



**ENVS*223H1
ENVIRONMENTAL RESEARCH SKILLS**

Fall 2020

Professor: Karen Morrison, Ph.D.

Office hours: Thursday 4-5pm (on-line via Blackboard Collaborate link in Quercus)

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This is an on-line course, with lectures delivered asynchronously, with portions dedicated for group work, participation and discussion. Students need to be able to prepare and submit short essays in PDF format onto Quercus and have the ability to use Blackboard Collaborate (Ultra).

You should be prepared to spend 2-4 hours per week listening to, reading and participating in learning the course material found on the Quercus site. You will need to check into the site 2-3 times each week to keep up to date with the lecture material, on-line discussions (and peer review), readings and time-limited weekly quizzes.

***Weekly Readings Posted on Quercus.**

Calendar Description:

The practical, interdisciplinary and controversial nature of environmental issues, as well as the uncertainty that surrounds measures to address them demand mastery of a particular range of skills by environmental students. This course teaches the fundamental research, analysis and presentation skills required for effective environmental work.

Course Objectives and Design:

This course will allow students to develop basic skills that will enable them to locate and critically assess existing environmental research, as well as to design, conduct and report on a basic research project on a current environmental issue. More concretely, following the successful completion of the course students should be able to:

- Understand how to develop a testable research question that can guide environmental research.
- Design an environmental research project.
- Understand and incorporate ethical concerns and responsibilities into research.
- Identify a suitable sampling strategy and design appropriate questions (or lines of questioning) for interviews.
- Identify and evaluate different primary data gathering techniques.
- Identify and develop the skills required to conduct basic fieldwork.
- To communicate research results effectively through different forms (orally, written and visually).
- Critically assess the strengths and limitations of environmental research.
- Develop the ability to work collaboratively and effectively with peers.
- Develop strong writing skills.

Lecture Schedule Fall 2020

Week	Date	Main Theme	Link to Assignments (due by 24:00 Wednesday nights)
PART I. General Research Concepts			
1	10-Sept	Introduction and Overview. Social research (ontology, epistemology, methodology & axiology) in the environmental studies/sciences;	
2	17-Sept	Research as one way of knowing; Generating Research Questions	
3	24-Sept	Research Ethics	
4	1-Oct	Research Design; Mixed methods Research	Reading Synthesis due for Peer Review by 30 September
PART II. Introduction to Various Research Methods in Environmental Studies/Sciences			
5	8-Oct	Questionnaire/Survey Design	Peer Review of Reading Synthesis must be completed by 8 October
6	15-Oct	Semi-structured interviews	Final Research Synthesis due by 18 October.
7	22-Oct	Place-Based Methods, Visual Methods	
8	29-Oct	Ethnography; Participatory Methods;	29 October. <i>Deadline to complete on-line class survey.</i>
PART III. Data Analysis Techniques			
9	5-Nov	Qualitative Data Analysis	Research Instrument Report due 4 November
READING WEEK			
10	19-Nov	Mixed Methods Analysis Techniques	19 Nov. Resubmission deadline for Research Instrument Report ONLY if requested by the prof or TAs
PART IV. Synthesis and Communication Techniques and Issues			
11	26-Nov	Formulating Recommendations: Scenarios & Future-based planning	
12	3-Dec	Science Communication	Data Analysis Assignment due 9 December

EVALUATION	% FINAL GRADE	DUE DATES
Reading Synthesis& Peer Review	20%	30 September; 8 & 18 October
Online Participation, including Survey Participation	10%	on-going
Individual Research Instrument Report	20%	4 November
Data Analysis Assignment	20%	9 December
Quizzes	30%	weekly
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TOTAL	100%	

Assignments

Assignment 1: Reading Synthesis and Questions & Peer Review (20%)

Synthesis Due: 30 September

Peer Review Due: 8 October

Final Synthesis Due: 18 October

You are to submit a one-page summary of the required readings indicated below. The summary should be between 500 and 600 words and include a ***summary and synthesis*** of the main themes and ideas of both of the required readings and ***at least one discussion question***.

The articles are available on the course Quercus site. You will upload your reading synthesis on the PeerScholar site by 30 September. During the week of 1-8 October, you will peer review two of your peers' submissions. Then you will revise your own paper based on your peer review and any new insights you have gained. The final deadline for your submission is 18 October (see Figure 1, below). Both your final synthesis and the quality of your peer review will be evaluated (the former will be the mark you receive for this assignment, the latter will be evaluated as part of your overall participation mark, see grading scheme below).

The purpose of this assignment is to focus your reading; deepen your understanding of and reflection on the main ideas and questions discussed in the course readings. Keep the following points in mind when writing each summary: The main ideas and themes should come from ALL the readings for the session. The focus should be on the ***main ideas and themes as they relate to this course*** - not specific details and examples. A main theme or idea should be in the form of a complete sentence (not a word or phrase) and should be expressed using your own words (that is, do not use quotations). ***You need to connect, compare and/or contrast ideas and themes from the different readings.***

Discussion questions should be authentic questions that are informed, insightful, well-written and point to future directions for your own inquiry and learning. You can write the summary in point form or as an essay. The writing should be concise, specific and clear. Make sure to indicate sources of ideas (i.e., author, date, page), but you do not need to include a reference list.

