1. **Course:** GLGY 202, Applications of Geoscience - Winter 2024

   **Lecture 01:** MWF 09:00 - 09:50 in MFH 160
   - Instructor: Dr Ann Quinney
   - Email: aequinne@ucalgary.ca
   - Phone: 403 220-6809
   - Office: ES 514
   - Hours: By appointment

   **Lecture 02:** MWF 11:00 - 11:50 in MFH 160
   - Instructor: Dr Ann Quinney
   - Email: aequinne@ucalgary.ca
   - Phone: 403 220-6809
   - Office: ES 514
   - Hours: By appointment

   To account for any necessary transition to remote learning for the current semester, courses with in-person lectures, labs, or tutorials may be shifted to remote delivery for a certain period of time. In addition, adjustments may be made to the modality and format of assessments and deadlines, as well as to other course components and/or requirements, so that all coursework tasks are in line with the necessary and evolving health precautions for all involved (students and staff).

   **In Person Delivery Details:**

   Lectures and Labs will be delivered in person.

   **Course Site:**

   D2L: GLGY 202 L01-(Winter 2024)-Applications of Geoscience

   **Note:** Students must use their U of C account for all course correspondence.

   I will respond to your email inquiries about the course within 24 hours except on weekends and holidays.

   **Equity Diversity & Inclusion:**

   The University of Calgary is committed to creating an equitable, diverse and inclusive campus, and condemns harm and discrimination of any form. We value all persons regardless of their race, gender, ethnicity, age, LGBTQIA2S+ identity and expression, disability, religion, spirituality, and socioeconomic status. The Faculty of Science strives to extend these values in every aspect of our courses, research, and teachings to better promote academic excellence and foster belonging for all.

2. **Requisites:**

   See section 3.5.C in the Faculty of Science section of the online Calendar.

   **Prerequisite(s):**
   - Geology 201.

   **Antirequisite(s):**
   - Credit for both Geology 202 and 203 will not be allowed.

3. **Grading:**

   The University policy on grading and related matters is described in F.1 and F.2 of the online University Calendar.

   In determining the overall grade in the course the following weights will be used:
<table>
<thead>
<tr>
<th>Course Component</th>
<th>Weight</th>
<th>Due Date (duration for exams)</th>
<th>Modality for exams</th>
<th>Location for exams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labs</td>
<td>10%</td>
<td>Ongoing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab Final</td>
<td>30%</td>
<td>Ongoing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture Activities</td>
<td>10%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture Midterm</td>
<td>20%</td>
<td>Mar 08 2024 at 09:00 am (50 Minutes)</td>
<td>in-person</td>
<td>In class</td>
</tr>
<tr>
<td>Registrar Scheduled Final Exam</td>
<td>30%</td>
<td>Will be available when the final exam schedule is released by the Registrar</td>
<td>in person</td>
<td>Will be available when the final exam schedule is released by the Registrar</td>
</tr>
</tbody>
</table>

1 Labs are collaborative exercises. If you miss a lab, you must attend an open lab session within 10 days of the missed lab to complete it. Open lab sessions occur on Fridays. You may not attend any lab session other than your own.

2 The lab final is a cumulative assessment.

3 To accommodate illnesses and missed classes, the lowest grade will be dropped.

4 Lecture exams will occur during your regular lecture time (9 am for L01 and 11 am for L02)

5 The lecture final is a cumulative assessment.

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

<table>
<thead>
<tr>
<th></th>
<th>A+</th>
<th>A</th>
<th>A-</th>
<th>B+</th>
<th>B</th>
<th>B-</th>
<th>C+</th>
<th>C</th>
<th>C-</th>
<th>D+</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum % Required</td>
<td>95%</td>
<td>90%</td>
<td>85%</td>
<td>80%</td>
<td>75%</td>
<td>70%</td>
<td>65%</td>
<td>60%</td>
<td>55%</td>
<td>50%</td>
<td>45%</td>
</tr>
</tbody>
</table>

This course will have a Registrar Scheduled Final exam that will be delivered in-person and on campus. The Final Examination Schedule will be published by the Registrar’s Office approximately one month after the start of the term. The final exam for this course will be designed to be completed within 2 hours.

The University of Calgary offers a flexible grade option, Credit Granted (CG) to support student’s breadth of learning and student wellness. Faculty units may have additional requirements or restrictions for the use of the CG grade at the faculty, degree or program level. To see the full list of Faculty of Science courses where CG is not eligible, please visit the following website: [https://science.ucalgary.ca/current-students/undergraduate/program-advising/flexible-grading-option-cg-grade](https://science.ucalgary.ca/current-students/undergraduate/program-advising/flexible-grading-option-cg-grade)

4. Missed Components Of Term Work:

In the event that a student legitimately fails to submit any online or in-person assessment on time (e.g. due to illness, domestic affliction, etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date, or possible exemption and reweighing of components. Absences not reported within 48 hours will not be accommodated. Students may be asked to provide supporting documentation (Section M.1) for an excused absence, See FAQ.

If an excused absence is approved, options for how the missed assessment is dealt with is at the discretion of the coordinator or course instructor. Some options such as an exemption and pro-rating among the components of the course may not be a viable option based on the design of this course.

To account for student illnesses and absences, the lowest lab mark and lowest lecture activity mark will be dropped. Additional academic concessions will be made on a case-by-case basis by the instructor and will require documentation.

5. Scheduled Out-of-Class Activities:

There are no scheduled out of class activities for this course.

6. Course Materials:

Recommended Textbook(s):


Lecture slides will be available on D2L.

