



UNIVERSITY OF CALGARY
FACULTY OF SCIENCE
DEPARTMENT OF GEOSCIENCE
COURSE OUTLINE
WINTER 2016

1. **Course:** Geology 353, Surficial Systems

*How many years can a mountain exist,
Before it is washed to the sea?
--Bob Dylan*

Lecture Sections: L01: MoWeFr 15:00-15:50, ICT 102

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

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

Potentates:

Grand Illustrious Potentate I:

Dr. Jerry Osborn, Office ES 510, Tel. No. 403-220-6448, osborn@ucalgary.ca, office hrs MW 13:00-14:00

Grand Illustrious Potentate II:

Dr. Masaki Hayashi, Office ES 278, Tel. No. 403-220-2794, hayashi@ucalgary.ca, office hrs Th 16:00-18:00

Lesser, but still potent, potentates:

Laura Beamish
Katherine Clarke
Igor Pavlovskii
Aaron Mohammed
Harrison Martin
Nes SuarezNieto
Rebecca Englert

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

2. **Prerequisites:** Geology 201; and 202 or 203; Chemistry 203 or 213; Physics 211 or 221, and 223; Mathematics 253 or 267 or 277 or 283 or Applied Mathematics 219. 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)

Antirequisite: Credit for both Geology 353 and 373 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:

Reading quizzes	10%
Laboratory and project reports	35%
Midterm exam #1	15
Midterm exam #2	15%
Final Examination	25% (To be scheduled by the Registrar)

Each piece of work (laboratory report, exam) 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, bearing in mind that an F grade will result if the student does not pass the Final Examination. The conversion between course percentage and letter grade is given below.

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

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:** There will be no formal activities outside of class time, but informal project work may go on outside of class time. It is possible that midterm exams may be held during class times but in venues other than the regular classroom, so pay attention.
6. **Course Materials:** The package of required reading materials is sold in the University Bookstore.
7. **Examination Policy:** Exams will be closed-book. Calculators and rulers may be required. 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 and/or project 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) **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 (FOIP). 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.

GEOLOGY 353 Winter 2016 Lecture/Lab Schedule

		LECTURES	LABS
Jan 11	JO	Overall course intro and logistics	
13	JO	Earthscaping intro	Orientation lab, field-trip prep
15	MH	Hydrology intro	
18	MH	Properties of water, phase changes, vapor pressure, humidity, etc.	
20	MH	Precipitation	Field trip: Spyhill, West Nose Creek
22	MH	“ [Qz #1]	
25	MH	Micrometeorology and evaporation	
27	MH	“	GP: Analysis of snow survey data
29	MH	Darcy’s law, hydraulic properties [Qz #2]	Computer is required.
Feb 1	MH	“	
3	MH	Aquifers, aquitards, groundwater flow system	Lab: Evaporation and precipitation
5	MH	“ [Qz #3]	Computer is required.
8	MH	Soil moisture, interaction w/ plants, animals	
10	MH	Watershed hydrology	Lab: TopoDrive and flownet
12	MH	Buffer to accommodate delay [Qz #4]	Computer is required.
15		READING WEEK	
17		READING WEEK	
19		READING WEEK	
22	MH	[MID-TERM #1]	
24	MH	Water quality issues	Lab: Watershed water balance
26	JO	Regolith [Qz #5]	Computer is required.
Feb 29	JO	“	
Mar 2	JO	“	GP: Regolith key
4	JO	Soils [Qz # 6]	
7	JO	“	
9	JO	Engineering behavior of soils [Qz #7]	Soils and regolith unknowns; continue work on key
11	JO	“	
14	JO	“	
16	JO	“	GP: Eng. soils field examination
18	JO	Mass movement [Qz #8]	
21	JO	“	

23	JO	“	GP: Mass movement example
25	JO	GOOD FRIDAY	
28	JO	[MID-TERM #2]	
30	JO	River hydrology and behavior [Qz #9]	Lab: Floods in Calgary
Apr 1	JO	“	
4	JO	“	
6	JO	Glaciers, glaciation [Qz #10]	Field trip: Confluence Park
8	JO	“	
11	JO	Capstone lecture?	
13		BSD - no lecture	

GP: group project