



**UNIVERSITY OF
CALGARY**

DEPARTMENT OF GEOSCIENCE
COURSE OUTLINE
FALL 2015

1. Course: GLGY 475, The Geologic Record of Global Change

Lecture Sections:

L01: TuTh, 11:00-12:15, ICT 114

Éowyn Campbell , Office: ES 530, Ph. 403-220-5842, ewyn.campbell@ucalgary.ca; Office Hours: By appointment.

The course website can be found on D2L (<https://d2l.ucalgary.ca>).

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

2. Prerequisites: Geology 201, and 202 or 203; Chemistry 201 or 211; Chemistry 203 or 213; Mathematics 249 or 251 or 265 or 275 or 281 or Applied Mathematics 217. See also Geology [Course Descriptions](#) of the University Calendar. 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)

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:

Reading Quizzes / In-class Assignments	15%
Article Analysis Instructor Discussion	15%
Article Analysis Group Discussion	5%
Midterm test	25% (October 15 2015)
Final Examination	40% (To be scheduled by the Registrar)

Each component of the course 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 then be used to determine the course letter grade. The conversion between course percentage and letter grade is as follows:

Grade	Grade Point Value	Percent
A+ *	4.0	
A	4.0	88-100
A-	3.7	83-87
B+	3.3	78-83
B	3.0	74-77
B-	2.7	70-73
C+	2.3	66-69
C	2.0	62-65
C-	1.7	58-61
D+	1.3	54-57
D	1.0	50-53
F	0.0	<50

* Awarded only in cases of exceptional performance

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. **Course Materials:** Ruddiman, W.F. (2014) Earth's climate: past and future. Freeman & Company, Third edition. Some worksheets must be printed and brought to class for in-class activities. These will be available as PDFs on D2L.
- Online Course Components:** Students are required to access D2L as part of on-going class engagement. Assignment materials, including grading rubrics and links to required materials, will be posted on D2L.
- SignUpGenius.com will be used to book Article Analysis Discussions. Link will be available on D2L.
6. **Examination Policy:** Examinations are open-book: students may bring their textbook, class materials, and study notes. Other reference materials are not permitted. Calculators are allowed, but no devices with internet-connectivity will be permitted. Students should also read the Calendar, [Section G](#), on Examinations.
7. **Writing across the curriculum statement:** Effective communication of key scientific ideas is a central concept in this course. Therefore clarity of discussion and argument will be assessed as part of the grade in written components such as long-answer questions for exams and written summaries. See also [Section E.2](#) of the University Calendar.
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 [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 Schedule: This schedule is for general information only and is subject to change.

Week	Dates	Lecture Topics
1	9/11 Sept	Introduction to Earth Systems, Atmosphere
2	16/18 Sept	Hydrosphere/Oceans
3	23/25 Sept	Glaciers, Biosphere, Pedosphere, Lithosphere and Chemical Weathering
4	30 Sept, 2 Oct	The Carbon Cycle, Faint Young Sun
5	7/9 Oct	Snowball Earth Greenhouse/Ice House, Seafloor Spreading Hypothesis
6	14/16 Oct	Review, Midterm
7	21/23 Oct	Climate models, Tertiary Cooling
8	28/30 Oct	Orbital Variations: Theory and Monsoon Activity
9	4/6 Nov	Orbital Variations: Ice Sheets and Green House Gases
10	13 Nov	Reasons for CO ₂ Variations
11	18/20 Nov	Orbital Scale Climate Interactions: Deglaciation and Holocene
12	25/27 Nov	Anthropogenic Impact on Global Change: Current Climate
13	2/4 Dec	Future Climate Predictions, Review
	Scheduled by Registrar	Final Examination