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam/Camera (built-in or external);
• Microphone and speaker (built-in or external), or headset with microphone;
• Current antivirus and/or firewall software enabled;
• Stable internet connection.

For more information please refer to the UofC ELearning online website.

7. Examination Policy:

No aids are allowed on tests or examinations.

Students should also read the Calendar, Section G, on Examinations.

8. Approved Mandatory And Optional Course Supplemental Fees:

There are no mandatory or optional course supplemental fees for this course.

9. Writing Across The Curriculum Statement:

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section E.2 of the University Calendar.

10. Human Studies Statement:

Students will not participate as subjects or researchers in human studies.

See also Section E.5 of the University Calendar.

11. Reappraisal Of Grades:

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See Section I.3 of the University Calendar.

a. Term Work: The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within ten business days of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work form to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections I.1 and I.2 of the University Calendar.

b. Final Exam: The student shall submit the request to Enrolment Services. See Section I.3 of the University Calendar.

12. Other Important Information For Students:

a. Mental Health: The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, Mental Health Services Website) and the Campus Mental Health Strategy website (Mental Health).

b. SU Wellness Services: For more information, see their website or call 403-210-9355.

c. Sexual Violence: The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (svsa@ucalgary.ca) or phone at 403-220-2208. The complete University of Calgary policy on sexual violence can be viewed here.

d. Student Ombuds Office: A safe place for all students of the University of Calgary to discuss student related issues, interpersonal conflict, academic and non-academic concerns, and many other problems.

e. Student Union Information: SU contact, Email your SU Science Reps: science1@su.ucalgary.ca, science2@su.ucalgary.ca, science3@su.ucalgary.ca.

f. Academic Accommodation Policy:

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf
Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf.

Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, by filling out the Request for Academic Accommodation Form and sending it to Brandon Karchewski by email brandon.karchewski@ucalgary.ca preferably 10 business days before the due date of an assessment or scheduled absence.

g. **Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional Code of Conduct and promote academic integrity in upholding the University of Calgary’s reputation of excellence. Some examples of academic misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor’s consent; submitting or presenting work as if it were the student’s own work; submitting or presenting work in one course which has also been submitted in another course without the instructor’s permission; borrowing experimental values from others without the instructor’s approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

   Student Handbook on Academic Integrity  
   Student Academic Misconduct Policy and Procedure  
   Faculty of Science Academic Misconduct Process  
   Research Integrity Policy

Additional information is available on the [Student Success Centre Academic Integrity page](https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf).

h. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or non-academic misconduct, in addition to any other remedies available at law.

i. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see Legal Services website.

j. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction (USRI) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Lab</th>
<th>Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 8-12</td>
<td></td>
<td>Topic 1: Earth as a Habitat</td>
</tr>
<tr>
<td>2</td>
<td>Jan 15-19</td>
<td>Meet and Greet</td>
<td>Topic 1: Earth as a Habitat</td>
</tr>
<tr>
<td>3</td>
<td>Jan 22-26</td>
<td>1: Mapmaking</td>
<td>Topic 1: Earth as a Resource</td>
</tr>
<tr>
<td>4</td>
<td>Jan 29-Feb 2</td>
<td>2: Carbon on the Move</td>
<td>Topic 2: Earth as a Resource</td>
</tr>
<tr>
<td>5</td>
<td>Feb 5-9</td>
<td>3: Earth Resources</td>
<td>Topic 2: Earth as a Resource</td>
</tr>
<tr>
<td>6</td>
<td>Feb 12-16</td>
<td>4: Hydrocarbon Exploration</td>
<td>Topic 2: Earth as a Hazard</td>
</tr>
<tr>
<td>7</td>
<td>Feb 19-23</td>
<td>Reading Week</td>
<td>Reading Week</td>
</tr>
<tr>
<td>8</td>
<td>Feb 26-March 1</td>
<td>6: Earthquake!</td>
<td>Topic 3: Earth as a Hazard</td>
</tr>
<tr>
<td>9</td>
<td>March 4-8</td>
<td>7: Geologic Hazards in Vancouver</td>
<td>Topic 4: Engineering Considerations</td>
</tr>
<tr>
<td>10</td>
<td>March 11-15</td>
<td>8: City Planning</td>
<td>Topic 4: Engineering Considerations</td>
</tr>
<tr>
<td>11</td>
<td>March 18-22</td>
<td>9: The Anthropocene</td>
<td>Topic 5: Climate Change</td>
</tr>
<tr>
<td>12</td>
<td>March 25-29</td>
<td>10: Keep Cool</td>
<td>Topic 5: Climate Change</td>
</tr>
<tr>
<td>13</td>
<td>April 1-5</td>
<td>Lab Exam</td>
<td>Topic 5: Climate Change</td>
</tr>
<tr>
<td>14</td>
<td>April 8-9</td>
<td>Lab Exam (Monday Sections)</td>
<td>Review</td>
</tr>
</tbody>
</table>

**Course Outcomes:**

- Students will be able to identify types of models used in geoscience, and analyze them for their purpose, affordances and limitations.
- Students will illustrate the important geologic processes involved with the generation and emplacement of natural resources.
and identify these resources as either renewable or non-renewable

- Students will evaluate human decisions, in terms of trade-offs, with regard to natural hazards, resource exploitation, and waste disposal.
- Students will categorize the various roles of geoscientists within society with respect to natural hazard, resource exploitation and waste disposal.
- Students will make an informed argument for the nature of human impact on the earth by delineating major affects on the physical earth, biosphere in general and humans existence in specifically.
- Students will generalize the nature of geologic hazards in terms of the geologic phenomena involved, impacts on human life and property and processes of human mitigation.