

GEOGRAPHY COURSE OUTLINE

GEOGRAPHY 445 H(3-3) (AREA III)

GLACIAL GEOMORPHIC SYSTEMS

Timetable: FALL SESSION

Catalogue #:

Lec 01 MWF 10:00 50 ES 332
Lab 01 W 12:00 170 ES 355

Instructor:

Dr. Darren Sjogren

Office: ES 926

Office Hours: By appointment only

Phone: 220-2575

E-mail: contact through Blackboard

Course Description:

Current theories concerning the genesis of glacial landform-sediment suites will be the primary focus. Timing and dynamics of the Laurentide ice sheet and its interactions with the Cordilleran ice sheet will be investigated from stratigraphic and geomorphic perspectives. Fieldtrips will focus on landform-sediment associations in central and southern Alberta.

Lecture and Laboratory Topics:

1. Glacier Physics
 - a. Glaciers and climate
 - b. Glacier motion
 - c. Subglacial processes
 - d. 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 vs multiple glaciation theories
 - b. Extent of glaciation(s)
 - c. Landform/sediment assemblages
 - d. Deglacial environments

Grading:

| | |
|-------------------|-----|
| Field Assignments | |
| Report | 25% |
| Field Notebook | 5% |
| Term Project | 20% |
| Midterm Exam | 20% |
| Final Exam | 30% |

- Note:** (1) Attendance on the field trips is mandatory.
(2) It is not necessary to pass each course component in order to pass the course.
(3) There will be a registrar scheduled final exam in this course.

Required Text: Martini, I.P., Brookfield, M.E., and Sadura, S. 2001. Principles of Glacial Geomorphology and Geology. Prentice-Hall, Inc., Upper Saddle River, New Jersey.

Other Required Readings will be assigned in class.

Prerequisites: Geography 307 or consent of the department.

Note: A supplementary field trip fee has been assessed for this course. This fee covers transportation and laboratory costs.

Lecture and Laboratory Schedule – Fall 2006

| Week | Date(s) | Lecture Topic (subject to change) | Laboratory/Fieldtrip |
|------|-------------------|--|--|
| 1 | Sept. 11, 13, 15 | Course introduction Climate/glacier/landscape Interactions Introduction to fieldtrip | No formal lab <i>Fieldtrip to Hilda/Athabasca Glaciers (Sept 16)</i> |
| 2 | Sept. 18, 20, 22 | Glacier mass balance and movement | Writing workshop (ES 355) |
| 3 | Sept. 25,27,29 | Glacier erosion, transport, and deposition | Sediment analysis workshop (ES 355) |
| 4 | Oct. 2,4,6 | Glacier erosion, transport, and deposition Glacier hydrology | Clast fabric workshop (ES 355) |
| 5 | Oct. 11,13 | Glaciofluvial processes Glaciolacustrine/glaciomarine processes | Introduction to fieldtrip <i>Fieldtrip to central Alberta (Oct 14)</i> |
| 6 | Oct. 16,18,20 | Subglacial landform-sediment associations | Introduction to fieldtrip <i>Fieldtrip to McGregor Lake and Kipp (Oct 21, 22)</i> |
| 7 | Oct. 23,25,27 | Subglacial landform-sediment associations (con't) Midterm Exam (Oct 27) | Lab period for sediment analysis |
| 8 | Oct. 30, Nov. 1,3 | Subglacial landform-sediment associations (con't) | Lab period for sediment analysis |
| 9 | Nov. 6,8,10 | Ice marginal landform-sediment associations | Lab demonstration |
| 10 | Nov. 15,17 | Ice marginal landform-sediment associations (con't) | No formal lab |
| 11 | Nov. 20,22,24 | Proglacial and Extraglacial environments | No formal lab |
| 12 | Nov. 27,29, Dec 1 | Proglacial and Extraglacial environments (con't) | No formal lab |
| 13 | Dec. 4,6,8 | Landscape models Summary | No formal lab |

Due Dates

| Due Date | Description |
|----------------------|---------------|
| 20 Nov 2006 at 23:55 | Field books |
| 20 Nov 2006 at 23:55 | Field report |
| 06 Oct 2006 at 23:55 | Term projects |

Grading Scheme

| | | | |
|----|------------|----|------------|
| A+ | > 93 | C+ | 69 – 72.99 |
| A | 89 – 92.99 | C | 65 – 68.99 |
| A- | 85 – 88.99 | C- | 61 – 64.99 |
| B+ | 81 – 84.99 | D+ | 57 – 60.99 |
| B | 77 – 80.99 | D | 50 – 56.99 |
| B- | 73 – 76.99 | F | < 50 |

Field Trip Schedule:

September 16 (Saturday) – Athabasca Glacier and Hilda Moraine

- Depart from the parking lot (lot 20) north of the Earth Sciences Building at 7:00 am.
- Trip will include a day hike to a glacier. ***Dress appropriately!!!***
- Arrive in Calgary at approximately 9:30 pm.

October 14 (Saturday) – Central Alberta

- Depart from the parking lot (lot 20) north of the Earth Sciences Building at 7:30 am.
- Trip will include several stops at glacial and deglacial sites.
- Arrive in Calgary at approximately 8:30 pm.

