

**University of Toronto Scarborough**  
**Department of Physical and Environmental Sciences**  
**ESTB01H3 - Introduction to Environmental Studies**

Lectures: Wednesdays 1-3 pm Eastern Time  
Labs/tutorials: Wednesdays 3-5 pm Eastern Time, as required  
Lecture and Tutorial Zoom meeting room ID: 837 5465 6833  
Passcode: 879988

Office hours: by appointment  
Zoom meeting room ID: 824 2136 2814  
Passcode: 939036

\*Note: No office hours will be held during reading week on Oct 13<sup>th</sup> \*

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Exam Essay TA: Fatima Ahmed ([fa.ahmed@utoronto.ca](mailto:fa.ahmed@utoronto.ca))

### **Course Description**

This course is designed to provide a strong interdisciplinary focus on environmental issues as they exist within a socioeconomic, institutional, political and cultural context. The orientation of the course is pragmatic in the sense that it is concerned with the use of proactive action for dealing with environmental issues. As such, we will lead you towards a broad understanding of the tools, methods and resources employed in 'solving' environmental problems, but we will do so within the context of the limitations of these methods and of scientific knowledge more generally.

Environmental issues have many sides including scientific, social, cultural, ethical, political, and economic; and comprise multiple stakeholders promoting divergent points of view and interests. The presumption that we can proactively 'solve' such problems suggests that we first possess a fundamental understanding of the nature of these problems. To attain this comprehension, we will provide students with an overview of the historical development of our representations (i.e. models) of the environment, humanity, and their interactions. Against this historical backdrop we will then consider a number of modern environmental challenges in the form of case studies.

### **Course Objectives and Outcomes**

Upon completion of this course, students will have an enhanced sense of the different, yet complementary perspectives on the environment, sustainability, environmental problems and the solutions identified in the natural and social sciences. The student will have a solid understanding of what environmental studies are and what the environmental studies major program entails in a

substantive sense. Broad course objectives include an awareness of the following fundamental themes associated with environmental problem solving:

1. It is critical that students first comprehend the fundamental complexity and interconnectedness of environmental issues. Whether defined as wicked, complex or hyper-complex, the first step in understanding the nature of human interaction with the environment is an awareness of the depths of uncertainty surrounding environmental issues.
2. As an extension of the first objective, we will examine the root drivers of human-induced environmental change (e.g. climate change), and the fundamental dilemma of 'proactive' human agency with respect to environmental issues. In other words, we will examine whether or not there is such a thing as directed environmental agency.
3. Students will be introduced to what might be considered the leading edge of international environmental problem-solving. There is a plethora of methodologies that are currently in use to deal with environmental issues. We will provide a preliminary overview of such methods, including their individual advantages and limitations. We will also introduce students to reflexive methods associated with what might be called the science of science.
4. Finally, we will touch upon a range of case studies to highlight fundamental differences in approaches to addressing environmental issues. Drawing upon the extensive partnerships of the New Brunswick Climate Change Research Collaborative and the UTSC 'Environmental Analytics Group' (e.g. our collaborators have included Toronto Regional Conservation Authority, WWF, Carolinian Canada, METROLINX; GNB; NRCAN-CFS; USDA; EC; SACiWaters; Women and Environment, Nepal; York University; University of Waterloo; University of Moncton; Canadian Rivers Institute; ARPFNB; University of New Brunswick; Université du Québec à Montréal; Institut National de la Recherche Scientifique ... RIISQ and ICIMOD), we will seek to understand the functional relationship between these various institutional players. At an individual level, particular skills will be fostered to deal with the differences in perspectives and interests that are part of environmental problem solving. Students will leave the course with specific skills including:
  - Critical thinking across disciplines: identifying, explaining and synthesizing key concepts learned in class;
  - Reflexivity: noticing, articulating and working with one's thought processes, and reactions in the context of reading, writing, and dialogue;
  - Demonstrating what they have learned through writing: summarizing, analyzing, assessing and synthesizing class readings and films.
  - Simple, analytical skills

### ***Class Attendance***

Because of the nature of the material covered in class, class participation is highly recommended. The lectures and tutorials are online and synchronous, which means that the recorded lectures will not be posted to Quercus. The only recordings that will be available for you to watch are the recordings of the introductory lecture, the midterm review lecture, and the final review lecture. In exceptional circumstances, accommodations can be made for missed lectures.

