



UNIVERSITY OF CALGARY

DEPARTMENT OF GEOSCIENCE COURSE OUTLINE WINTER 2016

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:** GLGY 202, Applications of Geoscience

Lecture Sections:

L01: MoWeFr, 09:00-09:50, ES 162

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

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

http://geoscience.ucalgary.ca/geoscience_info/courses/w16

Lecture Instructors		Office Hours*
Name:	Dr. Gerald Osborn	<i>By appointment</i>
Office Location:	ES 510	
Phone:	403-220-6025	
<i>email:</i>	<i>gdolphin@ucalgary.ca</i>	
Name:	Dr. Glenn Dolphin	<i>By appointment</i>
Office Location:	ES 134	
Phone:	403-220-6448	
<i>email:</i>	<i>osborn@ucalgary.ca</i>	

Geoscience Department ES 118, 403-220-5841, geoscience.ucalgary.ca, geoscience@ucalgary.ca

2. **Prerequisites:** Geology 201. See [Course Descriptions](#) in the University Calendar.

3. **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:

Weekly lab assignments	20%
Lab quizzes	5
Lecture midterm exam	22 (February 26, 2016 – 6:30-9:00 p.m.)
Lab final exam	15
Lecture final exam	38 (To be 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/ 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:** MID-TERM EXAM FOR BOTH LECTURE SECTIONS will be held on February 26 at 6:30 – 9:00 p.m.

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 GlgY 201 (Marshak, Earth, Portrait of a Planet, 4th ed.), as well as Keller, Environmental Geology, 9th 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) 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.

Department Approval: ORIGINAL SIGNED

Date: December 15, 2015

Associate Dean's Approval for
out of regular class-time activity: ORIGINAL SIGNED

Date: December 16, 2015

GLGY 202 Course Schedule (Winter 2016)

Week	Date	Lecture Topic	Lab
1	Jan 11	Intro to 202	Orientation
	Jan 13	Course logistics	
	Jan 15	Use of models in geoscience	
2	Jan 18	Earth as habitat- intro, philosophical issues	Lab 1
	Jan 20	Earth as habitat- soils: class exercise	Initial Views
	Jan 22	Earth as habitat- soils	
3	Jan 25	Earth as habitat – geochemical environment and health	Lab 2
	Jan 27	Earth as habitat – engineering geology	Carbon Cycle Model
	Jan 29	Earth as habitat – engineering geology: guest lecturer	
4	Feb 1	Earth as habitat – waste disposal	Lab 3
	Feb 3	Earth as habitat – examples of geo-kickbacks	Land Use Planning
	Feb 5	Hazards – Introduction to Geologic Hazards	
5	Feb 8	Hazards – Plate tectonics refresher	Lab 4 (short quiz)
	Feb 10	Hazards – Earthquakes	Understanding Earthquakes
	Feb 12	Hazards – Volcanoes	
6	Feb 15	READING WEEK	
	Feb 17	READING WEEK	
	Feb 19	READING WEEK	
	Feb 22	Hazards- Landslides	Lab 5
7	Feb 24	Hazards- Hurricanes and severe weather	Vancouver Earthquake
	Feb 26	Hazards- Tsunami	
8	Mar 29	Hazards- Near Earth Objects	Lab 6
	Mar 2	Resources – minerals, metals, materials	Mineral Resources
	Mar 4	Resources – minerals, metals, materials	
9	Mar 7	Resources – minerals, metals, materials	Lab 7
	Mar 9	Resources- water	Ore-Cost Accounting
	Mar 11	Resources- water	
10	Mar 14	Resources- energy	Lab 8 (short quiz)
	Mar 16	Resources- energy	Bow River Lab
	Mar 18	Resources- energy	
11	Mar 21	Resources- energy (Will?)	Lab 9
	Mar 23	Human impact on the earth - recognizing the Anthropocene	Blogosphere
	Mar 25	GOOD FRIDAY	
12	Mar 28	Human impact on the earth - Anthropocene as concept	Lab 10
	Mar 30	Human impact on the earth - ocean acidification (guest)	Anthropocene
	Apr 1	Human impact on the Earth – climate change culture war	
13	Apr 4	Human impact on the Earth –, blogs mission, science of warming	Lab Final
	Apr 6	Human impact on the Earth – science of warming continued	
	Apr 8	Geoscientists & society– where work, what do, science vs. activism	
14	Apr 11	Grand finale	
	Apr 13	BSD	