

**University of Guelph  
College of Biological Science**

Department of Integrative Biology

**COURSE OUTLINE**

Field Ecology – BIOL\*4410  
Fall 2017 (Sunday, August 13<sup>th</sup> – Saturday, August 26<sup>th</sup>, 2017)

**Course description**

This is a 12-day field course held in Algonquin Park, Ontario, during August. Emphasis is on the design and implementation of ecological field experiments; students acquire knowledge of natural history of plants, invertebrates and vertebrates as a result. Students design and conduct a research project on invertebrate or plant ecology in terrestrial or aquatic habitats and write an independent formal scientific paper. In addition, the students will work in teams on a field exercise to develop familiarity with hypothetico-deductive scientific methodology and will produce a natural history notebook highlighting their own natural history interests as well as accurately documenting their observations, data collection, and questions. The field exercise will be handed in during the course. Both the scientific paper and natural history notebook are due the last Friday in September. An organizational meeting will be held in the winter semester prior to the field course.

**Prerequisite(s):** 0.50 credits in ecology and biostatistics

**Restriction(s):** Instructor consent required.

**Department(s):** Department of Integrative Biology

**Teaching team**

Dr. Tim Bartley, Department of Integrative Biology, SSC room 2473; [tbartley@uoguelph.ca](mailto:tbartley@uoguelph.ca)

Dr. John Fryxell, Department of Integrative Biology, SSC room 2480, 519-824-4120 x53598, [jfryxell@uoguelph.ca](mailto:jfryxell@uoguelph.ca) (first 3 days of course)

Joyce Buck, Department of Integrative Biology, SSC room 3508, 519-824-4120, x52743, [jbuck@uoguelph.ca](mailto:jbuck@uoguelph.ca)

**Location**

Wildlife Research Station on Lake Sasajewun, Algonquin Provincial Park

**Cost**

Total cost: approx. \$1000. \$350 payable to the University of Guelph is due with your application. Balance is due by 10 June 2017. This course fee covers all equipment and consumables required for student projects and food and accommodation for 13 days. Students are responsible for their own transportation to and from the field station.

**Learning Objectives**

Field Ecology is an opportunity for students to be inspired by, explore, and discover the natural environment. At the end of this course, the successful student will be able to work collaboratively and efficiently with peers and instructors to achieve the following:

1. to design a self-guided research question and project at the level necessary for a fourth-year research project within the constraints imposed by the course (2 weeks, available resources etc).
2. to apply the scientific method to current ecology problems and evaluate the evidence for an ecological mechanism that demonstrates the use of logic, an evaluation of the literature, incorporation of information on multiple perspectives, and statistical analyses of data.
3. to efficiently conduct an experimental design by actively employing empirical sampling techniques necessary to obtain unbiased and sufficient abiotic and biotic data.
4. to convincingly communicate this process as a research article to an audience with a general, ecological, background.
5. Observe, document and appreciate the flora and fauna in Algonquin Park with a clearly presented and well-organized field notebook that is the basis for any field work and derived products (research and/or natural history project).
6. Appreciate the unpredictable nature of field biology and have the opportunity to employ problem solving and improvisation in a remote and rustic environment.
7. Develop skills in communication and teamwork

## Course Resources

Algonquin Wildlife Research Station website: <http://www.algonquinwrs.ca/>

The Science Behind Algonquin's Animals website: <http://www.sbaa.ca/facilities.asp?cn=300>

Suggested course text book: "EXPERIMENTAL DESIGN FOR THE LIFE SCIENCES" by RUXTON & COLEGRAVE, available in the University Bookstore.

Optional field guides: The course and instructors have a collection of flora and fauna field identification guides, although students are welcome to bring their own, which are available for purchase at local and online bookstores.

## Assessment

Form of Assessment	Weight of Assessment	Date (subject to change)	Learning Outcome Addressed (see above)
Research Paper	60%	Sept. 29	1,2,3,4
Field exercise	10%	14 Aug.	4,5,6
Proposal	10%	16 Aug.	2,3
Participation	10%	13-26 Aug.	5,6,7
Field Notebook	10%	21 Aug, Sept 29	5, 6

## Important Dates

Aug. 13      Arrival at WRS before 4:00pm  
 Aug. 14      Field exercise due at supertime  
 Aug. 16      Proposal due at supertime

Aug. 26 Depart WRS before 1:00pm  
Sept. 29 Final research paper and field notebook due

## **Course and University Policies**

### When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact, and be prepared to provide supporting documentation. See the undergraduate calendar for information on regulations and procedures for Academic

Consideration: <http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

### Accessibility

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Student Accessibility Services as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email [accessibility@uoguelph.ca](mailto:accessibility@uoguelph.ca) or see the website: <https://wellness.uoguelph.ca/accessibility/>

### Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

### E-mail Communication

As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

### Drop Date

The last date to drop one-semester courses, without academic penalty, is the 40<sup>th</sup> class day. To confirm the actual date please see the schedule of dates in the Undergraduate Calendar. For regulations and

procedures for Dropping Courses, see the Undergraduate Calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

#### Copies of out-of-class assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

#### Recording of Materials

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

#### Use of Animals

The University is committed to principles of conducting research and teaching in accord with the highest ethical standards. Given that the use of animals in research and teaching is a critical aspect of the work of the University of Guelph, the Department of Integrative Biology is committed to minimizing the use, pain, and suffering of animals used for teaching and to ensuring that animals which are used will receive care and treatment that meets or exceeds the standards outlined by provincial guidelines and statutes, and by the Guidelines of the Canadian Council on Animal Care. For more information

[http://www.uoguelph.ca/research/assets/acs/docs/university\\_animal\\_care\\_policy\\_and\\_procedures.pdf](http://www.uoguelph.ca/research/assets/acs/docs/university_animal_care_policy_and_procedures.pdf)

### **Campus Resources**

The Academic Calendar is the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs:

<http://www.uoguelph.ca/registrar/calendars/index.cfm?index>

If you are concerned about any aspect of your academic program:

- make an appointment with a program counsellor in your degree program.

<http://www.bsc.uoguelph.ca/index.shtml> or <https://www.uoguelph.ca/uaic/programcounsellors>

If you are struggling to succeed academically:

- There are numerous academic resources offered by the Learning Commons including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills. You can also set up individualized appointments with a learning specialist. <http://www.learningcommons.uoguelph.ca/>

If you are struggling with personal or health issues:

- Counselling services offers individualized appointments to help students work through personal struggles that may be impacting their academic performance. <https://www.uoguelph.ca/counselling/>
- Student Health Services is located on campus and is available to provide medical attention.

<https://www.uoguelph.ca/studenthealthservices/clinic>

- For support related to stress and anxiety, besides Health Services and Counselling Services, Kathy Somers runs training workshops and one-on-one sessions related to stress management and high performance situations. <http://www.uoguelph.ca/~ksomers/>

If you have a documented disability or think you may have a disability:

- The Student Accessibility Services (SAS) can provide services and support for students with a documented learning or physical disability. They can also provide information about how to be tested for a learning disability. For more information, including how to register with the centre please see: <https://wellness.uoguelph.ca/accessibility/>