

**ENV337H1S – Human Interactions with the Environment
Winter 2022**

Last Updated: December 17, 2021

Lecture: Mondays 10am–12noon
Tutorials: Wednesdays: 10-11am and 11am–noon.

Instructor: Carlos Avendano; carlos.avendano@utoronto.ca
Office Hours: Mondays (specific dates will be scheduled in Quercus).

Teaching Assistant: Susan Frye; s.frye@mail.utoronto.ca
Office Hours: Wednesdays at the tutorial times- when there are no tutorials.

Required Text:

There is no required hardcopy textbook for ENV337H. Readings and other sources are indicated in the lecture schedule. Readings can be acquired through the UofT Library online catalogue.

Course Evaluation

Lecture Test #1	February 9 th	12%
Lecture Test #2	March 11 th	12%
Final Exam	April exam period	34%
<i>Tutorials:</i>		42%
<i>Water Footprint -group- (12%)</i>	<i>due</i> March 1 st	
Oral presentations – Speed talk (4%)	<i>due</i> March 7 th	
<i>Individual Research Proposal (10%)</i>	<i>due</i> March 21 st	
<i>Local Project -group- (10%)</i>	<i>due</i> April 6 th	
Tutorial Attendance / Engagement (1.5% \times 4= 6%)		

*Tests, quizzes and final exam will be delivered via Quercus (a combination of multiple-choice, multiple-answer, short-answer, essay).

Introduction and Learning Objectives:

The impact of 7 billion people on the planet is enormous and challenges future generations. The interconnected systems of the planet means that as humans interact with their surrounding environments, they too will be influenced and impacted in turn. What are these impacts today and in future? What solutions and tools are available? What can we learn from environmental and cultural history? Using an integrated and interdisciplinary systems approach, we explore problems and solutions to the earth's limits to growth.

The course introduces students to Earth Systems interactions, and their limits to growth of human systems using an analytical perspective and, most importantly, how to critically analyze, quantify and solve problems arising from meeting these limits to growth.

Our learning objectives are to:

1. Familiarize you with Earth Systems, environmental processes, and ecological issues arising from human activities.
2. Understand the interconnectedness of these systems to each other and to human well being
3. Learn to integrate disparate issues with roots in natural sciences and social sciences, and to develop solutions to these issues.
4. Improve your critical thinking, analytical abilities and problem-solving skills.

5. Improve your ability to conduct research, assemble information, and communicate the results of your research.

Lecture Topics and Tutorial Schedule

Wk	Date	Lecture Topic and Readings Schedule	Activities
1	Jan 10	Introduction.	
2	Jan 17	<p>Are we in the Anthropocene? Human dominated planet.</p> <p>Gaffney, O., Steffen, W. 2017. The Anthropocene equation. <i>The Anthropocene Review</i>. 4, 53–61. http://www.anthropocene.info</p>	Tut No. 1. The Water Footprint. Jan 19 th
3	Jan 24	<p>Earth Sciences. The importance of understanding planetary geodynamics for planetary restoration: Solar forcing and plate tectonics.</p> <p>Anderson, David E., Goudie, Andrew S. and Parker, Adrian G. 2013. The Causes of Climatic Change. In: <i>Global Environments through the Quaternary: Exploring Environmental Change</i>. In: D. Anderson, Goudie, and A. Parker (Eds). 2nd ed. Oxford University Press, pp. 298-325. https://www.sciencecourseware.org/eec/GlobalWarming/Tutorials/Milankovitch/</p>	
4	Jan 31	<p>Planetary Functioning. Have we transgressed planetary thresholds? What are the Planetary Boundaries?</p> <p>Biermann, F., & Kim, R. E. (2020). The Boundaries of the Planetary Boundary Framework: A Critical Appraisal of Approaches to Define a “Safe Operating Space” for Humanity. <i>Annual Review of Environment and Resources</i>, 45, 497–521. http://stockholmresilience.org/research/planetary-boundaries.html</p>	
5	Feb 7	<p>Ecosystem theory. Disturbance and Resilience.</p> <p>Rocha J.C., Biggs, G., Peterson. 2014. Regime shifts: What are they and why do they matter? <i>Regime Shifts Database</i>. www.regimeshifts.org</p>	Lecture Test#1 (online via Quercus): Weeks 2-4 February 9 th

Wk	Date	Lecture Topic and Readings	Activities
6	Feb 14	<p>Population growth. Humans through the Quaternary Period. Consumption thresholds.</p> <p>Toth, G., Szigeti, C., 2016. The historical ecological footprint: From over-population to over-consumption. Ecological Indicators. 60, 283–291. https://ourworldindata.org/world-population-growth</p>	<p>Tut No. 2. Individual Research proposal. Feb 16th</p>
7	Feb 21 Family Day	<i>Reading Week</i>	
8	Feb 28	<p>Historical human interactions with the environment. Socio-ecological resilience cases: The Maya Civilization case study. Was there really a socio-ecological collapse?</p> <p>Giraldo O.F. 2019. The Future, Behind Us. In: Political Ecology of Agriculture. Springer, Cham.</p>	<p><i>Tut No. 1</i> <i>Due March 1st</i></p>
9	Mar 7	<p>Human impacts on the environment. What has happened since the Industrial Revolution?</p> <p>Gamble, R., Hogan, T., 2019. Watersheds in watersheds: The fate of the planet's major river systems in the Great Acceleration. Thesis Eleven 150, 3–25.</p>	<p><i>Speed Talk video</i> <i>due March 7th</i></p> <p>Lecture Test#2 (online via Quercus): Weeks 5, 6, 8. March 11th</p>
10	Mar 14	<p>Conservation Biology in a dynamic world. Biodiversity beyond protected areas.</p> <p>Gillson, L., 2015. Past, Present, and Future Climate Change: Can Palaeoecology Help Manage a Warming World? In: Gillson, L. (Ed.), Biodiversity Conservation &</p>	<p>Tut No. 3 Local Project. March 16th</p>

