

ENV 1197: Research in Environment and Sustainability



UNIVERSITY OF
TORONTO

Term: Fall 2022
Time: Th 12-2pm
Location: UC 177
Instructor: Meredith Franklin
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Office Hours: By Appointment
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Course Description

ENV 1197 serves as the first in a two-part series on research methods in environment and sustainability and is a core course for the Masters in Environment and Sustainability (MES). We will introduce how to do research commonly used in environmental science. Students will become familiar with the concepts, methods, and applications of research and evaluation; learn how to critically consume research; and develop a proposal on an appropriate research project that can be used as the basis for the MES thesis.

Learning Objectives

Through this course, students will

- 1) Become familiar with the concepts, language, methods, and applications of research;
- 2) Develop the ability to formulate clear research questions;
- 3) Develop a concept map;
- 4) Develop the ability to identify an appropriate research design to answer research questions and contribute to generalizable knowledge;
- 5) Learn how to assess the strengths and weaknesses of the research design in any given study;
- 6) Learn how to conduct basic environmental data analysis;
- 7) Write a detailed, feasible, and rigorous research proposal.

Prerequisite(s): None

Course Notes

Lecture notes presented in class will be posted on Quercus

Technological Proficiency and Hardware/Software Required

We will learn basic data analysis in R (<https://www.r-project.org/>) using RStudio (<https://www.rstudio.com/>)

Readings and Supplementary Materials

Weekly readings will be posted on Quercus

Discussion

This term we will be using Piazza for class discussion. The system is highly catered to getting you help fast and efficiently from classmates and myself. Rather than emailing questions, I encourage you to post your questions on Piazza. Find our class signup link at: <https://piazza.com/utoronto.ca/fall2022/env1197hflec0101>

Description and Assessment of Assignments

Assignments: There will be 4 assignments given throughout the semester, which will be based on the lecture topics. Late assignments will be penalized by 20% for each day past the due date.

Proposal Development: In preparation for the final proposal, you will provide a draft in the 10th week of the semester. A brief presentation summarizing your research topic will be conducted in the 11th week, and based on these, a peer review will be conducted. Each of these components will contribute to your overall grade.

Final Proposal: The final proposal will take the form of a traditional thesis (chapters) or a scientific paper. It will be due after our final class (during exam period).

Grading Breakdown

<u>Assignment</u>	<u>% of Grade</u>
Participation/Discussions	10%
Homework (4)	20%
Proposal Draft	10%
Proposal Presentation	5%
Peer review/critique	5%
Final proposal	50%
TOTAL	100%

Assignment Submission Policy

Late assignments will not be accepted without penalty, except when verifiable extenuating circumstances can be demonstrated.

Course Schedule: A Weekly Breakdown

	Topics/Weekly Activities	Due Dates
Week 1 September 15	Introductions, overview of course	
Week 2 September 22	Developing a research question	HW 1
Week 3 September 29	Developing a concept map for sustainable systems (Nicole Spiegelhaar)	
Week 4 October 6	Fostering research partnerships (John Robinson)	HW 2
Week 5 October 13	Information literacy and conducting a literature review (U of T Libraries)	
Week 6 October 20	Outlining/selecting appropriate methods	HW 3
Week 7 October 27	Defining a plan for data collection (Debra Wunch)	
Week 8 November 3	Tools for analyzing environmental data	HW 4
Week 9 November 10	Fall Break, no class	
Week 10 November 17	Presenting and communicating your research	Draft proposal
Week 11 November 24	Project summary presentations and critiques	Proposal Presentation
Week 12 December 1	Final project roundtable	Peer critiques
Exam week December 8		Final proposal

Statements on Academic Conduct and Support Systems

Academic Conduct

All suspected cases of academic dishonesty will be investigated following procedures outlined in the *Code of Behaviour on Academic Matters*. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, please reach out to me. Note that you are expected to seek out additional information on academic integrity from me or from other institutional resources (for example, the [University of Toronto website on Academic Integrity](#)).

Accommodations

The University provides academic accommodations for students with disabilities in accordance with the terms of the Ontario Human Rights Code. This occurs through a collaborative process that acknowledges a collective obligation to develop an accessible learning environment that both meets the needs of students and preserves the essential academic requirements of the University's courses and programs. Students with diverse learning styles and needs are welcome in this course. If you have a disability that may require accommodations, please feel free to approach me and/or the Accessibility Services* office.

[Accessibility Services on the St. George campus](#)

Religious Observances

The University provides reasonable accommodation of the needs of students who observe religious holy days other than those already accommodated by ordinary scheduling and statutory holidays. Students have a responsibility to alert members of the teaching staff in a timely fashion to upcoming religious observances and anticipated absences and instructors will make every reasonable effort to avoid scheduling tests, examinations or other compulsory activities at these times. Please reach out to me as early as possible to communicate any anticipated absences related to religious observances, and to discuss any possible related implications for course work.

Family Care Responsibilities

The University of Toronto strives to provide a family-friendly environment. You may wish to inform me if you are a student with family responsibilities. If you are a student parent or have family responsibilities, you also may wish to visit the Family Care Office website at familycare.utoronto.ca.

Intellectual Property Statement

Course material that has been created by your instructor (i.e. lecture slides, term test questions/solutions and any other course material and resources made available to you on Quercus) is the intellectual property of your instructors and is made available to you for your personal use in this course. Sharing, posting, selling or using this material outside of your personal use in this course is not permitted under any circumstances and is considered an infringement of intellectual property rights.

This course, including your participation, will be recorded on video and will be available to students in the course for viewing remotely and after each session. These are intended only for students registered in the course. Course videos and materials belong to your instructor, the University, and/or other source depending on the specific facts of each situation, and are protected by copyright. In this course, you are permitted to download session videos and materials for your own academic use, but you should not copy, share, or use them for any other purpose without the explicit permission of the instructor.

Land Acknowledgement

A land acknowledgement is a way of honouring the Indigenous people who have lived and worked here for thousands of years, and whose land was colonised. It is also an invitation to reflect on the history of this land and we encourage you to consider the history of the land wherever you are now. <https://native-land.ca/>