Humans have long been able to affect the environment, but never before on such a scale. We are now altering the Earth’s carbon cycle, which has resulted in climate change, and we have sped up, by more than 150 percent, the nitrogen cycle, which has led to acid rain, ozone depletion, and coastal dead zones, among other impacts. We have also replaced wilderness with clearcuts, mines, farms, cities and infrastructure used to pump, drill, frack, strip mine and transport fossil fuels. The loss of natural areas is leading to the precipitous loss and decline of biodiversity, including once common species, like bees and other pollinators. Human have become a new kind of biological force that is altering the physical, chemical, and biological properties of the planet on a geological scale. Indeed, Nobel Prize-winning chemist Paul Crutzen has suggested that the current geologic period should, most appropriately, be called the Anthropocene Epoch to reflect our new status as a global force in driving ecological change — “the Human Age”.

This course examines the impacts of natural and land use dynamics on ecosystems, biodiversity and ecological processes in the Age of the Anthropocene – the Human Age. We will consider the links between disturbance and biological systems and the important role spatial and temporal scale play in our understanding of these systems. Concepts and methods used in the analysis and management of biophysical systems will be reviewed and debated in class and employed as part of a group project that will focus on a recent major land use decision – the Site C dam in northeastern BC. Particular attention will also be given to the natural dynamics and management
of closed and open forests, including novel ecosystems created as a result of anthropogenic impacts such as deforestation and climate change.

Objectives

• to critically review methods and applications central to environmental systems analysis, including those employed in environmental assessment processes.
• to critically evaluate environmental systems literature and concepts
• to recognize the broader social contexts in which environmental research is undertaken
• to develop effective oral and written communication skills that will facilitate considered argument and opinion and the dissemination of research findings

Approach

The course will use a combination of lectures, seminar-style discussions, debates and student presentations.

Required Readings

There is no text book for the course. Readings will be assigned one week before each lecture and will be available on Courselink

Evaluation

35% Written Assignment
25% Group Project and Presentation
40% Final Exam

Written Assignment (35%)

A key component of this class is to connect what we’re doing in lecture and in the readings with what is happening right now in the world beyond our classroom. You will be responsible for writing a submission, as a hypothetical stakeholder, to the Site C or Kinder Morgan pipeline Environmental Assessment processes.

Group Project and Presentation (25%)

TBD

Final Exam (40 %)

The final exam will cover material from the whole term. The format will be multiple choice, short answer and essay questions.
University of Guelph Policy

Statements:

E-mail Communication
As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly:
e-mail is the official route of communication between the university and its students.

When You Cannot Meet a Course Requirement
When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor [or the teaching assistant in the case of the proposal or essay] in writing,
with your name, id#, and e-mail contact. Where possible, this should be done in advance of the missed work or event, but otherwise, just as soon as possible after the due date, and certainly no longer than one week later. Note: if appropriate documentation of your inability to meet that in-course requirement is necessary, the course instructor, or delegate, will request it of you. Such documentation will rarely be required for course components representing less than 10% of the course grade. Such documentation will be required, however,
for Academic Consideration for missed end-of-term work and/or missed final examinations. See the undergraduate calendar for information on regulations and procedures for Academic Consideration.
(http://www.uoguelph.ca/undergrad_calendar/08-ac.shtml)

Drop Date
The last date to drop one-semester Fall 2018 courses, without academic penalty, is Friday, November 2, 2018. For regulations and procedures for Dropping Courses, see the Undergraduate Calendar
(https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c03/c03-fallsem.shtml).

Copies of Out-of-Class Assignments
Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

Academic Misconduct
The University of Guelph is committed to upholding the highest standards of academic integrity and enjoins 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. The University of Guelph takes a serious view of academic misconduct, and it is your responsibility as a student to be aware of and to abide by the University’s policy. Included in the definition of academic misconduct are such activities as cheating on examinations, plagiarism, misrepresentation, and submitting the same material in two different courses without written permission from the relevant instructors. To better understand your responsibilities, read the Undergraduate Calendar for a statement of Students’ Academic Responsibilities (https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c01/index.shtml); also read the full Academic Misconduct Policy (https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml). You are also advised to make use of the resources available through the Learning Commons (http://www.learningcommons.uoguelph.ca/) and to discuss any questions
you may have with your course instructor, TA, or academic counsellor.

Instructors have the right to use software to aid in the detection of plagiarism or copying and to examine students orally on submitted work. For students found guilty of academic misconduct, serious penalties, up to and including suspension or expulsion, can be imposed. Hurried or careless submission of work does not exonerate students of responsibility for ensuring the academic integrity of their work. Similarly, students who find themselves unable to meet course requirements by the deadlines or criteria expected because of medical, psychological or compassionate circumstances should review the university’s regulations and procedures for Academic Consideration in the calendar (http://www.uoguelph.ca/undergrad_calendar/08-ac.shtml) and discuss their situation with the instructor and/or the program counsellor or other academic counsellor as appropriate.

**University Policy on Academic Misconduct**

*Academic misconduct, such as plagiarism, is a serious offence at the University of Guelph. Please consult the Undergraduate Calendar for offences, penalties and procedures relating to academic misconduct. (www.uoguelph.ca/undergrad_calendar/08-amisconduct.shtml)*, 