



# ENVS\*2310 CURRENT ISSUES IN EARTH SURFACE PROCESSES

**Credit Weight: 0.5**

**Academic Department: School of Environmental Sciences Campus: Guelph**

**Semester Offering: Fall 2016**

**Course Description**

This course provides an introduction to aspects of environmental Earth science which are critical to understanding issues that have direct social impacts. Students will gain a basic understanding of disciplines that represent different compartments of the active Earth, including geology, water and soil sciences, and atmospheric science. This knowledge will be directed toward exploring the links between scientific and societal perspectives. Examples of possible issues include climate change, resource extraction, and water supply.

# Prerequisites

1 of ENVM\*1000, ENVM\*1200, ENVS\*1030; CHEM\*1040

# Class Schedule and Location

Lecture T/Th, 10:30– 11:20, MCKN 227

Seminar W, 14:30-16:20, Alex 218

# Instructor Information

Instructor: Galina Morozova

Instructor email: [gmorozov@uoguelph.ca](mailto:gmorozov@uoguelph.ca)

Office location and office hours: 103 Alex; office hours T, 11:30-12:30 or by appointment Graduate Teaching Assistant: Sean [Simpson, ssimps04@mail.uoguelph.ca,](mailto:ssimps04@mail.uoguelph.ca) office hours by appointment

# Course materials

There is *no textbook* assigned for this course. All lecture notes, reading assignments and other materials will be posted on CourseLink. Lecture notes will be posted AFTER the discussion of each topic is completed in class. Lecture notes WILL NOT be posted in advance. Seminar assignments will be handed out in class. We are going to watch several movies during this semester, both in class and at home (available on youtube and other websites), instructions and movie quizzes will be provided on

CourseLink and/or in class. Instructions for group project & presentation will be posted on CourseLink during the 3rd week of classes (Sept 19-23).

# Course Content

**Specific Learning Outcomes:** students who pass the course will

1. Understand key scientific concepts in Earth science
2. Demonstrate the development of critical thinking and problem solving skills for application in Earth science, as well as in the broader realm of environmental science
3. Acquire some practical skills and field experience in environmental sciences
4. Show improved literacy in scientific communication
5. Understand the changing role of science and scientists in modern society

# Tentative schedule of lectures and seminars:

|  |  |  |  |
| --- | --- | --- | --- |
| Week | Tuesday Lecture | Thursday Lecture | Wednesday Seminar |
| Sept 8-9 |  | Introduction |  |
| Sept 12-16 | Introduction | Studying Earth surface processes: methods | *none* |
| Sept 19-23 | Studying Earth surface processes: methods | Earth surface materials: minerals and rocks | SA\* 1. Topographic maps and remote sensing (in class) |
| Sept 26-30 | Earth surface materials: minerals and rocks | Natural resources: minerals, soils, water, air, biological | SA 2. Minerals (in class)  *SA 1 due* |
| Oct 3-7 | Natural resources: minerals, soils, water, air, biological | Earth surface formed: tectonic plates, hot spots, earthquakes, volcanoes and extraterrestrial impacts | SA 3. Rocks and sediments (in class) *SA 2 due* |
| Oct 10-14 | *No class* | **Lecture quiz 1** | SA 4. Weathering and soils (in class)  *SA 3 due* |
| Oct 17-21 | Earth surface formed: tectonic plates, hot spots, earthquakes, volcanoes and extraterrestrial impacts | Earth surface modified: gravity, streams, glaciers, waves and wind | SA 5. Surface processes, rocks and landscapes around Guelph (short fieldtrip)  *SA 4 due* |
| Oct 24-28 | Earth surface modified: gravity, streams, glaciers, waves and wind | Earth surface modified: gravity, streams, glaciers, waves and wind | SA 6. Surface processes, rocks and landscapes around Guelph (short fieldtrip)  *SA 5 due* |
| Oct 31- Nov 4\*\* | Natural hazards | Natural hazards | TBA  *SA 6 due* |
| Nov 7-11 | Changing face of the planet: Earth surface through geologic time | Changing face of the planet: Earth surface through geologic time | SA 7. Human activities and surface processes around Guelph (short fieldtrip)  *Group projects (both hard and*  *electronic copies) due* |
| Nov 14-18 | **Lecture quiz 2** | Environment, surface | Student presentations |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | processes and civilizations: from ancient Mesopotamia to present | (group projects), *Project peer review due (hard copy only)*  *SA 7 due* |
| Nov 21-25 | Environment, surface processes and civilizations: from ancient Mesopotamia to present | Impact of human activities on the Earth surface | Student presentations (group projects) |
| Nov 28-  Dec 2 | Impact of human activities on the Earth surface | Environmental science, economic development, politics, media and society | *none* |

## Final Exam: Dec 15, 8:30-10:30 am, room TBA

\*SA - seminar assignment

\*\*Nov 4 is the last day to withdraw from the course

# Course Assignments and Tests:

## Two lecture quizzes and final exam

These will consist of multiple choice, short answer, draw/label picture and essay question and cover both lecture and seminar. The topics covered by lecture quizzes will be announced in class before each lecture quiz. The final exam is comprehensive.

## Group project and presentation

During the 3rd week, the class will be randomly separated into groups of 4-5 students. Each group must write a project (with topic relevant to our classroom discussion during this semester) and present this project at the end of the semester (see course schedule below). Projects and presentations will be

peer-reviewed by other students, instructor and teaching assistant. Instructions for project, presentation and reviews will be posted on CourseLink. You MUST discuss your topic with me before starting. We do not want any repetition of topics (to keep it interesting for all students). Presentations will be conducted during seminars on November 9 and 16.

