COURSE: ENVS 274 Principles of Geomorphology
Lectures: T TH 8:30-9:20 AM (EV1 132)
Seminar/Lab T 9:30-10:20 AM (EV1 134)

INSTRUCTOR: Dr. J. Beebe
Room 310 – ENV1; ext 35490 (jbeebe@uwaterloo.ca)
Office Hours: T 10:30-12:00 AM or by appointment.

COURSE CONTENT AND ORGANIZATION

The course introduces the students to the underlying principles of geomorphology, using examples from a range of subfields in the discipline. Selected topics include the role of time and scale in geomorphic processes, the role of water (flowing in rivers and at and beyond the shore), hillslope processes, soils, glaciation and ice in continental and alpine environs, and the effects of wind. Fundamental to the learning will be showing connections between processes across different environments.

Through a series of lectures and lab exercises, students will discover the processes that are responsible for building up and wearing down the surface of the earth, giving us the landscape features we see today. Seminar sections include demonstrations of data collection techniques which the students will use to complete lab assignments.

Objectives of the course are to

1) Introduce students to the underlying concepts of space and time in the context of geomorphic systems, with a particular emphasis on cause and effect
2) Apply those concepts in learning how different physical environments function, both independently and as part of a complex system
3) Learn methodologies which are used to understand geomorphic processes, with emphasis on process environments
4) Complete assignments using real-world data as a means of applying knowledge gained from the lectures to interpret landscape assemblages.

The primary focus of the course is on water and its role in sculpting the landscape. In addition, we will look at other environments, some influenced by water (ie hillslopes), and others by wind. We will also look at water in its solid form, and the role of, and landscape assemblages associated with, ice and cold environments. This course will provide a foundation for upper-level courses in the physical sciences.
**TEXTBOOK**

The textbook for this course is:


The text is available in the bookstore. You may wish to investigate other sources for the book. As far as previous editions of the book are concerned, you may find a 5th edition available somewhere; if you choose to use an earlier edition be aware that the 6th edition is the one used for examination purposes, and also that chapter numbers in other editions might not match what is listed on the course syllabus below. It is your responsibility to ensure the text material is appropriate.

The text is supplemental to the lecture and seminar materials and is examinable. Lectures do not follow the textbook; the text is used to reinforce context from the lectures and to provide additional specific examples.

Lectures are developed from a range of materials including textbooks, scientific papers and government documents. Each lecture will be posted on LEARN prior to the lecture as indicated below. It is your responsibility to review the materials prior to lecture so you are able to contribute to the discussion.

**COURSE SCHEDULE**

The course is scheduled as follows. We will endeavour to follow the schedule exactly but be aware we may drift from time to time or get ahead of ourselves.

Students will be split (depending on the class size) into two seminar sections, GP1 and GP2. Once assigned a group, you are expected to attend the appropriate lab/seminar class at 0930h on the Tuesday as indicated in the schedule below. You are not allowed to switch groups. If you cannot attend one session or another please see me beforehand and I will make arrangements for you.

The seminars are mandatory. At the seminar class I will be demonstrating and explaining the methodology used to address the lab which we are studying. After the discussion, you will be given a dataset and a lab outline with instructions and questions to answer and submit for grading. For each lab you will be required to discuss the methodology used, so it is imperative you attend the seminar sessions.

If you do not attend your designated lab section you will not be able to submit a lab for grading, and will therefore be given a 0 for that lab. Exclusions relating to documented absences will apply on a case-by-case basis.

Due dates for labs will be provided at the time the lab is handed out.
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The schedule for the mid-term exam and the final exam are fixed and will only change if the University is closed.

There are other important dates in the University Calendar which may apply to your specific situation. It is your responsibility to ensure you are aware of these dates and act accordingly.

**MID-TERM EXAMINATION**

There is a mid-term examination which will be held in class on Thursday 24 October 2019. Material to be examined will include lecture materials, powerpoint slides, and text chapters up to and including the Fluvial Processes 3 lecture (10 October). There will be no questions relating to the seminars/labs on the mid-term exam.

**FINAL EXAMINATION**

The final examination, to be held during the University Final Exam Period, will cover all material from the course (lecture materials, powerpoint slides, and text chapters), including material from prior to the midterm. There will also be a section on the final that covers the seminars/labs.
STUDENT EVALUATION

Evaluation will include the following:

Lab Exercises: 4 labs @ 10% each: 40%
Midterm Exam 20%
Final Exam 40%

Total 100%

As indicated above, if a student is not present at a seminar session to which they are required to attend, they will not be allowed to submit a lab for grading and will receive a grade of zero (0/10) on the assignment (unless discussed with the instructor prior to missing the lab for a documented reason). Lab marks are not transferrable to other labs (ie you can’t take the 10% off a missed lab and make the next lab worth 20%).

