

BIOL 3ET3 Ecotoxicology Winter 2021 Course Outline

Course Details

Instructor: Dr. Karen Kidd, karenkidd@mcmaster.ca, phone extension 23550

Office hours: Life Sciences Building 337, to be posted on Avenue to Learn

Tutorial TA: TBD

Lectures: Tuesdays 9:30-10:20 am and Fridays 9:30-10:20 am, Location TBA

Tutorial: Tuesdays 11:30 am - 12:20 pm, Location TBA

Course Description

- This course covers the sources and fate of contaminants in the environment, and the adverse effects that these contaminants have on diverse species including humans.
- Each week there will be 3 hours of class time that includes live (synchronous) lectures and tutorials. Tests are scheduled during class times as indicated on the course schedule.
- Tutorial sessions throughout the semester will enable students to learn practical skills in ecotoxicology and explore lecture materials in more depth through discussions and assignments. Note: Any course changes will be posted to Avenue to Learn.

Course Learning Objectives

By the end of this course students will be able to:

- Understand the classes of contaminants, their fate in the environment and routes of organism exposures
- Appreciate the mechanisms of toxicity in organisms, populations and communities
- Use the breadth of topic knowledge from lectures and readings to answer fact-based and applied questions
- Conduct basic exposure, population and community ecotoxicological assessments
- Read, understand and discuss journal articles relating to ecotoxicology studies

Course Schedule

The topics for this term include:

- Major classes of contaminants
- Contaminant sources and environmental fate
- Exposure routes in organisms, biotransformation
- Bioavailability, bioaccumulation, biomagnification
- Toxicity tests
- Molecular, cellular, tissue and individual effects of contaminants
- Population & community effects of contaminants
- Global patterns of contaminants in humans and wildlife
- Biomonitoring and field-based testing, whole ecosystem studies
- Environmental quality guidelines, environmental risk assessments and global conventions
- Emerging issues in ecotoxicology

***A weekly schedule of lectures and tutorials and their topics, along with test dates and assignment due dates will be posted to Avenue to Learn prior to the beginning of the semester.**

IMPORTANT NOTE

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If any modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes. Changes will be communicated through regular McMaster communication channels, such as McMaster Daily News, Avenue to Learn and/or McMaster email.

Course Materials

- The required text is Fundamentals of Ecotoxicology, 4th Edition, by Michael Newman and it is available as an e-book.
- Reading materials, lecture notes, assignments and the course outline and schedule will be posted as PDF files on the course website through Avenue to Learn.
- All tutorial exercises will require a computer to complete.

Course Evaluation

- **Tests** - There will be 3 tests during the semester. The material these tests cover will not be cumulative. Two will be written in person during regular class time and the third will be written in person during the final exam period. These tests will be on materials presented during lectures and tutorials (except tutorials with assignments) given by Dr. Kidd, the teaching assistant and any guest lecturer(s), along with any provided readings/lecture notes posted on

Avenue to Learn. Term tests will include short answer questions, labeling figures, definitions, and longer compare and contrast questions. The scheduled term tests will not be changed unless McMaster is closed due to weather. There are no make-up tests in BIOL 3ET3.

- **Assignments** - There will be 4 individual tutorial assignments (each worth 5-15%) that will enable students to connect the core course material and gain a better understanding of the implications of chemical exposures. They include assessments of exposure routes and potential risks, population modeling to predict chemical impacts, and aquatic community assessments at impacted sites. For written assignments, students are encouraged to use the Undergraduate Writing Centre at McMaster. Assignments will be submitted to the course website. Late assignments will be deducted 10% per day they are late.

Course Assessment (dates available on schedule posted on Avenue to Learn before semester starts):

Tests

Test 1	15%
Test 2	15%
Test 3 (during exam period)	20%*

(*if a student writes all 3 tests and the best mark is on test 1 or 2, that test will be reweighted to be worth 20% instead)

Tutorial Assignments

Four assignments (worth 5-15% each)	50%
-------------------------------------	-----

Re-mark Policy:

Requests for re-evaluation must be made to Dr. Kidd within two weeks of when the marked test or assignment is returned. All requests must be made in writing to Dr. Kidd who will then consider the possibility of a re-mark. Please be aware that a re-mark can result in an increase, decrease or no change to the original mark.

Communication between Students and Instructor:

The University's official method of correspondence with students is through a valid McMaster University e-mail account. It is the student's responsibility to keep their @mcmaster.ca account active and to check it on a regular basis. All emails from students must include your full name and course code (BIOL 3ET3). All emails will be replied to within 48-72 hours. Office hours are by appointment through email unless announced via Avenue to Learn.

Missed Academic Term Work

When using the MSAF (see below), you must contact Dr. Kidd by email (karenkidd@mcmaster.ca) immediately (normally within 2 working days) to report your absence. Dr. Kidd will indicate what relief may be granted for the work you have missed, and relevant details such as revised deadlines. Please note that the MSAF may not be used for a final examination or its equivalent. If you submit an MSAF for an assignment, the assignment must be submitted within 72 hours of the original deadline.