October 21, 22 (Saturday - Sunday) McGregor Lake, Kipp Section

- Depart from the parking lot (lot 20) north of the Earth Sciences Building at 7:30 am on Saturday.
- Saturday will include sedimentary investigations near McGregor Lake.
- Arrive back in Calgary by 8:00 pm on Saturday night.
- Depart from the parking lot (lot 20) north of the Earth Sciences Building at 7:30 am on Sunday.
- Sunday will include sedimentary investigations of the Kipp section near Lethbridge.
- Arrive back by 8:30 pm on Sunday.

Laboratory/Exam Guidelines:

1. Assignments are due the day indicated above. They must be received by 23:55 on the due date. When you submit your lab in Blackboard it logs the time of submission. Late assignments will not be accepted.
1. If you have unforeseen problems completing the assignments on time, contact the D. Sjogren ***prior*** to the deadline (an email will do). Problems identified after the deadline must be supported by a doctor's note.
2. Exam conflicts/problems must be brought to D. Sjogren's attention at least 2 weeks prior to the exam.

Excerpt from: PLAGIARISM/CHEATING/OTHER ACADEMIC MISCONDUCT

A. Definitions

1. **Plagiarism** - essentially plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Most commonly plagiarism exists when:

- (a) the work submitted or presented was done, in whole or in part, by an individual other than the one submitting or presenting the work (this includes having another impersonate the student or otherwise substituting the work of another for one's own in an examination or test)
- (b) parts of the work are taken from another source without reference to the original author
- (c) the whole work (e.g., an essay) is copied from another source, and/or
- (d) a student submits or presents work in one course which has also been submitted in another course (although it may be completely original with that student) without the knowledge of or prior agreement of the instructor involved.

While it is recognized that scholarly work often involves reference to the ideas, data and

conclusions of other scholars, intellectual honesty requires that such references be explicitly and clearly noted. Plagiarism is an extremely serious academic offence.

It is recognized that clause (d) does not prevent a graduate student incorporating work previously done by him or her in a thesis or dissertation.

2. **Cheating** is an extremely serious academic offence. Cheating at tests or examinations includes but is not limited to dishonest or attempted dishonest conduct such as speaking to other candidates or communicating with them under any circumstances whatsoever; bringing into the examination room any textbook, notebook, memorandum, other written material or mechanical or electronic device not authorized by the examiner; writing an examination or part of it, or consulting any person or materials outside the confines of the examination room without permission to do so, or leaving answer papers exposed to view, or persistent attempts to read other students' examination papers.

3. **Other Academic Misconduct** - other academic misconduct includes, but is not limited to, tampering or attempts to tamper with examination scripts, class work, grades and/or class records; failure to abide by directions by an instructor regarding the individuality of work handed in; the acquisition, attempted acquisition, possession, and/or distribution of examination materials or information not authorized by the instructor; the impersonation of another student in an examination or other class assignment; the falsification or fabrication of clinical or laboratory reports; the non-authorized tape recording of lectures. All of these offences are extremely serious.

4. Any student who voluntarily and consciously aids another student in the commission of one of these offences is also guilty of academic misconduct.

B. Penalties

1. **Failing Grade** - a student may be given a failing grade in either an exercise or course in which that student is found guilty of plagiarism, cheating or other academic misconduct. Except in circumstances in which leniency is warranted, this penalty will only be applied in conjunction with one or other of the other penalties mentioned in this section. In situations in which a student is registered in a faculty other than that in which the course is given, this is the only penalty which shall be applied by the host faculty.

2. **Disciplinary Probation** - when a student is placed on disciplinary probation, he or she is entitled to proceed with a degree or other academic programme, but only on condition that the registration will be forfeited and the student suspended or expelled, if she or she is found guilty of a further academic offence. A student who is placed on disciplinary probation is eligible to continue in the faculty in the normal way after the satisfactory completion of his or her probationary period. This penalty shall be applied by the faculty in which the student is registered.

3. **Suspension** - suspension takes place when a student is denied registration within a degree or other academic programme for a specified period of time. A student who has been placed under suspension is conditionally eligible to reapply for admission or registration at either the end of a specified period of time or thereafter. Suspension does not imply automatic readmission; a student must satisfy the dean and/or the faculty concerned of his/her eligibility for readmission. This penalty shall be applied by the faculty in which the student is registered.

4. **Expulsion** - a student who is expelled from a faculty is dismissed permanently from the faculty with no right to apply for readmission to that faculty. This penalty shall be applied by the faculty in which the student is registered.

5. **Effects of Suspension or Expulsion from a Faculty** - a student suspended or expelled from a faculty normally may not apply or be considered for readmission to the university in another faculty, until at least twelve months after the end of the session in which the academic offence takes place.

6. Expulsion from the university - if, upon suspending or expelling a student from a faculty, the dean and/or faculty determine that the severe sanction of expulsion from the University is warranted, such a recommendation may be made to the Vice-President (Academic) and Provost, who may act to expel the student from the University.

For complete document refer to: www.ucalgary.ca/secretariat

Re: Posting of Grades and Picking-up of Assignments

1. Assignments will be handed back only in class or by the Professor at pre-arranged time(s).
2. To receive your assignment back via mail, please include an appropriately sized self-addressed, stamped envelope with your assignment when handing in to the professor.
3. Posting of grades will be at the discretion of each Professor and, if posted, they will be scrambled. Grades will **not** be available at Geography's main office.

Contact Information for Student and Faculty Representation

4. SU VP Academic Phone: 220-3911 and e-mail: suwpaca@ucalgary.ca
5. SU Faculty Rep. Phone: 220-3913 and e-mail: socialscirep@su.ucalgary.ca

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.