Faculty of Arts and Science - School of Environment

ENV452H1 S

Environmental Science Seminar

Winter 2025 Syllabus

Course Meetings

ENV452H1 S

Section	Day & Time
LEC0101	Tuesday, 3:00 PM - 4:00 PM
	Wednesday, 3:00 PM - 5:00 PM

Refer to ACORN for the most up-to-date information about the location of the course meetings.

Course Contacts

Course Website: https://q.utoronto.ca/courses/383079

Instructor: Miriam L. Diamond
Email: miriam.diamond@utoronto.ca
Office Hours and Location: By appointment
Additional Notes: Please allow 24-48 hours response time during regular business hours. Please include "ENV 452" in the subject line of the email

Teaching Assistant: Kayla Simpson
Email: Kayla.simpson@mail.utoronto.ca
Office Hours and Location: by appointment

Course Overview

Scientists from within and external to the university share and discuss challenges, findings and opportunities. Specific topics (and speakers) vary from year to year but may draw from rehabilitation techniques, contaminants in our environment, environmental health, impacts on landscapes and communities, biodiversity, water, and modelling of environmental processes. This course is for students enrolled in the School of the Environment, Environmental Science Major BSc program, or permission of the Undergraduate Associate Director.

It is well known that the planet and societies are facing many challenges to environmental and human health. Scientific research provides information on those challenges and their solutions to all sectors of society, including policy makers. However, which questions are asked and pursued (funded) are subject to who is asking the question(s) and what is funded. This course explores a variety of perspectives on who is able to ask and pursue research questions, which questions are or ought to be asked, and if they are pursued through research (is the research

funded?) and/or the solution space. We focus on topics related to impacts caused by chemical pollution to ecosystem and human health.

Course Goal:

To develop an understanding of and a critical view towards the production of scientific research by investigating who can ask questions, which questions are asked, and whether they are pursued to solutions related to threats to environmental and human health arising from chemical pollution and waste.

Educational Objectives:

- Develop an understanding of the wide array of issues confronting different geographic regions, which of those issues is being pursued in research and which issues make their way towards solutions.
- Acquire the skills necessary to research and critically evaluate and synthesize information, and then to effectively communicate that information, and
- Build knowledge on how research is translated into solutions.

This course is for students enrolled in the School of the Environment, Environmental Science Major BSc program, or permission of the Undergraduate Associate Director.

Course Learning Outcomes
STUDENT LEARNING OUTCOMES:

· Read a broad range of literature and determine main takeaways

· Discuss and critically analyze scientific research and literature with their peers

· Write an evidence-based synthesis regarding two topics related to chemical pollution

· Present a synthesis of a topic on an understudied environmental question orally and visually

· Understand the limitations of current research and generate ideas on where a subject area should move towards

· Be comfortable asking questions and challenging the gaps in scientific research

· Connect environmental science concepts from assigned readings and relate to real-world situations

· Gain experience with groupwork

Prerequisites: Completion of 12 credits of courses, including
ENV316H1/ENV334H1/ENV337H1
Corequisites: None
Exclusions: None
Recommended Preparation: None
Credit Value: 0.5

This course assumes you have an understanding of qualitative and quantitative methods in environmental science.

Marking Scheme

Assessment	Percent	Details	Due Date
300-word summary of each guest presentation	20%	1. Write 300-word summary of each guest presentation, 8 presentations X 2.5% each (20%). The 300-word summary must list and briefly explain the main points raised by the speaker followed by several sentences that critically evaluate those main points (not a personal reflection, but rather a critical analysis). You can answer questions such as: Did the speaker present a convincing argument backed by sufficient evidence? What surprised you? What was the speaker's main "take away message"? Criteria for Evaluation: Captures the main messages of the talk, shows an understanding of the subject matter, thoughtful and well written (logical progression of ideas that are expressed clearly with attention to word limit). Submission: Each 300-word write-up is due before the following Tuesday class, e.g., the 1st 300-word write-up is due on January 28 from the presentation on January 22, etc. Please submit each summary electronically through Quercus. as a Microsoft Word (.doc and .docx) file or as a PDF via the course's website on Quercus. You can submit summaries for 8 out of 9 guest presentations.	2025-01-21,2025-02-04,2025-02-11,2025-02-25,2025-03-04,2025-03-11,2025-03-18,2025-03-25,2025-04-01

Lead 1 presentation & discussionsion on weekly guest speaker topic	15%	2. Lead seminar and discussion on one guest speaker topic (15%). Due according to seminar schedule. In a small group (likely 2 people), you will present a 15-20-minute seminar based on a topic to be discussed by the guest speaker on the next day. The intention is to familiarize yourself and the class with the guest speaker's topic so that you can more fully appreciate and participate in the guest speaker's presentation. Your seminar will introduce the topic and delve into the details. The presentation needs to tell a story starting from explaining the issue, why we should care, who and what is affected, why the question is under-studied, and if relevant, solutions. The presentation must reference the literature (peer-reviewed, gray literature, information from industry sources, etc.). It is also important to note the lack of information or information that you could not access, e.g., lack of studies, information not in the public domain. Please try to comment on why the topic is under-studied. You will likely use power-point slides for the presentation. Please remember to acknowledge the source of every figure used, make all type no smaller than 24 print size, and use minimal text per slide. Slides are to prompt you and the audience and not to provide a full explanation. Criteria for Evaluation: For the presentation, you clearly convey main "take away" message(s) of topic, shows an understanding of the subject matter, presentation	No Specific Date

Assessment	Percent	Details	Due Date
		flows logically, effective presentation style in terms of delivery and visual aids. For leading the discussion, shows thoughtful consideration of interesting questions or prompts to lead the discussion and able to maintain an informed discussion that is based on evidence and not just personal reflection.	

