Fall 2020 Course Offerings

**ENVS 6000, Environmental Science and Technology**  
**Instructor:** Dr. Amir Ali Khan  
**Schedule:** Tuesdays and Thursdays from 5:00 pm – 6:30 pm

This is the common, first course for the interdisciplinary Graduate Program in Environmental Science and as such it needs to lay some of the groundwork for subsequent coursework in this program. More importantly however, this course is primarily designed to introduce students to the scope and interdisciplinary nature of environmental science. Further, it will also serve to introduce students to the breadth of research being done by the faculty members participating in this program across campus as well as other researchers in the region.

This course will be offered asynchronously, with some live lectures on some Tuesdays and Thursdays by researchers. These will be recorded and made available to the class for them to listen to when it is convenient for them. The students will need to make presentations. These can be pre-recorded or made live. Either way a recording will be made available to the remaining students.

**ENVS 6001, Earth and Ocean Systems**  
**Instructor:** Dr. Norm Catto  
**Schedule:** Tuesdays and Thursdays from 3:00 pm – 4:30 pm

There will be two virtual sessions each week to discuss topics in Earth & Ocean Systems with reference to those of interest for Environmental Science and in accordance with student interests. The meetings will involve discussions, and may include practical analysis/problem solving. Topics will depend upon your interests and mine and will cover a range of issues, initially including those listed below. Content may change in response to events.

This course will be have nominal office hours of Tuesdays and Thursdays from 3:00-4:30. There will be two asynchronous sessions per week, with optional synchronous sessions on Tuesdays from 3:00-4:15 pm. Notes for all sessions and assignments will be posted on-line at [http://www.online.mun.ca/](http://www.online.mun.ca/).

**ENVS 6002, Environmental Chemistry and Toxicology**  
**Instructor:** Dr. Heather Reader  
**Schedule:** Tuesdays and Thursday from 10:30 am – 11:45 am

Environmental chemistry is the study of the sources, reactions, transport, fates and effects of natural and man-made substances in air, water, and soil, and how they are affected by human activity. Environmental toxicology focusses on the effect of harmful substances on organisms and ecosystems. Out of these two closely related fields has arisen the study of green chemistry which seeks to reduce or eliminate the generation and use of hazardous chemicals and processes. We will meet weekly to chemistry, marine chemistry, and toxicology: routes of exposure of organisms to environmental toxicants, fate of environmental toxicants, mechanisms of action of toxicants, role of environmental pollution in human disease.

This course will be offered in a mostly asynchronous method, with some synchronous material as well. More detailed information will follow.
ENVS 6009, Project Report in Environmental Science
Instructor: Each student’s individual supervisor

*Note that this course is offered every semester.

The project report provides an opportunity for the student to create an original perspective on a selected environmental issue through the reading of appropriate literature and reinterpretation of other sources of information (e.g. existing data). Normally the project will be multidisciplinary or interdisciplinary in nature. The project report will be equivalent to a review article in a journal, or a consultant’s report on a particular environmental issue. Collection of new data from the field or laboratory and analysis of this new data is permitted, but not required for the MEnvSci degree.

MEnvSci students register for ENVS 6009 in the semester in which they plan to submit their report for examination, typically when all other course work has been completed. Students must follow the format requirements (margins, pagination, etc.) as outlined in the Guidelines for Theses and Reports on the School of Graduate Studies website. You must submit your paper to the program assistant by email (PDF format preferred), so that it can be sent out for examination. In order to meet the deadlines for convocation, please keep the following in mind:

- examiners need enough time to review the report, comment on it, and return it to the student for corrections;
- the student makes the corrections in consultation with the supervisor;
- the student submits the final copy by email, along with the Report Deposit form, to the program assistant at the Dean of Science Office;
- the program assistant submits the grade to the Registrar’s Office and ensures the Recommendation for Award of a Graduate Degree form is sent to the School of Graduate Studies by their deadline.

The recommended deadlines for submitting your report so that we can best avoid delays in completing your requirements for the semester are:

- Fall semester - November 15
- Winter semester - March 15
- Spring semester - July 15

Winter 2021 Course Offerings

ENVS 6003, Applied Ecology
Instructor: TBD
Schedule: TBD

Applied Ecology ENVS6003 is an advanced graduate course on the applied ecology –on applications of science of ecology to real-world problems: policies and management. We will cover recent topics of particular importance to environmental sciences, and discuss examples of their applications considering the application of the science of ecology to real world questions. The practical and local-relevance component of the course includes reading and commenting on examples of actual environmental assessments and policy discussion papers in Newfoundland and Labrador.

The method of delivery will be determined at a later date.
ENVS 6007/ ENGI 9609, Environmental Risk Assessment (*this course will only be offered if ENGI 9609 is being offered).
Instructor: TBD
Schedule: TBD
Elements of risk assessment; measuring and analyzing hazards and risks; risk assessment goals, concept in risk assessment; risk assessment process; hazard identification, release assessment modeling, exposure response evaluation, risk characterization and consequence determination; risk assessment techniques and methods of approach; dose-response models; risk based criteria for remedial action planning, probabilistic risk assessment; management decisions from risk assessment; multi-media fate and transport modeling; bio-concentration and accumulation of risk agents; case studies and applications.

The method of delivery will be determined at a later date.

ENVS 6010, Environmental Seminar
Instructor: Dr. Evan Edinger
Schedule: Thursdays from 9:00 am to 12:00 pm

The practice of environmental science inevitably involves verbal communication of results to peers and colleagues, clients, students and/or the public. This seminar course is primarily intended to provide a forum for student discourse of the environmental science problems they have chosen for their respective research projects. It is also a vehicle to develop skills in critically examining project proposals and/or research results of colleagues. There will be a seminar on presentation skills early in the semester given by an expert in this area.

The method of delivery will be determined at a later date.