EESC33H3 F

Environmental Science Field Course

Fall 2023 Syllabus

## Course Meetings

### EESC33H3 F

| **Section** | **Day & Time** | **Delivery Mode & Location** |
| --- | --- | --- |
| **LEC01** | Thursday, 9:00 AM - 11:00 AM | In Person: HL B110 |

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

Thursdays, 9 am –11 am.

Some field trips will last from 9-12 on Thursdays.

## Course Contacts

**Course Website:** <https://q.utoronto.ca/courses/313086>

**Instructor:** Prof. Mathew Wells

**Email:** [m.wells@utoronto.ca](mailto:m.wells@utoronto.ca)

## Course Overview

A field course on selected topics in aquatic environments. Aquatic environmental issues require careful field work to collect related hydrological, meteorological, biological and other environmental data. This hands-on course will teach students the necessary skills for fieldwork investigations on the interactions between air, water, and biota.

This years "**Field course**" ESC33 will be taught as a series of tutorial lectures, with 3 in person short field trips. The course will be primarily about data-analysis of water quality parameters from lakes. We will collect some of this data ourselves from boats, and we can explore the data using online tools and exploring ways to understand this data using Matlab.

Canada has millions of lakes. They are all different, and their dynamics and water quality vary, as does the fish they can support. We can largely classify lakes by the details of the physics of how water responds to the changing seasons. Many lakes around the world now have automated measuring systems (see for example [*http://ontario2.loboviz.com/*](http://ontario2.loboviz.com/)) so there is a wealth of online data available. The goal of this class is to give you some tools so that you can quickly interpret such data and help you to classify lake behaviour.

This is a small class, so I want to run it more like a tutorial than as a classic lecture. This means I want students to be engaged and ask questions, Every week I'll start with a small lecture, then we will do an exercise using Matlab. The TA (**Yulong Kuai**) and I will talk with you in groups as we do these Matlab exercises. I will post the lecture file and any Matlab exercises prior to class. I will try and record each class so that you can review it later.

### Course Learning Outcomes

By the end of class students should be able to appreciate how field data is collected, and how long term datasets are analyzed to study water quality trends.

**Prerequisites**: 1.5 full credits at the B-level or higher in EES and permission of instructor.

**Corequisites**: None

**Exclusions:** (EEB310H)

**Recommended Preparation**: None

**Credit Value:** 0.5

I am assuming you have taken first year math or stats

## Course Materials

Before the 4th  week of class you need to install Matlab on your own machine - it is free for students and you can get the software at

<https://onesearch.library.utoronto.ca/ic/mathworks-software-–-matlab-students>

A really good introduction to limnology (the study of lakes) is this book - Lakes : a very short introduction by Professor Warwick F. Vincent. A PDF of this book is available at UofT library at <http://go.utlib.ca/cat/12013998>- you just need to be logged in through you student ID to get this university library material. If you are old fashioned like me and enjoy reading real books, you can buy it from Indigo or Amazon for less than $10.

## Marking Scheme

| **Assessment** | **Percent** | **Details** | **Due Date** |
| --- | --- | --- | --- |
| **Final presentation report** | 50% |  | 2023-11-30 |
| **Assignent 1** | 16% |  | 2023-10-19 |
| **Assignent 2** | 17% |  | 2023-11-02 |
| **Assignent 3** | 17% |  | 2023-11-16 |

### Late Assessment Submissions Policy

Please contact me in if you have a valid reason for late submission. Otherwise there is a 10% per day latee penalty.

## Policies & Statements

### Academic Integrity

The University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters (<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences.  
  
Potential offences in papers and assignments include using someone else's ideas or words without appropriate acknowledgement, submitting your own work in more than one course without the permission of the instructor, making up sources or facts, obtaining or providing unauthorized assistance on any assignment.  
  
On tests and exams, cheating includes using or possessing unauthorized aids, looking at someone else's answers during an exam or test, misrepresenting your identity, or falsifying or altering any documentation required by the University.

### Equity, Diversity and Inclusion

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.  
  
The University of Toronto is a richly diverse community and as such is committed to providing an environment free of any form of harassment, misconduct, or discrimination. In this course, I seek to foster a civil, respectful, and open-minded climate in which we can all work together to develop a better understanding of key questions and debates through meaningful dialogue. As such, I expect all involved with this course to refrain from actions or behaviours that intimidate, humiliate, or demean persons or groups or that undermine their security or self-esteem based on traits related to race, religion, ancestry, place of origin, colour, ethnic origin, citizenship, creed, sex, sexual orientation, gender identity, gender expression, age, marital status, family status, disability, receipt of public assistance or record of offences.

### University Land Acknowledgement

I wish to acknowledge this land on which the University of Toronto operates. For thousands of years, it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.

### Accommodations

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, please feel free to approach me and/or the AccessAbility Services Office as soon as possible.  
  
AccessAbility Services staff (located in Rm AA142, Arts and Administration Building) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations 416-287-7560 or email [ability.utsc@utoronto.ca](mailto:ability.utsc@utoronto.ca). The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

### Use of Generative Artificial Intelligence Tools

Students may use artificial intelligence tools, including generative AI, in this course as learning aids or to help produce assignments. However, students are ultimately accountable for the work they submit.  
  
Students may not use artificial intelligence tools for taking tests, writing research papers, creating computer code, or completing major course assignments. However, these tools may be useful when gathering information from across sources and assimilating it for understanding.  
  
The knowing use of generative artificial intelligence tools, including ChatGPT and other AI writing and coding assistants, for the completion of, or to support the completion of, an examination, term test, assignment, or any other form of academic assessment, may be considered an academic offense in this course.

### Recording of Classroom Material by Students

Recording or photographing any aspect of a university course - lecture, tutorial, seminar, lab, studio, practice session, field trip etc. – without prior approval of all involved and with written approval from the instructor is not permitted.

### UTSC policies and statements

Please read UTSC academic policy