In the tutorials, we will also be viewing four videos, which will be on hold in the UTSC library. Students that miss tutorials are responsible for viewing the missed videos independently of the class. You may be able to find some of these videos through other avenues (e.g. internet, streaming services, etc.).

Date	Lecture	Topic	Tutorial	Deadlines
Sept. 8	Week 1	Introduction to Environmental "Studies"		
Sept. 15	Week 2	History 1: Nature - Gilgamesh/Enkidu		Thinking Question set 1 @ 1 PM ET
Sept. 22	Week 3	History 2: Nature - Greek Foundations	Video 1	Thinking Question set 2 @ 1 PM ET
Sept. 29	Week 4	History 3: Nature - Age of Discovery		Quiz 1 @ 1 PM ET Thinking Question set 3 @ 1 PM ET
Oct. 6	Week 5	History 4: Nature - Natural Processes	Video 2	Assignment 1 @ 1 PM ET Thinking Question set 4 @ 1 PM ET
Oct. 13	Reading Week	NO CLASSES		Quiz 2 @ 1 PM ET
Oct. 20	Week 6	History 5: Nature – Expanded Perspectives	Midterm Review	Thinking Question set 5 @ 1 PM ET
Oct. 27	Week 7	<b>MIDTERM EXAM</b>		
Nov. 3	Week 8	History 1: Humans - Greek Thoughts		Thinking Question set 6 @ 1 PM ET
Nov. 10	Week 9	History 2: Humans - Utopia Debate	Video 3	Thinking Question set 7 @ 1 PM ET
Nov. 17	Week 10	History 3: Humans - Rationality\Optimal Utility		Quiz 3 @ 1 PM ET Thinking Question set 8 @ 1 PM ET
Nov. 24	Week 11	Human\Nature Interactions	Video 4	Assignment 2 @ 1 PM ET Thinking Question set 9 @ 1 PM ET
Dec. 1	Week 12	Impact\Risk Assessments; Case Study;	Term review	Quiz 4 @ 1 PM ET Thinking Question set 10 @ 1 PM ET

### **Grading Scheme**

In this course you will have 2 Assignments, 4 Quizzes, weekly Thinking Questions on the 10 required readings, an in-class midterm exam, and a final exam that is scheduled in the exam period by the Registrar’s Office. The mid-term and final exams will consist of multiple choice, short-answer, and essay questions, which will draw upon the lecture content, required readings, and videos viewed in this class.

Assessment	Weight
4 <i>Movie Quizzes</i> Each quiz is worth 2.5% of the final grade	10%
10 <i>Required Readings and Thinking Question Sets</i> Each required reading has a Thinking Question set worth 0.5% of the final grade	5%
2 <i>Assignments</i> The higher assignment grade will be worth 20% of the final grade while the lower assignment grade will be worth 10% of the final grade	30%
1 <i>Mid-term Test</i>	20%
1 <i>Term Test</i>	35%

### *Required Readings*

All of the required readings will be made available through QUERCUS and are listed below. You are responsible for the lecture content and material. Please do not share the slides as the content is subject to copyright.