Student Responsibilities:

To get the most out of the course, you must be prepared to:

- attend all sessions, make up all missed work, and provide documentation for authorized absences;
- interact frequently with instructor, students, and the TA;

- plan and manage your own time;
- complete preparatory tasks (such as reading and initial research) in advance of tutorials;
- develop and use reflective learning skills (for example identifying learning objectives, planning and carrying out research tasks, acting on academic feedback);
- check the course Avenue site, and your McMaster and Avenue e-mail daily for updates; and,
- follow all university policies and guidelines, and in all ways be a responsible university member

Academic Integrity

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity. **It is your responsibility to understand what constitutes academic dishonesty.**

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university. For information on the various types of academic dishonesty please refer to the [Academic Integrity Policy](https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/), located at <https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/>

The following illustrates only three forms of academic dishonesty:

- plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.
- improper collaboration in group work.
- copying or using unauthorized aids in tests and examinations.

Authenticity/Plagiarism Detection

Some courses may use a web-based service (Turnitin.com) to reveal authenticity and ownership of student submitted work. For courses using such software, students will be expected to submit their work electronically either directly to Turnitin.com or via an online learning platform (e.g. Avenue to Learn, etc.) using plagiarism detection (a service supported by Turnitin.com) so it can be checked for academic dishonesty.

Students who do not wish their work to be submitted through the plagiarism detection software must inform the Instructor before the assignment is due. No penalty will be assigned to a student who does not submit work to the plagiarism detection software. **All submitted work is subject to normal verification that standards of academic integrity have been upheld** (e.g., on-line search, other software, etc.). For more details about McMaster's use of Turnitin.com please go to www.mcmaster.ca/academicintegrity.

Courses with an On-line Element

Some courses may use on-line elements (e.g. e-mail, Avenue to Learn, LearnLink, web pages, capa, Moodle, Echo360, Microsoft Teams, ThinkingCap, etc.). Students should be aware that, when they access the electronic components of a course using these elements, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in a course that uses on-line elements will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

Online Proctoring

Some courses may use online proctoring software for tests and exams. This software may require students to turn on their video camera, present identification, monitor and record their computer activities, and/or lock/restrict their browser or other applications/software during tests or exams. This software may be required to be installed before the test/exam begins.

Conduct Expectations

As a McMaster student, you have the right to experience, and the responsibility to demonstrate, respectful and dignified interactions within all of our living, learning and working communities. These expectations are described in the [Code of Student Rights & Responsibilities](#) (the “Code”). All students share the responsibility of maintaining a positive environment for the academic and personal growth of all McMaster community members, **whether in person or online**.

It is essential that students be mindful of their interactions online, as the Code remains in effect in virtual learning environments. The Code applies to any interactions that adversely affect, disrupt, or interfere with reasonable participation in University activities. Student disruptions or behaviours that interfere with university functions on online platforms (e.g. use of Avenue 2 Learn, WebEx, Echo360, Microsoft Teams or Zoom for delivery), will be taken very seriously and will be investigated. Outcomes may include restriction or removal of the involved students’ access to these platforms.

Academic Accommodation of Students with Disabilities

Students with disabilities who require academic accommodation must contact [Student Accessibility Services](#) (SAS) at 905-525-9140 ext. 28652 or sas@mcmaster.ca to make arrangements with a Program Coordinator. For further information, consult McMaster University’s [Academic Accommodation of Students with Disabilities](#) policy.

Requests for Relief for Missed Academic Term Work

McMaster Student Absence Form (MSAF): In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar “Requests for Relief for Missed Academic Term Work”.

View the [McMaster Student Absence Form \(MSAF\)](#) for more information.

Academic Accommodation for Religious, Indigenous or Spiritual Observances (RISO)

Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the [RISO](#) policy. Students should submit their request to their Faculty Office **normally within 10 working days** of the beginning of term in which they anticipate a need for accommodation or to the Registrar's Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

Copyright and Recording

Students are advised that lectures, demonstrations, performances, and any other course material provided by an instructor include copyright protected works. The Copyright Act and copyright law protect every original literary, dramatic, musical and artistic work, **including lectures** by University instructors

The recording of lectures, tutorials, or other methods of instruction may occur during a course. Recording may be done by either the instructor for the purpose of authorized distribution, or by a student for the purpose of personal study. Students should be aware that their voice and/or image may be recorded by others during the class. Please speak with the instructor if this is a concern for you.

Extreme Circumstances

The University reserves the right to change the dates and deadlines for any or all courses in extreme circumstances (e.g., severe weather, labour disruptions, etc.). Changes will be communicated through regular McMaster communication channels, such as McMaster Daily News, Avenue to Learn and/or McMaster email.