



UNIVERSITY OF
CALGARY

DEPARTMENT OF GEOSCIENCE
COURSE OUTLINE
FALL 2016

1. **Course:** GLGY 201, Principles of Geoscience

Lecture Sections:

L01: MoWeFr, 09:00-09:50, CHC 119

L02: MoWeFr, 11:00-11:50, KNB 132

Note: On Fridays, L01 and L02 will be held in the Taylor Institute Forum rather than the usual lecture room.

For a listing of all lab sections corresponding with this course, please see the following link:

http://geoscience.ucalgary.ca/geoscience_info/courses/f16/GLGY201

Lecture Instructors		Office Hours*
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Name:	Dr. Annie Quinney	<i>By appointment</i>
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Head TA		<i>By appointment</i>
Name:	TBD	
Office Location:		
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2. **Prerequisites:** N/A

Antirequisite: Credit for both Geology 201 and 209 will not be allowed. See [Course Descriptions](#) in the University Calendar.

3. **Learning Objectives:**

By the end of this course students should be able to:

1. **Describe and interpret** the types of evidence that inform our understanding of geological processes.
2. **Compare and contrast** how *scientific inquiry and theory development* work in geoscience versus other physical sciences.
3. **Describe** the external and internal *structure of the Earth* and the *geophysical and geomorphological processes* that operate on and within it.
4. **Explain** the fundamentals of *tectonic theory*, its historical development, and how it explains the geologic evidence observed at the surface of the Earth.
5. **Compare and contrast** the processes that form similar, but different features (e.g. coarse grained granite vs. coarse grained sandstone, mountains vs. volcanoes, river valleys vs. glacial valleys) and **describe** the evidence that one can use to *distinguish* between them.
6. **Analyse** *geologic features* observed during everyday life, including being able to:

- a. Use *diagnostic characteristics* to **identify** rocks in hand sample and **describe** the likely conditions during rock formation.
 - b. **Discuss** the *limitations* of visual observations in accurately classifying rocks.
 7. **Discuss** the *complexity* of the world surrounding us, and how geologic processes have shaped the society in which we live.
 8. **Communicate** the above ideas to peers in the *non-scientific and scientific communities*.
4. **Grading:** The University policy on grading and related matters is described in sections [F.1](#) and [F.2](#) of the online University Calendar. In determining the overall grade in the course the following weights will be used:

Tests and Assignments	Weight	Dates
Lab Assignments & Learning Assessments	25%	See the schedule posted on D2L
Lab Midterm Exam	15%	Week of Monday, October 31 during Lab period
Lecture Midterm Exam	15%	Friday, November 4 during Lecture period
Lab Final Exam	20%	Week of Monday, December 5 during Lab period
Lecture Final Exam	25%	SCHEDULED BY THE REGISTRAR

-Students must achieve a minimum of 50% in **BOTH** the lab components and lecture components of the course to obtain a passing grade.

Individual elements of the course (i.e. labs, exams) will be assigned a percentage score. Final percentage grades for the overall course will be calculated based on the grade weighting scheme indicated above and will be converted to letter grade as follows:

Letter Grade	Percent	Letter Grade	Percent
A+	95-100	C+	65-69
A	90-94	C	60-64
A-	85-89	C-	56-59
B+	80-84	D+	53-55
B	75-79	D	50-52
B-	70-74	F	0-49

5. **Missed Components of Term Work:** The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in [Section 3.6](#). It is the student's responsibility to familiarize himself/herself with these regulations. See also [Section E.6](#) of the University Calendar.
6. **Scheduled out-of-class activities:** There will not be any course components that take place outside of the regularly scheduled lecture or lab times. However, on some weeks the room may change (e.g. for an exam). Students are responsible for monitoring D2L or in-class announcements regarding class locations each week.
7. **Course Materials:** *Introduction to Physical Geology: The Science of the Earth* by Charles Fletcher, Dan Gibson and Kevin Ansdell (Canadian Edition); the course will also make use of the WileyPLUS resources associated with this textbook. The binder-ready loose-leaf edition of the book including WileyPLUS access has ISBN 978-1-119-31218-5 and will be available at the University of Calgary Bookstore. The WileyPLUS standalone version (which also provides time limited electronic access to the full text) has ISBN 978-1-118-84011-5 and should also be available at the bookstore as a card with an access key. Reserve copies should also be available at the university library.

Lab Handouts and corresponding assignments are posted in advance on D2L.

Lab Audio Introductions are posted weekly on D2L, by Lab.

Lecture notes are posted in advance on D2L.

Selected online web resources will be posted on D2L.