In addition to the overall criteria for written work (see p. 5, below) this assignment will be graded according to the following criteria:

Reading Synthesis Criteria: Full and accurate understanding of the essential meaning of all readings; appropriate and accurate selection of relevant content from the readings; excellent ability to identify common ideas and links within and across the readings; excellent referencing and paraphrasing/summarizing of ideas from readings; well-thought out and insightful question(s) generated from a reflection on the readings.

Peer Review Criteria: Engaging and thoughtful reply; constructive criticism framed in appropriate and supportive professional language; Expression of personal insights and reflections gleaned from peers' reading synthesis.

Reading List

Moon, K and D. Blackman. 2014. A guide to understanding social science research for natural scientists. *Conservation Biology*. 28(5):1167-1177.

Tengo, M. et al. 2017. Weaving knowledge systems in IPBES, CBD and beyond – lessons learned for sustainability. *Environmental Sustainability*. 26:17-25.

Create Phase	Assess Phase	Reflect Phase
Thursday Sept 24 – Wednesday Sept 30	Thursday October 1 – Thursday Oct 8	Friday October 9 – Sunday October 18

Figure 1. Deadlines for the initial submission of the Reading Synthesis (Create Phase), Peer Review (Assess Phase) and Final Submission for Evaluation (Reflect Phase) via PeerScholar link in Quercus

Online Participation, including Survey Participation (10%)

The online participation grade will be assigned at the end of the semester and will take into account all of the assignments on Quercus and PeerScholar where participation and/or peer review have been solicited. On-line activities include: generating and responding to research questions, generating questions for the class survey (see Data Analysis Assignment, below), peer review, and other posts. The rubric for the participation mark is posted on Quercus. In addition to the quality of the work, the quantity of work will be assessed: Marks will be deducted for missing assignments (i.e. peer reviews, initial or final submissions and questions). All on-line participation must adhere to the guidelines and good practices pertaining to public academic communication among peers.

Individual Research Instrument Report (20%) - Due 4 November

Each student will submit **one** data collection instrument* report. The report will contain the following information:

1. Research Question

1a. Your sub-question(s), if relevant

2. Your Method

2a. Literature review on your method (750 words on how and why it is used; **strengths and weaknesses**)

2b. Your research instrument (i.e. the data collection form)

2c. How you would use it (i.e. sampling strategy)

3. Data Analysis Strategy (250 words on how you plan to individually analyze the data you collect)

At least four (4) high-quality references (e.g. books, journal articles, practitioner manuals) pertaining to the method and/or design of the instrument are required. Websites are not considered to be high quality sources for this assignment.

The development of field research skills is a critical component of this course. In previous (non-CoVID-19) years, the course involved the collection of original 'field' data by students. While that requirement has been lifted due to safety concerns this year, the research instruments that you develop will still be marked as though the instrument were to be used in public immediately – i.e. it must be 'field ready'. Assignments that veer widely off track and/or that are not 'field ready' will be deemed to be of insufficient quality to meet the requirements of this second-year University course. Students will be given one opportunity to address the issues flagged by the TAs and will have until 19 November to redo and resubmit the assignment.

Failure to resubmit will result in students receiving a failing grade on this assignment. In addition to logic, cohesion and research, the assignment will be graded using the evaluation criteria for written work outlined below.

* the 'instrument' is the tool on which data are recorded

Data Analysis Assignment (20%)

Due: 9 December

This assignment will take **several hours** to complete. Please do not wait until the last minute to begin.

All students must complete the survey with the questions developed by the class on-line by 29 October. **To ensure we have a data set of adequate size, the penalty for non-compliance (i.e. not completing the full on-line survey) will be a deduction of 50% of the final mark for this assignment.**

Using the survey data set provided by the class, and the raw interview data provided for the Ontario Environmental Farm Plan study, each student will complete the assignment provided. The data files are available on Quercus. The reports will be completed using the template provided and will focus on the analysis and presentation of *a selection of the data* as well as an informed critique of the data collection instruments and techniques used (See also, Overall Evaluation Criteria, below). Emphasis will be on the thoroughness and quality of the answers and the presentation of the data used. NOTE: You may find it helpful to read the following two articles to complete the semi-structured interview assignment:

Morrison, K. and J.E. FitzGibbon. 2013. Adaptive governance of dynamic social-ecological systems: The case of the Ontario Environmental Farm Plan (1992-2011). *Agroecology and Sustainable Food Systems*. 38:378-409.

Glasbergen, P. 2011. Understanding partnerships for sustainable development analytically: the Ladder of Partnership activity as a methodological tool. *Environmental Policy and Governance*. 21:1-13.

