

Fall 2017
BIOL*1050

General Information

Course Code: BIOL*1050

Course Title: Biology of Plants and Animals in Managed Ecosystems

Course Description: In this course you will investigate the biology of plants and animals in the context of agroecosystems and other managed ecosystems. You will learn about the form and function of plants and animals and interactions between organisms and their environments. The course strongly emphasizes participatory and self-directed learning, problem solving, reasoning and exposure to primary research literature and introduces the general principles necessary for more advanced courses.

Credit Weight: F(3-2) [0.5]

Academic Department: Departments of Animal Biosciences & Plant Agriculture, OAC

Campus: Guelph

Semester Offering: Fall

Class Schedule and Location:

Lectures: Monday, Wednesday, Fridays 12:30 PM – 1:20 PM in ROZH Room 101

Laboratories: See WebAdvisor for the laboratory and room you are scheduled in.

Labs are held every week starting September 11, 2017. **You must attend the lab section in which you are registered.** In order to synchronize lectures and laboratories, certain laboratories will be cancelled. See the **Semester at a Glance** file posted on CourseLink.

Instructor Information

Lead instructor: Dr. Stephen Bowley (Plant Agriculture)
Co-Lecturers: Dr. Alexandra Harlander (Animal Biosciences)
Dr. Eric Lyons (Plant Agriculture)
Dr. Andy Robinson (Animal Biosciences)
Lab Coordinators: Julie Kim (Animal Biosciences)
Dave Kerec (Plant Agriculture)

Office hours: Dr. Bowley Wednesdays 10:30-12:00, Rm 408 CRSC
Other instructors & times by appointment only.

Course email: biol1050@uoguelph.ca

Note: **This is the email address you must use for all email communication related to this course; do not use an instructor's or TA's personal email address.** Emails are only accepted from your *mail.uoguelph.ca* account.

Queries that can be readily answered by information that has been posted on the CourseLink course website will NOT be answered. *Be brief, avoid acronyms in your message, and include a subject line which indicates the nature of the message.* Note that it may take one or more working days to respond to an email or discussion board query.

Laboratory coordinators: Animal labs: Julie Kim Plant labs: David Kerec

GTA Information Renee Benczik [sect. 105 & 108], Nicole Berardi [sect. 102 & 107],
Lilieth Ives [sect. 103 & 104], Cameron Ogilvie [sect. 101 & 106]

Course Content

Topics and Organization:

The course is divided into four, three-week modules; lecture outlines will be posted on CourseLink, not necessarily before they have been presented.

1. Plant Reproduction

Lecturer: Dr. Eric Lyons

- Sexual reproduction of plants.
- Seed structure and function.
- Vegetative reproduction of plants.
- Climate change effects on plants.
- Pollinators and bee decline.

2. Nutrient/Energy Flow in Animals

Lecturer: Dr. Andy Robinson

- Chemistry of nutrition – minerals, vitamins, macromolecules, metabolism.
- Nutrition at the cellular level – glycolysis, cellular respiration.
- Nutrition at the organismal level - digestive anatomy and physiology.
- Plant-animal interactions: adaptations to herbivory, co-evolution of plants and animals.

3. Energy Flow in Plants

Lecturer: Dr. Stephen Bowley

- Harvesting photons: C3/C4/CAM photosynthesis.
- Photoreceptors, light responses, circadian rhythms, plant-plant interactions.
- Carbon and nitrogen acquisition, transport, and storage.
- Secondary metabolites, mutualistic and antagonistic associations.

4. Animal Functioning

Lecturer: Dr. Alexandra Harlander

- Principles of animal morphology, functioning, and behavior.
- Organ systems and functioning of animals kept in human managed environments.
- Physiological adjustments to environmental challenges.
- Regulation of functions.

Learning Outcomes:

The course Biol*1050 is designed to emphasize the following categories of learning outcomes:

- Literacy.
- Communication.
- Professional and Ethical Behaviour.
- Critical and Creative Thinking.

Specific Learning Outcomes:

After successfully completing the course students will be able to define and describe the terms and processes involved in the above listed topics of animal and plant biology (See: Topics and Organization). The labs will enhance your understanding of the lecture material and explore other aspects of animal and plant biology. After successfully completing the course students will also be able to:

- Measure variables related to biological processes.
- Apply statistical methods to assess and interpret observed biological processes.
- Form and test hypotheses.
- Search peer-reviewed literature to expand their knowledge of biological processes
- