



GEOGRAPHY COURSE OUTLINE: WINTER 2013

GEOGRAPHY 507 H(3-3)

Glacial Geomorphic Systems

Section	Days	Times	Location
LEC01	TuTh	9:30-10:45	ES 342
LAB01	We	14:00-16:45	ES 307

Instructor: Darren Sjogren	Office: ES 406
Telephone: 220 2575	Email: sjogren@ucalgary.ca

Please note: The appropriate emergency evacuation assembly point for classes taught in Earth Sciences is ICT Food Court.

Course Description:

Contemporary theories for the formation of glacial landforms and sediments are evaluated. Topics include glacial mechanics, erosion, deposition, and hydrology. Timing and dynamics of glaciation and deglaciation are addressed.

Prerequisite: Geography 307 or consent of the department.

Supplementary Fees: N/A

Text(s)/Readings:

Required text:

Bennett, M.R. and Glasser, N.F. 2009. Glacial Geology: Ice sheets and landforms, 2nd edition. Wiley-Blackwell.

Readings

Links (or bibliography) of additional readings will be posted on BlackBoard. It is your responsibility to check for additional readings, as they will be posted as the term progresses.

Lecture and Laboratory Topics:

1. Glacier Mechanics
 - a. Glacier motion
 - b. Subglacial processes
 - c. Glacier hydrology
2. Landform and Sediment Associations
 - a. Erosional forms
 - b. Glacial sediments
 - c. Subglacial environments
 - d. Ice marginal environments
 - e. Proglacial environments
3. Glaciation in Alberta
 - a. Single & multiple glaciation theories
 - b. Extent of glaciation(s)
 - c. Landform/sediment assemblages
 - d. Deglacial environments

Grading:

Lab 01 - Term Project	
Paper	15%
Presentation	05%
Lab 02 (Sediment Analysis)	10%
Labs 03 – 07 (Airphoto)	06% (each)
Midterm Exam	15%
Final Exam	25%

Grading System:

A+ > 92	C+ 68 – 72
A 88 – 92	C 64 – 68
A- 84 – 88	C- 60 – 64
B+ 80 – 84	D+ 56 – 60
B 76 – 80	D 50 – 56
B- 72 – 76	F < 50

Note: (1) It is not necessary to pass each course component in order to pass the course.
(2) There will be a registrar scheduled final exam in this course.

For additional detailed course information posted by the Instructor see Blackboard at:
<http://blackboard.ucalgary.ca/>

Writing across the Curriculum

Writing skills are not exclusive to English courses and, in fact, should cross all disciplines. The University supports the belief that throughout their University careers, students should be taught how to write well so that when they graduate their writing abilities will be far above the minimal standards required at entrance. Consistent with this belief, students are expected to do a substantial amount of writing in their University courses and, where appropriate, members of faculty can and should use writing and the grading thereof as a factor in the evaluation of student work. The services provided by the Writing Centre in the Effective Writing Office can be utilized by all undergraduate and graduate students who feel they require further assistance.

Principles of Conduct

The University of Calgary Calendar includes a statement on the Principles of conduct expected of all members of the University community (including students, faculty, administrators, any category of staff, practicum supervisors and volunteers) whether on or off the University's property. This statement applies in all situations where the members of the University community are acting in their University capacities. All Members of the University Community have a responsibility to familiarize themselves with this statement which is available at: <http://www.ucalgary.ca/pubs/calendar/current/j-2.html>

Plagiarism

Academic dishonesty is not an acceptable activity at the University of Calgary and students are **strongly advised** to read the Student Misconduct section in the University Calendar. Quite often, students are unaware of what constitutes academic dishonesty or plagiarism. The most common are 1) presenting another student's work as your own 2) presenting an author's work or ideas as your own without proper referencing and 3) using work completed for another course. This activity will not be tolerated in this course and students conducting themselves in this manner will be dealt with according to the procedures outlined in the calendar. <http://www.ucalgary.ca/honesty/plagiarism>

Disability Resource Centre Accommodations

If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic

accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.

Freedom of Information and Protection of Privacy

FOIP: The Freedom of Information and Protection of Privacy (FOIP) legislation disallows the practice of having students retrieve assignments from a public place, e.g., outside instructor's office, the department office, etc. Term assignments will be returned to students individually, during class or during the instructor's office hours; if students are unable to pick up their assignments from the instructor, they provide the instructor with a stamped, self-addressed envelope to be used for the return of the assignment.

Re: Posting of Grades and Picking-up of Assignments

1. All assignments will be handled through Blackboard or personally.
2. Their own grades will be available to each student on Blackboard by password access. Grades will **not** be available at Geography's main office.

Contact Information for Student and Faculty Representation

3. SU VP Academic Phone: 220-3911 and e-mail: suypaca@ucalgary.ca
4. SU Faculty Rep. Phone: 220-3913 and e-mail: arts1@ucalgary.ca
5. The students ombudsman office information can be found at:
<http://www.su.ucalgary.ca/page/affordability-accessibility/su-structure/contact-info>

Campus Safewalk

Campus Security, in partnership with the Students' Union, provides the Safewalk service, 24 hours a day, to any location on Campus including the LRT, parking lots, bus zones and University residences. Contact Campus Security at 220-5333 or use a help phone, and Safewalkers or a Campus Security officer will accompany you to your Campus destination.

Faculty of Arts Program Advising and Student Information Resources

Have a question, but not sure where to start? The new Faculty of Arts Program Information Centre (PIC) is your information resource for everything in Arts! Drop in at SS110, call us at 403-220-3580 or email us at artsads@ucalgary.ca. You can also visit the Faculty of Arts website at <http://arts.ucalgary.ca/undergraduate> which has detailed information on common academic concerns.

- For program planning and advice, contact the Student Success Centre (formerly the Undergraduate programs Office) at (403) 220-5881 or visit them in their new space on the 3rd Floor of the Taylor Family Digital Library.
- For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at (403) 210-ROCK [7625] or visit them at the MacKimmie Library Block.

Contact for Students Union Representatives for the Faculty of Arts:

arts1@su.ucalgary.ca, arts2@su.ucalgary.ca, arts3@su.ucalgary.ca, arts4@su.ucalgary.ca

Course Schedule (subject to change)

Week	Date	Lecture or Laboratory	Due
1	Jan 07	Topic 00: Course introduction & Topic 01: Late Cenozoic glaciations	
	Jan 08	No Lab	
	Jan 09	Topic 01: Late Cenozoic glaciations	
2	Jan 15	Topic 02: Glacier mass balance and movement	
	Jan 16	Lab 01: Term Project introduction	
	Jan 17	Topic 02: Glacier mass balance and movement	
3	Jan 22	Topic 03: Glacial hydrology	
	Jan 23	Lab 02: Sediment Analysis	
	Jan 24	Topic 03: Glacial hydrology	
4	Jan 29	Topic 04: Subglacial erosion and entrainment	
	Jan 30	Lab 02: Sediment Analysis	
	Jan 31	Topic 04: Subglacial erosion and entrainment	
5	Feb 05	Topic 05: Subglacial transport and deposition	
	Feb 06	Lab 02: Sediment Analysis	
	Feb 07	Topic 05: Subglacial transport and deposition	
6	Feb 12	Topic 05: Subglacial transport and deposition	
	Feb 13	No Formal Lab – time to complete report for Lab 02	
	Feb 14	Midterm Exam (15%)	Midterm Exam
7	Feb 19	Reading Week	
	Feb 20		
	Feb 21		
8	Feb 26	Topic 06: Subglacial Bedforms - landform/sediment associations	
	Feb 27	Airphoto labs introduction	
	Feb 28	Topic 06: Subglacial Bedforms - landform/sediment associations	
9	Mar 05	Topic 06: Subglacial Bedforms - landform/sediment associations	Lab 02
	Mar 06	Lab 03: Subglacial landscape 1	
	Mar 07	Topic 07: Ice marginal landform/sediment associations	
10	Mar 12	Topic 08: Subglacial glaciofluvial - landform/sediment associations	Lab 03
	Mar 13	Lab 04: Subglacial landscape 2	
	Mar 14	Topic 08: Subglacial glaciofluvial - landform/sediment associations	
11	Mar 19	Topic 08: Subglacial glaciofluvial - landform/sediment associations	Lab 04
	Mar 20	Lab 05: Subglacial landscape 3	
	Mar 21	Topic 08: Subglacial glaciofluvial landform/sediment associations	
12	Mar 26	Topic 09: Ice marginal & proglacial glaciofluvial landform/sediment associations	Lab 05
	Mar 27	Lab 06: Subaerial landscape 1	
	Mar 28	Topic 09: Ice marginal and proglacial glaciofluvial landform/sediment associations	
13	Apr 02	Topic 10: Glaciolacustrine and glaciomarine landform/sediment associations	Lab 06
	Apr 03	Lab 07: Subaerial landscape 2	
	Apr 05	Topic 10: Glaciolacustrine and glaciomarine landform/sediment associations	
14	Apr 09	Topic 11: Pleistocene and Holocene glacial activity in Alberta and adjacent areas	Lab 07
	Apr 10	Student Presentations	Lab 01: Pres .
	Apr 11	Student Presentations	Lab 01: Pres.
15	Apr 16	Topic 12: Course Review	Lab 01: Paper (Apr 15)
16/17	Registrar scheduled Final Exam		

Due dates: (note that all deliverables are due at 11:55pm on the date indicated)

Note: All deliverables must be submitted through the appropriate assignment submission in under the "Assignments" tab in BlackBoard. **DO NOT USE THE DIGITAL DROPBOX.**

Explanation of Course Components and Structure (subject to change)

Lecture Material

All lecture presentations will be posted under the "Lectures" tab on BlackBoard in PDF format. However, note that there will be significant amounts of information that will not be on the slides. You will be required to be in class to take notes. Do not make the mistake of thinking that the lecture slides are adequate to study from, **because they are not!**

Additional Readings

I will post links to additional readings organized by topic under the "Readings" tab in BlackBoard. These readings are testable.

Examinations (40%)

There are 2 exams in this course:

1. Midterm Exam (15%)
 - a. 75 minute exam
 - b. One required essay
 - c. Choice 2 of 3 short answer questions
2. Final Exam (25%)
 - a. 120 minute exam – scheduled by registrar
 - b. Two required essays
 - c. Choice 3 of 4 short answer questions

Laboratory Exercises (60%)

1. Please refer to the detailed description of each exercise located in the "Assignments" tab of BlackBoard.
2. Laboratory exercises are linked closely with the material taught in the lectures.
3. Laboratory exercises will be posted on Blackboard at least 1 day prior to the week of its introduction. You are responsible for having a copy (digital or paper) with you during the lab period. Copies will not be provided.
4. The laboratory exercises will be introduced on dates indicated on the schedule.
5. I will provide any updates such as "things to bring" to the labs on Blackboard. Make sure you consult Blackboard regularly.
6. Your laboratory exercises are due at **11:55pm** on the day indicated on the schedule. Some of these exercises take considerable time to complete do not leave them to the last minute. Take advantage of the periods of my office hours to ask for help.
7. Late assignments will be accepted only when accompanied by a medical doctor's note.
8. A penalty of 20% per day (or portion thereof) will be assessed to any late laboratories that are not accompanied by a medical doctor's note.

Bonus Participation (1%)

Participation in the class will be evaluated and a bonus of up to 1% will be added to your final grade. This includes classroom discussions, laboratory discussions, and asking questions of presenters.

Hints (how to excel in GEOG 507):

1. Blackboard will be used extensively to communicate outside of laboratory and lecture periods. All lab exercises, lectures, readings, grades, and updates/corrections to the course materials will be provided on Blackboard.
2. I suggest that you consult Blackboard every morning before lecture or laboratory in the event of changes, cancellations etc.
3. Readings are intended to supplement and reinforce the concepts presented in lecture and lab, but **ARE NOT** substitutes for attending the lecture and lab. Do not make the mistake of thinking that you can "just read the book or papers".

4. The readings will often become points of discussion within the lecture and lab periods. Consider these readings to be homework assignments that you will be asked about in the lecture.
5. Ask questions of your instructor. That is why I am here. I urge you to take advantage of my office hours.

Notes on Communication

How to contact your instructor

Contact D. Sjogren using the email within Blackboard. I will NOT answer emails that are sent directly to my email address. This is important because when you send an email through BlackBoard it adds the name of the course to the subject line. This allows me to identify your emails easily in the flood of other emails I receive every day. Please appreciate that you may not receive a response immediately. Sometimes I may choose to respond to your question in class so that all participants can benefit from the discussion.

Requirement regarding the formality of emails

I require that all emails be written formally. Consider these to be formal letters, NOT TEXT MESSAGES.