significance of temporal and spatial scales to scientific research in physical geography;
- apply the scientific method to explain natural processes shaping the physical environment;
- convey scientific information using written, numeric, graphic, and oral methods to explain physical geographic phenomena; and
- collaborate respectfully and productively with peers to complete group tasks and solve problems.

Course Topics:

- Ktunaxa Creation Story
- Introduction to physical geography, systems, and scientific method
    - Mapping of earth's systems
    - Interpreting topographic maps and air photos
    - Topographic cross-sections
    - Google Earth to observe geographical features
- The Atmosphere
    - Structure and composition of the atmosphere
    - Global radiation and energy balance
    - Atmospheric and oceanic circulation patterns
    - Global temperatures

- Weather, water, and climate
    - Weather systems
    - Hydrologic cycle
    - Water resources
    - Climate systems
    - Use of meteorological and hydrological instrumentation
- The Earth-Atmosphere Interface
    - Crustal and tectonic processes
    - Earthquakes and volcanoes
    - Weathering, erosion and mass movement
    - Fluvial, Karst, Aeolian, Glacial, and Coastal processes and landforms
- Soils and the Biosphere
    - Soil formation, classification, and distribution
    - Biogeography and ecosystems
    - Biogeoclimatology of British Columbia

See instructor's syllabus for the detailed outline of weekly readings, activities and assignments.

Evaluation and Assessments

Assessment Type: On-Campus (face-to-face) and Online, or Hybrid

Assessment Type	% of Total Grade
Lab Assignments	40%
Lecture Weekly Reading Reviews	10%
Lecture Quizzes	20%
Final Exam (Lab and Class)	30%
Total	100%

Grade Scheme

A+	A	A-	B+	B	B-	C+	C	C-	D	F
>=90	89-85	84-80	79-76	75-72	71-68	67-64	63-60	59-55	54-50	<50

Pass requirements: A passing mark 50% or higher on lecture assessments and 50% or higher on lab assessments is required.

Evaluation Notes: A grade of "D" grants credit, but may not be sufficient as a prerequisite for sequential courses.

Exam Attendance:

Students must attend all scheduled exams at the appointed time and place. Instructors may

approve an alternate exam to accommodate an illness or personal crisis. Department heads will consider other written requests. Any student who misses a scheduled exam without prior approval will receive a “0” on the exam.

Academic Policies:

College of the Rockies policies related to courses can be found at https://cotr.bc.ca/about-us/college-policies/ and include the following:

- Policy 2.1.4 Course Audit
- Policy 2.4.1 Credential Framework
- Policy 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Rights, Responsibilities and Conduct
- Policy 2.4.8 Academic Performance
- Policy 2.4.9 Student Feedback and Concerns
- Policy 2.4.11 Storage of Academic Works
- Policy 2.5.3 Student Appeal
- Policy 2.5.5 Prior Learning Assessment and Recognition (PLAR)

Course Changes:

The College of the Rockies updates course outlines regularly to meet changing educational, employment and marketing needs. The instructor will notify students in writing of any updates to this outline during the semester. The instructor reserves the right to revise, add or delete material while meeting the learning outcomes of this course outline.