1. Gilgamesh: Tablets III, IV and V
2. Aristotle, 1752. Categories. The Project Gutenberg. (Pages TBA in class)
3. Voltaire, (350 BCE). MicroMegas. The Project Gutenberg. (Pages TBA in class)
4. Tansley, AG (1935). "The use and abuse of vegetational terms and concepts". Ecology. 16 (3)
5. Watch --> Schmidt, G. (2014). The emergent patterns of climate change.  
[https://www.ted.com/talks/gavin\\_schmidt\\_the\\_emergent\\_patterns\\_of\\_climate\\_change](https://www.ted.com/talks/gavin_schmidt_the_emergent_patterns_of_climate_change)
6. Aristotle, 1752. Categories. The Project Gutenberg. (Pages TBA in class)
7. The New Atlantis (20 pages) - Francis Bacon - 1624
8. Wealth of Nations (Chp 1-3) & Theory of Moral Sentiment (Part Vi; Section 2; Chp. I-III)
9. Cornelius, P., Van de Putte, A., & Romani, M. (2005). Three Decades of Scenario Planning in Shell. California Management Review, 48(1), 92–109.
10. Baram, M. (1983). Report on Reports: Risk Assessment in the Federal Government: Managing the Process. Environment: Science and Policy for Sustainable Development, 25(7), 25–27.

### *Thinking Questions (TQ)*

A small set of thinking questions will be provided for each reading to help you keep up with the required course readings and to help prepare you for course assessments like assignments and exams. The answers will be reviewed for sufficient completion but not on being correct/incorrect. As such, these grades are only participation marks and will be awarded based on the sufficient completion of the answers.

### ***Late or Missed Term Work***

Due to the large class size, this course has a strict late policy.

Assignments that are submitted late will lose 10% per day for up to 5 days. Submissions that are more than 5 days late will be given a grade of zero.

Any missed assessments will be given a mark of zero unless an extension is granted and a self-declaration Absence form is submitted (see [this link](#)). If an assessment with a deadline extension is submitted later than 5 days after the original (non-extended) deadline then it will have a default grade of zero, but these situations will be addressed on a case-to-case basis.

Thinking Questions for readings will receive a grade of zero if submitted more than 24 hours after the deadline. Thinking Questions don't have one correct answer but instead help you think about the reading and count as participation marks.

Quizzes will receive a grade of zero if they are late.

Missed final exams are handled by the Registrar's Office, NOT with the Self-declaration Absence Form.

### ***Correspondence***

When corresponding with course personnel, include the Course Code (ESTB01) in the subject line of the email and sign your name and student number at the end of the email.

## ***Important UTSC Policies***

UTSC is dedicated to fostering an academic community in which the learning and scholarship of every member may flourish, with vigilant protection for individual human rights and a resolute commitment to the principles of equal opportunity, equity and justice.

### ***1) Information on Academic Integrity***

Academic integrity is essential to the pursuit of learning and scholarship in a University, and to ensure that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters outlines behavior that constitutes academic dishonesty and the process for addressing such offenses (see [this link](#)).

### ***2) Information Regarding AccessAbility Services at UTSC***

AccessAbility Services is a student service, academic service and University of Toronto equity office on the U of T Scarborough campus. Its principal function is to ensure that policies, practices, procedures and programs at UTSC are inclusive to remove barriers and ensure equal access for students with disabilities. Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations. You can contact AccessAbility Services at 416-287-7560, by e-mailing [ability@utsc.utoronto.ca](mailto:ability@utsc.utoronto.ca) or visiting their [website](#).

Any student with a disability or health consideration can register with AccessAbility Services by visiting the [How To Register](#) page. You will be able to submit accommodation requests through [myAIMS](#) (**my** AccessAbility Information **M**anagement **S**ystem).

### ***3) Information on Religious Observances***

It is policy at UTSC to provide special consideration for recognized holy days which may be observed by our students. Though not all holy days require students to be absent from school, accommodations may still be necessary in some cases. As a student, it is your responsibility to check the due dates for all course work and scheduled dates for tests/exams on a regular basis. Inform the Course Instructor of any potential conflicts at least 7 days prior to the date of the test/assignment. Failure to do so may result in special consideration not being granted (documentation may be required).

### ***4) Procedures Regarding Final Marks***

The final mark is based on term work and the final exam. After the final exam, marks are calculated and submitted to the Department for review. Once approved, the final mark for each student in the course will be released on ROSI/ACORN. Final marks are not negotiable and instructors are not permitted to discuss final marks with students. If students have concerns about their final mark, they should consult the proper procedures to be followed as outlined by the Registrar's office [here](#).