

UNIVERSITY OF CALGARY  
FACULTY OF SCIENCE  
DEPARTMENT OF GEOSCIENCE  
COURSE OUTLINE  
WINTER 2015

*Civilization exists by geological consent, subject to change without notice.*

--Will Durant, What Is Civilization?, 1946

*We are part of the earth and it is part of us ... What befalls the earth befalls all the sons of the earth.*

-- Chief Seattle, Address to the Pacific Northwest Commissioner of Indian Affairs, 1854

*Man and man's earth are unexhausted and undiscovered. Wake and listen! Verily, the earth shall yet be a source of recovery.*

--Friedrich Nietzsche, Thus Spake Zarathustra, 1911

**1. Course:** Geology 202, Applications of Geoscience

Lecture Sections:

L01, MoWeFr, 09:00–09:50, ES 162

L02, MoWeFr, 11:00-11:50, CHC 105

Instructor, Dr. Glenn Dolphin, ES 134, 403-220-6025, [gdolphin@ucalgary.ca](mailto:gdolphin@ucalgary.ca)

Instructor, Dr. Jerry Osborn, ES 510, 403-220-6448, [osborn@ucalgary.ca](mailto:osborn@ucalgary.ca)

D2L Course name: GLGY 202 L01, L02 Winter 2015 – Applications of Geoscience

Geoscience Department ES 118; (403) 220-5841; [geoscience.ucalgary.ca](http://geoscience.ucalgary.ca), [geoscience@ucalgary.ca](mailto:geoscience@ucalgary.ca)

**2. Prerequisites:** Geology 201. See section 3.5.C in the Faculty of Science section of the online Calendar ([www.ucalgary.ca/pubs/calendar/current/sc-3-5.html](http://www.ucalgary.ca/pubs/calendar/current/sc-3-5.html))

**Antirequisite:** Credit for both Geology 202 and 203 will not be allowed.

**3. Grading:** The University policy on grading and related matters is described 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:

Components that will determine final course grades will be weighted as follows:

Weekly lab assignments	18%
Lab quizzes	12
Lecture midterm exam	20 (February 25)
Lab final exam	15
Lecture final exam	35

A passing grade in the lab final is required for a passing grade in the course.

Percentage scores on exams or assignments will be converted to letter grades according to the following scheme:

Letter Grade/ Percentage conversions

A+ 95- 100	C+ 65- <70
A 90- <95	C 60- <65
A- 85- <90	C- 56- <60
B+ 80- <85	D+ 53- <56
B 75- <80	D 50- <53
B- 70- <75	F 0- <50

Deferred exams offered in this course may be in a format different from that of regular exams (i.e., all short-answer questions).

Extra Credit

Extra credit may be granted for extra class-directed work, such as researching a problem arising in class, by agreement at the time. However, any such credit must be applied for in writing at the end of the term

**4. 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.

5. **Scheduled out-of-class activities:** Dates and times of approved class activities held outside of class hours. MID-TERM EXAM FOR BOTH LECTURE SECTIONS will be held on February 25 at 20:30 – 21:30 in rooms ST 140 and ST 148.
- REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY.** If you have a clash with this out-of-class-time-activity, please inform your instructor as soon as possible so that alternative arrangements may be made for you.
6. **Course Materials:** Readings will be assigned from the textbook already used in G1gy 201 (Marshak, Earth, Portrait of a Planet, 4<sup>th</sup> ed.), as well as Keller, Environmental Geology, 9<sup>th</sup> ed.
7. **Examination Policy:** No electronic or written aids (eg. cell phones, tablets, computers, PDAs, notes, textbooks) will be allowed during writing of any exams. Non-programmable calculators will be permitted to answer quantitative questions on exams, if applicable.

Students should also read the Calendar, [Section G](#), on Examinations.

8. **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.

9. **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) **Academic Accommodation Policy:** Students with documentable disabilities are referred to the following links: Students with Disabilities: <http://www.ucalgary.ca/pubs/calendar/current/b-1.html> [B.1](#) and Student Accessibility Services: <http://www.ucalgary.ca/access/>.
- (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 (FOIPPA). 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: 220-3911 Email: [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca).  
SU Faculty Rep. Phone: 220-3913 Email: [sciencerep@su.ucalgary.ca](mailto:sciencerep@su.ucalgary.ca); [Student Ombudsman](#)
- (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](http://www.ucalgary.ca/usri)). Your responses make a difference – please participate in USRI Surveys.

Department Approval: Original Signed

Date: January 12, 2015

Associate Dean's Approval for  
out of regular class-time activity: Original Signed

Date: January 12, 2015

## GLGY 202 Course Schedule (Winter 2015)

Week	Date	Lecture Topic	Lab
1	Jan 12	Intro to 202	Orientation
	Jan 14	Course logistics	
	Jan 16	Use of models in geoscience	
2	Jan 19	Earth as habitat- intro, philosophical issues	Lab 1
	Jan 21	Earth as habitat- soils: class exercise	Initial Views
	Jan 23	Earth as habitat- soils	
3	Jan 26	Earth as habitat – geochemical environment and health	Lab 2
	Jan 28	Earth as habitat – engineering geology	Carbon Cycle Model
	Jan 30	Earth as habitat – engineering geology: guest lecturer	
4	Feb 2	Earth as habitat – waste disposal	Lab 3
	Feb 4	Earth as habitat – examples of geo-kickbacks	Land Use Planning
	Feb 6	Hazards – Introduction to Geologic Hazards	
5	Feb 9	Hazards – Plate tectonics refresher	Lab 4 <b>SHORT QUIZ</b>
	Feb 11	Hazards – Earthquakes	Understanding Earthquakes
	Feb 13	Hazards – Volcanoes	
6	Feb 16	READING WEEK	
	Feb 18	READING WEEK	
	Feb 20	READING WEEK	
	Feb 23	Hazards- Landslides	Lab 5
7	Feb 25	Hazards- Hurricanes and severe weather <b>MIDTERM EXAM 8:30 PM</b>	Vancouver Earthquake
	Feb 27	Hazards- Tsunami	
8	Mar 2	Hazards- Near Earth Objects	Lab 6
	Mar 4	Resources – minerals, metals, materials	Mineral Resources
	Mar 6	Resources – minerals, metals, materials	
9	Mar 9	Resources – minerals, metals, materials	Lab 7
	Mar 11	Resources- energy	Ore-Cost Accounting
	Mar 13	Resources- energy	
10	Mar 16	Resources- energy	Lab 8 <b>SHORT QUIZ</b>
	Mar 18	Resources- energy : stakeholders, conflicts	Bow River Lab
	Mar 20	Resources- water	
11	Mar 23	Resources- water	Lab 9
	Mar 25	Human impact on the earth: Anthropocene as concept	Anthropocene
	Mar 27	Human impact on the earth: ocean acidification (guest)	
12	Mar 30	Human impact on the earth: recognizing Anthropocene exercise	Lab 10
	Apr 1	Human impact on the Earth – climate change culture war	Blogosphere
	Apr 3	GOOD FRIDAY	
13	Apr 6	Human impact on the Earth –, blogs mission, science of warming	<b>LAB FINAL</b>
	Apr 8	Human impact on the Earth – science of warming continued	
	Apr 10	Geoscientists & society– where work, what do, science vs. activism	
14	Apr 13	Grand finale	
	Apr 15	BSD	