NOTE:

This is not a quantitative methods course; therefore, the analysis of the survey data will be limited to a descriptive analysis.

Online Quizzes (30%)

One- or two-timed mini quizzes will be posted weekly and students will have one week to complete and submit them. Once begun, each quiz will be available for approximately 30 minutes. **They will be comprehensive and based on the content of the weekly video lectures, as well as any additional videos, readings and other material posted for that week.** The quizzes will include multiple choice, matching, short answer and other question types and each quiz will include approximately 5-7 questions. You should take your own notes on the readings and video lectures as you will not have time to consult the original sources during the quiz.

Overall Evaluation Criteria

The primary criteria used in evaluating **written work** are the following:

- 1) Mechanics: Your work must be completely free of grammatical errors, spelling errors or major factual errors. References can be in any style, but the same format must be used consistently, and they must be accurate.
- 2) Writing style: Your papers should be written in a clear and unambiguous style which assists, rather than impedes, communication with the reader.
- 3) Structure: Your written work should have a clear focus, provided by the research question, and a structure which logically flows from that focus.
- 4) Precision and accuracy: Precision means saying exactly and specifically what you mean, avoiding ambiguity and vague generalities. Accuracy refers to absence of major factual errors.

- 5) Analysis: Your analysis should display understanding of the topic and based on that understanding, originality of thought.

Please also refer to the Faculty's and the University's Grading Policies at:

<https://fas.calendar.utoronto.ca/rules-regulations#marks>

<http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/PDF/grading.pdf>

Academic Integrity

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:

- Using or possessing any unauthorized aid, including a cell phone
- Looking at someone else's answers
- Letting someone else look at your answers
- 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

Further information about academic integrity is available from the website of the Office of Student Academic Integrity at:

www.artsci.utoronto.ca/osai/students

- Turnitin

Turnitin will be used for all written assignments in this course. Turnitin is a tool that will assist in detecting textual similarities between compared works.

A Turnitin Assignment box will be created in the Quercus course. Students will submit their assignments electronically into this dropbox for analysis. **With the integration of Turnitin into Quercus courses, instructors and students should not access the program through the Turnitin.com website.**

For more information on Turnitin, please send a query to q.help@utoronto.ca.

Normally, students will be required to submit their course essays to Turnitin.com 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 Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service is described on the Turnitin.com web site.

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, <http://academicintegrity.utoronto.ca/>).

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: <http://studentlife.utoronto.ca/as>

ADDITIONAL INFORMATION

Student Conduct

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect and to refrain from actions disruptive to such a relationship. Moreover, it is the responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom, and the responsibility of the student to cooperate in that endeavour. Further, the instructor is the best person to decide, in the first instance, whether such an atmosphere is present in the class.

Lateness Penalty

Written assignments and quizzes are due on-line on Quercus or a related site (i.e. PeerScholar) by 11:59pm the night they are due. Late assignments, if accepted, will be subject to a penalty of 5% of the value of the final mark per day. Missed on-line quizzes cannot be made up without an exemption (see below).

Exceptions to the lateness penalty for valid reasons such as illness, compassionate grounds, etc. will be entertained by the Course Director on a case-by-case basis. Some assignments cannot be handed in late (i.e. peer review, quizzes(e.g after answers are released) and completion of the class survey) and so ***deadlines will not be extended.***

Re-marking Policy

Re-marking of assignments will be considered on an exceptional case-by-case basis. Students must approach their TA for consideration via a well-written and professional email outlining their concerns. The TA will respond to the email. The mark on a re-marked assignment can go **up or down**. If, after the TA has considered their case, a student is still concerned they can email the professor to request that the assignment be re-marked. The professor will review the student and TA comments and determine, at her discretion, whether to re-evaluate the assignment. The grade on the assignment can go **up or down** and the mark given by the professor will be the final mark on the assignment.

Online Communication

Email will be the primary form of communication between the students and the professor outside of the regularly scheduled office hours. Questions about the assignments should be directed to the Teaching Assistant for the Course. The professor will endeavor to respond to an email within **3 working days**. Emails received in the evening or weekends will not be read until the next business day. Students are advised to not send any reminders regarding their communication until at least 3 working days have passed. Urgent information regarding an issue that would substantially affect the student's ability to participate in the course should be marked as such. Student emails should include 'ENV223' in the subject line for easier processing.

Equity, Diversity and Inclusion

The University welcomes and includes students, staff, and faculty from a wide range of backgrounds, cultural traditions, and spiritual beliefs. Instructors are strongly encouraged to include the following statement in their course syllabus and in their Quercus course shell: 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.

Notification to Students if Recording Online Course Meetings

Notice of video recording and sharing (download and re-use prohibited) 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. Course videos and materials belong to your instructor, the University, and/or other sources depending on the specific facts of each situation and are protected by copyright. Do not download, copy, or share any course or student materials or videos without the explicit permission of the instructor. For questions about the recording and use of videos in which you appear, please contact your instructor.

Religious Observance

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.