If you are unable to attend the mid-term exam for a reason which is documentable according to University guidelines (ie illness with a note, religious observance, and the like), the missed 20% will be added to the final exam value, raising that exam to 60% of your final grade. If at all possible this should be avoided as it can add an additional level of pressure at exam time.

If you do not attend the mid-term exam for any other reason, you will be assessed a grade of zero (0/20). This can be avoided on a case-by-case basis by having discussions with the instructor PRIOR TO the missed exam.

Information on formats and grading schemes for exams and labs will be discussed during lectures and seminars.

COURSE ORGANIZATION

Two lecture sessions of 50 minutes each week (T & TH 0830-0920h), with an alternating seminar session on Tuesdays (0930-1020h).

Note this is an interactive course, there will be time set aside for discussion of specific questions in the lecture period, and all students are expected to contribute to the discussion. Specific discussion questions may be provided the week before they are dealt with, or will be provided in class at the time of discussion.

The discussion will be led by me, however do not expect me to carry the content. Material discussed in this manner will be examinable, so please be prepared to read up beforehand and to contribute during the discussion.
COURSE MATERIALS

Materials for the class (i.e., copies of lecture-slides, course outline, and assignment materials) will be made available on the university’s web-based learning management system - LEARN. To log into LEARN go to http://learn.uwaterloo.ca/

Note that the powerpoint files are only one part of the course materials. The discussion that accommodates the slides during the lectures represents the core component of the course and will be the material from which the quiz and exam questions will be taken.

Additional readings may also be placed on Learn for use by the students. When this occurs an announcement will be made in the lectures. It is the responsibility of the student to access Learn to ensure they are up-to-date with the course.

TURNITIN.COM

Text matching software (Turnitin) may be used to screen assignments in this course. Turnitin is used to verify that all materials and sources in assignments are documented. Students submissions are stored on a U.S. server, therefore students must be given an alternative (e.g., scaffolded assignment or annotated bibliography), if they are concerned about their privacy and/or security. Students will be given due notice, in the first week of the term and/or at the time assignment details are provided, about arrangements and alternatives for the use of Turnitin in this course.

It is the responsibility of the student to notify the instructor if they, in the first week of term or at the time assignment details are provided, wish to submit the alternate assignment.

EXPECTATIONS DURING LECTURES/SEMINARS

It is expected that students attending lectures and seminars will be attentive and engaging. It is expected that cell phones will be turned off or to silent mode so they do not distract others. I understand that from time to time an important message may come through; you should deal with that as quickly as you can in the class or you should excuse yourself to the hallway and deal with the issue there.

It is a requirement that all students and the instructor are treated with respect at all times. Failure to do so will result in an offending person being asked to leave the class and the issue will be dealt with outside the lecture/seminar periods.

USE OF ELECTRONIC DEVICES IN LECTURES

Students are allowed to follow the lectures using electronic devices and the material on LEARN, as well as being able to make notes on the materials. Use of devices for other means (facebook, twitter, youtube and so on) is not allowed as it is disruptive to those sitting around you. Should
you disturb others by any means you will be asked to cease and, if the disruption continues, you will be asked to leave that lecture.

SUCCESS IN THIS COURSE CAN BE ACHIEVED BY

1. Reviewing the powerpoint slides prior to each lecture
2. Completing any required readings prior to each lecture
3. Noting any questions about the material so you can ask during lectures
4. Use office hours to clarify anything you don’t understand.

COMMUNICATING WITH THE PROFESSOR

The best means of communication is by attending office hours. Apart from that, please use email. A voicemail can be left at my extension but please be aware that I may not be able to access voicemail daily and your call may wait.

Contact with me is required to be from your uwaterloo.ca email address. It is a University policy to have email contact between students and the University via this means. Therefore, I will not respond to emails from other domains (Hotmail, google, etc.).

CHEATING ON EXAMS

Cheating is defined for the purposes of this class as any attempt to gain advantage by either copying another student's paper or using any other means to read/ review material, either in paper or electronic format, or somehow communicate with others during quizzes and exams. Should a student be suspected of such behavior, they will be advised at the time and will be allowed to complete the works. Their paper, and the papers of those around the student, will be tagged for assessment. Upon grading the student will be invited to discuss the event with me prior to a decision being made. Any penalties imposed will follow University guidelines.

If at any time a student feels they have concerns I would ask you to please see me immediately so these concerns may be addressed. In instances such as these please do not wait for office hours; contact me by email.