| 3. Write one 4-page review and analysis of weekly guest speaker topic | 20% | 3. Write short review on one guest speaker topic (20%). Due according to seminar schedule. You will translate a "polished" version of your seminar into written form. The written report (not an essay) needs to: i) introduce the topic, ii) establish the motivation (why is this issue important?) and knowledge gap, iii) explain what you found using referenced information, and iv) end with a summary and conclusions. You and your group members can decide whether to write a single report or individual reports that minimize overlap in the subject matter. You may NOT use AI such as ChatGPT to compile and write this report. You are taking this course to strengthen your analytical and critical skills, which comes from you reading, evaluating and synthesizing the information you have read. The written submission should be 1000 words exclusive of figures, tables and references (double spaced, 12-point font, about 250 words/page), not including references or figures. The text should tell a story with references to information sources. Figures and tables help to tell the story so please use them! Criteria for Evaluation: Your writing should effectively summarize the main points of the topic that is expressed in a logical and clear fashion (your 1000 word summary tells a coherent story), shows evidence of research and working with new (to you) ideas and concepts, is well written (see below). Submission: Please | No Specific Date |

Assessment	Percent	Details	Due Date
		submit your report electronically as a Microsoft Word (.doc and .docx) file or as a PDF via the course's website on Quercus on (or before) the week following your seminar, e.g., the following Thursday by midnight.	

4.1 Write a final analysis - outline	10%	4. Final analysis. The report's main goal is to investigate a topic that, in your view, has been under-studied or insufficiently addressed in terms of solutions. The topic must be different from any of those presented during the term. You must obtain permission from the course instructor for the choice of topic by January 22, 2025. The choice of topic is tricky: the topic needs to have sufficient information to explain and justify the need for investigation and yet the topic cannot be one that has received considerable attention. Thus, justification for the choice of the topic should come some evidence suggesting that the issue has the potential to impact environmental, ecosystem and/or human health, as related to pollutants, but is lacking a fulsome understanding. Your report will document what is and is not known about the issue. Note that it is important to identify key knowledge gaps. It would be a bonus if you could assess the reason(s) for knowledge gaps. You will try to answer questions such as "who or what is impacted (are they a vulnerable or marginalized population)?", "what are the potential or actual impacts?", "what are the major gaps in understanding?", "who is and who is not doing research on the topic?", "what are key knowledge gaps that would help achieve a solution(s)?"The outline should contain the major headings and subheadings of your report along with 1-2 bullet points to give a preview of what you will discuss. It is especially	2025-01-29

Assessment	Percent	Details	Due Date
		important to present a strong motivation for your chosen topic in the "Introduction". Criteria for Evaluation: Outline: Provides sufficient information to evaluate whether this is a reasonable topic to pursue. The headings and subheadings, along with accompanying points, should provide an overview of topic. You need to include at least 5 sources of information.	
4.2 Write a final analysis - report	25%	See "Write a final analysis - outline" for an explanation of the assignment. Criteria for evaluation: Final report: Similar to the 1000-word summary, your writing should effectively summarize the main points of the topic that is expressed in a logical and clear fashion (your analysis tells a coherent story), shows depth of research effort which is demonstrated by citing the peer-reviewed literature and other sources, your ability to work with new (to you) ideas and concepts, and is well written (see below). Added to this are the criteria of creativity, thoughtfulness and level of sophistication in dealing answering the questions posed above. Submission: Please submit your outline and then report electronically as a Microsoft Word (.doc and .docx) file or as a PDF via the course's website on Quercus on by the due date.	2025-04-14

Assessment	Percent	Details	Due Date
Participation	10%	5. Weekly participation in classes and seminars (10%). You will read one article for each seminar to familiarize yourself with that week's topic. This will allow you to better understand the breadth of the topic and to more fully participate in the seminars presented on these topics. You are expected to participate in each class by asking questions and contributing to the discussion.	No Specific Date

Late Assessment Submissions Policy

Without a declaration form filed, the late penalty is a lowering of the grade by 3% per day with 3% applying to the weekend.

Policies & Statements

Late/Missed Assignments

This item is listed here to remind you to include your late/missed assignment policy; if you have late penalties, you are required to publish them in your syllabus. Please see the A&S Academic Handbook (https://www.artsci.utoronto.ca/faculty-staff/teaching/academic-handbook) sections on missed term work (Section 4.7), late term work and extensions (section 4.8), and missed term tests (Section 5.3) for more information.

Abscence from class, late/Missed Assignments, etc.

Please consult an instructor as soon as possible if you are unable to complete an assignment on time or if you are unable to present your seminar. Late penalty and extension policy - Assignments will be accepted up to ONE week after the due date with a penalty levied. You may report your absence through (1) absence declaration via ACORN, (2) UoT verification of illness or injury form (VOI), (3) college registrar's letter, or (4) letter of academic accommodation from accessibility services. Without a declaration form filed, the late penalty is a lowering of the grade by 3% per day with 3% applying to the weekend.

Attendance

- You may join on-line only when you are not able to attend in person. Online expectations regarding etiquette/participation
  - University statement regarding a positive learning environment: "*The University of Toronto is committed to equity, human rights and respect for diversity. All*

members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities."

- Course sessions will not be recorded.

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).

Cell Phones and Laptop Usage

Technology can support student learning, but it can also become a distraction. Research indicates that multi-tasking during class time can have a negative impact on learning. Out of respect for your fellow students in this class, please refrain from using laptops or mobile phones for purposes unrelated to the class. Do not display any material on a laptop which may be distracting or offensive to your fellow students.