8. **Examination Policy:** Closed Book. Non-programmable calculators allowed. Students should also read the Calendar, [Section G](#), on Examinations.
9. **Approved Mandatory and Optional Course Supplemental Fees:**
Students will need to obtain a mineral/rock identification tool kit for some of the lab exercises. This year, the fee for this kit is included in the regular course fees, so this will be provided during lab period after the fee refund deadline for dropping the course.
10. **Writing across the curriculum statement** In this course, the quality of the student's writing in laboratory reports will be a factor in the evaluation of those reports. See also [Section E.2](#) of the University Calendar.

11. OTHER IMPORTANT INFORMATION FOR STUDENTS:

- (a) **Misconduct:** Academic misconduct (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties
- (b) **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#).
- (c) **Student Accommodations:** Students needing an Accommodation because of a Disability or medical condition should contact Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities available at http://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities_0.pdf. Students needing an Accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, preferably in writing, to the Associate Head of Geoscience, Dr. E.S. Krebs by email krebs@ucalgary.ca or phone 403-220-5850.
- (d) **Safewalk:** Campus Security will escort individuals day or night (<http://www.ucalgary.ca/security/safewalk/>). Call 220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- (e) **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). As one consequence, 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 also <http://www.ucalgary.ca/secretariat/privacy>.
- (f) **Student Union Information:** VP Academic Phone: 403 220-3911 Email: suvpaca@ucalgary.ca SU Faculty Rep. Phone: 403 220-3913 Email: science1@su.ucalgary.ca, science2@su.ucalgary.ca and science3@su.ucalgary.ca; Student Ombuds Office: 403-220-6420 Email: ombuds@ucalgary.ca; <http://ucalgary.ca/provost/students/ombuds>
- (g) **Internet and Electronic Device Information:** You can assume that in all classes that you attend, your cell phone should be turned off unless instructed otherwise. Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.
- (h) **U.S.R.I.:** At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses (www.ucalgary.ca/usri). Your responses make a difference – please participate in USRI Surveys.

Tentative Course Schedule for GLGY 201 - Fall 2016					
Week	Start Date	Lecture Topic(s)	Learning Assessment	Lab Topic	Text Chapter(Section)
1	12.09.2016	GeoScientific Inquiry, Solar System, Earth Structure,	Self-Assessment, Team Formation	Topographic Maps 1 (3D Map Data Collection)	1-3, 15, 23
2	19.09.2016	Earth Materials: Minerals, Fossils, Rocks, The Rock Cycle	Rock Cycle	Topographic Maps 2 (Scale, Cross-Sections, UTM)	1(5), 4, 10
3	26.09.2016	Igneous Rocks: Volcanism, Classification	Igneous and Sedimentary Rocks	Earth Materials	5-6
4	3.10.2016	Sedimentary Rocks: Environments, Clastic vs.	LA Review	Rock ID 1 (Igneous + Clastic Sedimentary)	7-8
5	10.10.2016	Metamorphic Rocks: Regional, Contact, Classification	Metamorphic Rocks	Rock ID 2 (Igneous + Sedimentary + Metamorphic)	9
6	17.10.2016	Evolution, Geologic Time, Earth History	Geologic Time / Daisen Volcano	Paleontology + Fossil Record	1(7), 13-14, 17(5-10)
7	24.10.2016	Surficial Geology, Hydrology	LA Review	Surficial Geology + Lab Review	7, 17(1-4), 18(1-4), 19(1-9), 20(1-4,8-9), 21(1-7), 22(1-5)
8	31.10.2016	Midterm Review	Midterm Exam (up to Earth History)	Lab Midterm (up to Rock ID 2)	Review Chapters up to those listed for Earth History
9	7.11.2016	Carbonate Environments/Rocks, Cementation, Diagenesis	READING BREAK -- NO LABS OR LEARNING ASSESSMENT		8(2,7-8), 22(9-11)
10	14.11.2016	Structural Geology: Stress, Strain, Folds, Faults	Maps and Structures	Rock ID 3 (Carbonates, Cements, Dunham classification)	11
11	21.11.2016	Earthquakes: Causes, Location, Measurement	Plate Boundaries	Virtual Field Experience	12
12	28.11.2016	Geohazards, Climate Change, GeoScience and Society	Concept Mapping / Minute Thesis	Lab Review - Concept Mapping	1(6), 10, 16, 17(5-10), 18(5-8), 19(10), 20(5-7), 21(8), 22(7,12), 23(10)
13	5.12.2016	Review & Wrap-Up		Lab Final (Cumulative)	Review All Assigned Reading
14	12.12.2016	FINAL EXAMS (Cumulative)			
15	19.12.2016	FINAL EXAMS (Cumulative)			
*Note the the course schedule is tentative and the instructors reserve the right to modify the schedule. In case of a change in schedule, due notice will be provided on the course D2L page.					