		Environmental Change. Oxford University Press, pp. 87–115.	
Wk	Date	Lecture Topic and Readings	Activities
11	Mar 21	<p>Socio-Ecological Systems Restoration. Mitigation or adaptation to climate change?</p> <p>Simonsen, S.H., Biggs, R., Schlüter, M., Schoon, M., Bohensky, E.L., Cundill, G., Dakos, V., Daw, T., Kotschy, K., Leitch, A.M., Quinlan, A., Peterson, G., Moberg, F., 2014. Applying resilience thinking: Seven principles for building resilience in social-ecological systems. Stockholm Resilience Centre. 20 p.</p>	<p><i>Tut No. 2</i> <i>due March 21st</i></p> <p>World Water Day - March 22 http://www.worldwaterday.org</p>
12	Mar 28	<p>The Great Acceleration. Is deceleration possible?</p> <p>Leff, E., 2017. Power-Knowledge Relations In The Field Of Political Ecology. Ambiente & Sociedade 20, 225–256.</p>	
13	April 4	Course review.	<p><i>Tut No. 3</i> <i>due April 6th</i></p>

Important Dates (<https://www.artsci.utoronto.ca/current/dates-deadlines/academic-dates#academic-dates-deadlines-accordion-6>)

Jan 10 – Classes begin in S courses.

Apr 8 – Winter term classes end.

Apr 15 – Good Friday – University closed.

Apr 11-29 – Examination period.

COURSE POLICIES

Submission of tutorial projects:

Tutorial projects are handed in through **online submission**. If students experience any disruption to

their studies, they should use the self-declaration form on ACORN (<https://www.acorn.utoronto.ca>). Any disputes or questions on graded material must be brought to the attention of the TA or instructor within 2 weeks of return or posting, otherwise will be considered final.

Formatting of reports for the different project reports will be specified during tutorials.

Late penalties

The late penalty will be 2.5% of the assignment grade per day late.

Accessibility Needs

The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible:

disability.services@utoronto.ca or <http://studentlife.utoronto.ca/accessibility>.

Academic Integrity

The following is taken from the Faculty of Arts and Science Academic Integrity website (<http://www.artsci.utoronto.ca/osai/students>):

Academic integrity is fundamental to learning and scholarship at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the U of T degree that you earn will be valued as a true indication of your individual academic achievement, and will continue to receive the respect and recognition it deserves.

Familiarize yourself with the University of Toronto's *Code of Behaviour on Academic Matters* (<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>). It is the rule book for academic behaviour at the U of T, and you are expected to know the rules. Potential offences include, but are not limited to:

In papers and assignments:

- Using someone else's ideas or words without appropriate acknowledgement.
- Copying material word-for-word from a source (including lecture and study group notes) and not placing the words within quotation marks.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Including references to sources that you did not use.
- Obtaining or providing unauthorized assistance on any assignment including
 - working in groups on assignments that are supposed to be individual work,
 - having someone rewrite or add material to your work while "editing".
- Lending your work to a classmate who submits it as his/her own without your permission.

On tests and exams:

- Misrepresenting your identity.
- Submitting an altered test for re-grading.

Misrepresentation:

- Falsifying or altering any documentation required by the University, including doctor's notes.

- Falsifying institutional documents or grades.

The University of Toronto treats cases of academic misconduct very seriously. All suspected cases of academic dishonesty will be investigated following the procedures outlined in the *Code*. The consequences for academic misconduct can be severe, including a failure in the course and a notation on your transcript. If you have any questions about what is or is not permitted in this course, please do not hesitate to contact me. If you have questions about appropriate research and citation methods, seek out additional information from me, or from other available campus resources like the [U of T Writing Website](#). If you are experiencing personal challenges that are having an impact on your academic work, please speak to me or seek the advice of your college registrar. See also the handout “How Not to Plagiarize,” Margaret Proctor, 2009, available online at <http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>

The plagiarism detection tool, Ouriginal, will be used to screen assignments, tests and exams.

Plagiarism Detection Tool

“Normally, students will be required to submit their course essays to the University’s plagiarism detection tool for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the tool’s reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University’s use of this tool are described on the Centre for Teaching Support & Innovation web site (<https://uoft.me/pdt-faq> ([Links to an external site.](#))).”

Communication

You are encouraged to ask questions in class and during office hours. If you would like to discuss class material please communicate further with the professor. If you have a schedule conflict to meet during lecture time, please contact me to set-up a time when we can meet.

E-mail can be used to make appointments and address brief questions but should not be viewed as an alternative to meeting with the professor during lecture times. Weekend emails may be sporadic so please plan accordingly.

1. Always use your University of Toronto e-mail address (...@utoronto.ca) for all course-related communications. Other e-mail addresses may be filtered as spam and we do not promise to respond to them.
2. Please include the course code (e.g., ENV337) as part of your subject line, and include your full name and student number in the body of the e-mail.
3. Please read the course handouts and check the course online site before e-mailing a question, to make sure that it hasn’t already been answered. Questions that can be answered by reading information in Quercus, will not be answered.
4. The Discussion Board is a great tool to ask questions and provide feedback.

Please e-mail the professor concerning a lecture or assignment-related query.