CHEATING ON LABS

Cheating is defined for the purposes of the labs as submitting works for grading that are not your own. You are not allowed to submit answers to the labs that are direct copies of other students efforts, even if you worked together on the labs. Should two labs have either identical sections/text or be exact copies, both offending students will be given a grade of zero (0/10) on the assignment and the offense may be taken to the University for assessment of additional penalties.
ACADEMIC MISCONDUCT

From time to time issues relating to academic misconduct arise. It is the student’s responsibility to be familiar with the University of Waterloo requirements relating to academic integrity, and it is their responsibility to treat others with the utmost respect.

To ensure everyone is familiar with the some of the terminology, please see below:

**Intellectual Property:** Students should be aware that this course contains the intellectual property of their instructor, TA, and/or the University of Waterloo. Intellectual property includes items such as: -Lecture content, spoken and written (and any audio/video recording thereof); -Lecture handouts, presentations, and other materials prepared for the course (e.g., PowerPoint slides); -Questions or solution sets from various types of assessments (e.g., assignments, quizzes, tests, final exams); and -Work protected by copyright (e.g., any work authored by the instructor or TA or used by the instructor or TA with permission of the copyright owner).

Course materials and the intellectual property contained therein, are used to enhance a student’s educational experience. However, sharing this intellectual property without the intellectual property owner’s permission is a violation of intellectual property rights. For this reason, it is necessary to ask the instructor, TA and/or the University of Waterloo for permission before uploading and sharing the intellectual property of others online (e.g., to an online repository).

Permission from an instructor, TA or the University is also necessary before sharing the intellectual property of others from completed courses with students taking the same/similar courses in subsequent terms/years. In many cases, instructors might be happy to allow distribution of certain materials. However, doing so without expressed permission is considered a violation of intellectual property rights.

Please alert the instructor if you become aware of intellectual property belonging to others (past or present) circulating, either through the student body or online. The intellectual property rights owner deserves to know (and may have already given their consent).

**Academic Integrity:** In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. The University’s guiding principles on academic integrity can be found here: http://uwaterloo.ca/academicintegrity. ENV students are strongly encouraged to review the material provided by the university’s Academic Integrity office specifically for students: http://uwaterloo.ca/academicintegrity/Students/index.html

Students are also expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for their actions. Students who are unsure whether an action constitutes an offense, or who need help in learning how to avoid offenses
(e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. Students may also complete the following tutorial: https://uwaterloo.ca/library/get-assignment-and-research-help/academic-integrity/academic-integritytutorial

When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline: https://uwaterloo.ca/secretariat-general-counsel/policiesprocedures-guidelines/policy-71. Students who believe that they have been wrongfully or unjustly penalized have the right to grieve; refer to Policy #70, Student Grievance: https://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-70

**Note for students with disabilities:** AccessAbility Services, located in Needles Hall, Room 1401, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term.

**Mental Health:** The University of Waterloo, the Faculty of Environment and our Departments/Schools consider students' well-being to be extremely important. We recognize that throughout the term students may face health challenges - physical and / or emotional. Please note that help is available. Mental health is a serious issue for everyone and can affect your ability to do your best work. Counselling Services http://www.uwaterloo.ca/counselling-services is an inclusive, non-judgmental, and confidential space for anyone to seek support. They offer confidential counselling for a variety of areas including anxiety, stress management, depression, grief, substance use, sexuality, relationship issues, and much more.

**Religious Observances:** Students need to inform the instructor at the beginning of term if special accommodation needs to be made for religious observances that are not otherwise accounted for in the scheduling of classes and assignments.

**Grievance:** A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. See Policy 70 - Student Petitions and Grievances, Section 4, www.adm.uwaterloo.ca/infosec/Policies/policy70.htm. When in doubt please contact your Undergraduate Advisor for details.

**Appeals:** A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 – (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) www.adm.uwaterloo.ca/infosec/Policies/policy72.htm
Communications with Instructor and Teaching Assistants: All communication with students must be through either the student’s University of Waterloo email account or via Learn. If a student emails the instructor or TA from a personal account they will be requested to resend the email using their personal University of Waterloo email account.

Recording lectures: Use of recording devices during lectures is only allowed with explicit permission of the instructor of the course. If allowed, video recordings may only include images of the instructor and not fellow classmates. Posting of videos or links to the video to any website, including but not limited to social media sites such as: facebook, twitter, etc., is strictly prohibited.

Unclaimed Assignments: Unclaimed assignments (midterm exams/quizzes/written assignments) will be retained until one month after term grades become official in quest. After that time, they will be destroyed in compliance with UW’s confidential shredding procedures.