

UNIVERSITY OF CALGARY  
DEPARTMENT OF GEOSCIENCE  
COURSE OUTLINE

*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	MWF	09:00–09:50	ES 162	WINTER 2014
	L02	MWF	11:00-11:50	CHC 105	

<b>Instructors:</b>	Dr. Glenn Dolphin	ES 134	220-6025	<a href="mailto:gdolphin@ucalgary.ca">gdolphin@ucalgary.ca</a>
	Dr. Jerry Osborn	ES 510	220-6448	<a href="mailto:osborn@ucalgary.ca">osborn@ucalgary.ca</a>

D2L Course name: GLGY 202 L01, L02 Winter 2014 – Applications of Geoscience

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

**2. PREREQUISITES:** Geology 201

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

See section 3.5.C in the Faculty of Science section of the online Calendar (<http://www.ucalgary.ca/pubs/calendar/current/sc-3-5.html>)

- 3. GRADING:** The University policy on grading and related matters is described in “Academic Regulations, sections F.1 and F.2” of the online University Calendar (<http://www.ucalgary.ca/pubs/calendar/current/f-1.html> and <http://www.ucalgary.ca/pubs/calendar/current/f-2.html>) 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 midterm or project	12%
Lecture midterm exam	20% (March 3 2014 19:30 – 21:30 ST 141, ST 143, ST 145, ST 148)
Lab final exam	20%
Lecture final exam	30% (To be scheduled by the Registrar)

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

Each piece of work (assignment, laboratory report, midterm test or final examination) submitted by the student will be assigned a percentage score. The student's average percentage score for the various components 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, with the provision that a passing grade in the lab final is required for a passing grade in the course.

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

#### 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

#### Extra Credit

Extra credit may be granted for extra class-directed work, such as researching a problem arising in class. 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: <http://www.ucalgary.ca/pubs/calendar/current/sc-3-6.html>. It is the student's responsibility to familiarize himself/herself with these regulations. See also <http://www.ucalgary.ca/pubs/calendar/current/e-3.html>.
5. **DATES AND TIMES OF CLASS EXERCISES HELD OUTSIDE OF CLASS HOURS:**  
MID-TERM EXAM FOR BOTH LECTURE SECTIONS will be held on March 3, 2013 at 19:30 – 21:30 rooms ST 141, ST 143, ST 145, 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.

**Department Approval: ORIGINAL SIGNED Date: December 23 2013**

**Associate Dean's Approval for  
out of regular class-time activity: ORIGINAL SIGNED Date: January 03 2014**  
GLGY 202 W14; 21/10/2013 11:20

6. **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, and permission to do this will be clearly indicated on the examination paper.

Students should also read the Calendar, Section G, on Examinations: <http://www.ucalgary.ca/pubs/calendar/current/g.html>.

7. 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 <http://www.ucalgary.ca/pubs/calendar/current/e-2.html>."

#### **8. OTHER IMPORTANT INFORMATION FOR STUDENTS:**

- (a) **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 K. Student Misconduct (<http://www.ucalgary.ca/pubs/calendar/current/k.html>) 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 at <http://www.ucalgary.ca/emergencyplan/assemblypoints>.**
- (c) **ACADEMIC ACCOMMODATION POLICY.** Students with documentable disabilities are referred to the following links:  
Calendar entry on students with disabilities: <http://www.ucalgary.ca/pubs/calendar/current/b-1.html>  
Student Accessibility Services: [www.ucalgary.ca/access](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 (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:** 220-3911 **Email:** [suypaca@ucalgary.ca](mailto:suypaca@ucalgary.ca).  
SU Faculty Rep. **Phone:** 220-3913 **Email:** [sciencerep@su.ucalgary.ca](mailto:sciencerep@su.ucalgary.ca) Website <http://www.su.ucalgary.ca/home/contact.html>.  
Student Ombudsman: [www.ucalgary.ca/provost/students/ombuds](http://www.ucalgary.ca/provost/students/ombuds); [ombuds@ucalgary.ca](mailto:ombuds@ucalgary.ca) 220-6420
- (g) **INTERNET and ELECTRONIC COMMUNICATION DEVICE Information.** You can assume that in all classes that you attend, **your cell phone should be turned off.** 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.