## Seminars and seminar assignments

Seminars will include four in-class practical exercises (including maps, samples and possibly experiments) and three short fieldtrips (walking or by school bus) conducted during seminar time. See due dates for seminar assignments in the course schedule above.

## Movie quizzes

Each movie will be accompanied by a short quiz (available on CourseLink or handed in class). Due dates for at-home movie quizzes are TBA. In-class movie quiz due at the end of the class time.

# Mark Allocations and Learning Objectives:

|  |  |  |  |
| --- | --- | --- | --- |
| Assignment or Test | Due Dates | Contribution to Final Mark (%) | Learning Outcomes Assessed |
| Group project | Nov 9 | 10 | 1, 2, 4 |
| Project peer review | Nov 16 | 5 | 2 |
| Seminar assignments | See course schedule | 25 total | 1, 2, 3 |

|  |  |  |  |
| --- | --- | --- | --- |
| Assignment or Test | Due Dates | Contribution to Final Mark (%) | Learning Outcomes Assessed |
| Movie quizzes | TBA | 5 total | 1 |
| Lecture Quiz 1 | Oct 13 | 15 | 1-5 |
| Lecture Quiz 2 | Nov 15 | 15 | 1-5 |
| Final | Dec 15 | 25 | 1-5 |

**Extra credit**

You will be given 2% extra credit to your final mark for being present in class during ALL project presentations and submitting ALL presentation reviews. Missing at least one presentation without valid excuse (see Policy on Missing Assignments below) disqualifies you from receiving extra credit. No partial extra credit applies.

# Course Policies

**Communication:** all students *are required* to check their e-mail and CourseLink on a regular basis. All e-mails sent between 8:00 and 18:00 Monday-Friday will be answered the same day. You can expect evening and weekend messages to be answered the next day and on Monday, respectively (except for emergencies).

**Policy on missing and late assignments:** students will be allowed to make up assignments/tests or return late assignments *only* in case of:

* illness proven by a doctor or hospital note;
* playing sports for the University of Guelph confirmed by team coach;
* extreme family emergencies (going on vacation is excluded!).

In all other cases, make ups and late assignments WILL NOT be allowed.

**Copies of out-of-class assignments:** keep paper and/or other reliable electronic back-up copies of all out-of-class assignments: you may be asked to resubmit your work at any time.

**Course Policy on Group Work:** group work is *absolutely required* for your group project. Make sure that you actively participate in project & presentation preparation. Students that do not participate enough *may be excluded* from the project by other members of their group. In case a student is excluded, he or she has two options: 1) loose 15% of the final mark or 2) write and present their own project.

**Course Policy regarding use of electronic devices and recording of lectures:** presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the written permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

Phones and laptops are distractions not just for the people using them, but for others sharing the same space. A recent study showed that students attempting to multi-task using laptops in the classroom did much worse than peers using pencil and paper to take notes. Even worse, students sitting next to the

multi-taskers also suffered significantly ("Students' use of laptops in class lowers grades: Canadian study". Globe and Mail, August 14, 2013).

The use of cell phones, including texting and checking messages, is prohibited during class time. Please leave the room if you need to use your phone. Laptops are essential for some students to take notes, but they can create a distracting space within the classroom. You may use your computer for notetaking; you may not use it for any other purpose during class time as there will be no need to access the Internet.

# University Policies

**Academic Consideration:** the University of Guelph is committed to supporting students in their learning experiences and responding to their individual needs and is aware that a variety of situations or events beyond the student's control may affect academic performance. Support is provided to accommodate academic needs in the face of personal difficulties or unforeseen events in the form of Academic Consideration.

Information on regulations and procedures for Academic Consideration, Appeals and Petitions, including categories, grounds, timelines and appeals can be found in [Section VIII (Undergraduate](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml)  [Degree Regulations and Procedures) of the Undergraduate Calendar.](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml)

**Academic Misconduct:** the University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Detailed information regarding the Academic Misconduct policy is available in [Section VIII](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml)  [(Undergraduate Degree Regulations and Procedures) of the Undergraduate Calendar.](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml)

**Accessibility:** the University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Student Accessibility Services (SAS), formerly Centre for Students with Disabilities (CSD), as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or e[mail sas@uoguelph.ca](mailto:sas@uoguelph.ca) or visit the  [Student Accessibility Services website (http://www.uoguelph.ca/csd/).](http://www.uoguelph.ca/csd/)

**Course Evaluation Information:** end of semester course and instructor evaluations provide students the opportunity to have their comments and opinions used as an important component in the Faculty Tenure and Promotion process, and as valuable feedback to help instructors enhance the quality of their teaching effectiveness and course delivery.

While many course evaluations are conducted in class others are now conducted online. Please refer to the [Course and Instructor Evaluation Website](https://courseeval.uoguelph.ca/) for more information.

**Drop period:** the drop period for single semester courses starts at the beginning of the add period and extends to the Fortieth (40th) class day of the current semester (the last date to drop a single semester courses without academic penalty) which is listed in [Section III (Schedule of Dates) of the](https://www.uoguelph.ca/registrar/calendars/)  [Undergraduate Calendar.](https://www.uoguelph.ca/registrar/calendars/)

The drop period for two semester courses starts at the beginning of the add period in the first semester and extends to the last day of the add period in the second semester.

Information about Dropping Courses can be found in [Section VIII (Undergraduate Degree Regulations](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/)  [and Procedures) of the Undergraduate Calendar.](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/)

# Additional Course Information

**Commitment to the course:** this course is worth 0.5 credits. According to University policy, you should plan on spending up to 12 hours per week engaged with this course, including lectures and seminars. That leaves around 8 hours for study outside of class meetings. If you have invested this amount of time and still feel like you're struggling to keep up, please make an appointment to see me.

# HAVE A GREAT SEMESTER!