**\*Tentative Course Schedule for GLGY 202 (L01 & L02)– Winter 2014**

<b>Week</b>	<b>Date</b>	<b>Lecture Topic</b>	<b>Lab</b>
<b>1</b>	-----	-----	
	Jan 8	Introduction to GLGY202	
	Jan 10	Course logistics	
<b>2</b>	Jan 13	Earth as habitat: intro to habitat, philosophical issues	TBA
	Jan 15	Earth as habitat: soils.....class exercise	
	Jan 17	Earth as habitat- finish soils, land-use planning	
<b>3</b>	Jan 20	Earth as habitat – investigating complex systems: models	Models <b>Carbon Flux lab</b>
	Jan 22	Earth as habitat – engineering geology	
	Jan 24	Earth as habitat – engineering geology—guest lecturer H. Heinz	
<b>4</b>	Jan 27	Earth as habitat – geochemical environment and health	Habitat <b>City Planning Lab</b>
	Jan 29	Earth as habitat – waste disposal	
	Jan 31	Earth as habitat – examples of geo-kickbacks	
<b>5</b>	Feb 3	Hazards – floods	Hazards 1 <b>Epicenter Location</b>
	Feb 5	Hazards – landslides	
	Feb 7	Hazards – plate tectonics and earthquakes	
<b>6</b>	Feb 10	Hazards – plate tectonics and earthquakes continued	<b>Lab Midterm Exam</b>
	Feb 12	Hazards – tsunami	
	Feb 14	Hazards – plate tectonics and volcanism	
<b>7</b>	Feb 17-21	<b>Reading Week – No lectures class or lab</b>	
<b>8</b>	Feb 24	Hazards – plate tectonics and volcanism continued	Hazards 2 <b>Vancouver EQ Lab</b>
	Feb 26	Hazards – hurricanes	
	Feb 28	Hazards – impacts of extraterrestrial objects	
<b>9</b>	Mar 3	Resources – Energy MIDTERM THIS EVENING AT 19:30	Resources 1 <b>What the world is made of?</b>
	Mar 5	Resources – Energy	
	Mar 7	Resources – Energy	
<b>10</b>	Mar 10	Resources – Minerals, Metals & Earth Material	Resources: Ores <b>Ore Deposit development &amp; Cost Accounting</b>
	Mar 12	Resources – Minerals, Metals & Earth Material	
	Mar 14	Resources – Minerals, Metals & Earth Material	
<b>11</b>	Mar 17	Resources – Water	Resources: Water <b>Bow River Dry-up</b>
	Mar 19	Resources – Water	
	Mar 21	Resources – Water	
<b>12</b>	Mar 24	Human impact on the Earth – The Anthropocene as concept	Human Impact Lab <b>Brainstorm: The Anthropocene Layer</b>
	Mar 26	Human impact on the Earth- Anthropocene cont., class exercise	
	Mar 28	Human impact on the Earth- soil erosion	
<b>13</b>	Mar 31	Human impact on the Earth – anthro.climatechange:politics/sociology	Geoscience & Society <b>Blogsphere Lab</b>
	Apr 2	Human impact on the Earth – anthropogenic climate change: science	
	Apr 4	Human impact on the Earth –	
<b>14</b>	Apr 7	Geoscientists & society– where geoscientists work and what they do	<b>Final Lab Exam</b>
	Apr 9	Geoscientists& society– politics, ethics, science vs. activism	
	Apr 11	The Future – Guest Lecturers	
<b>15</b>	Apr 14	The Future - Grand Finale	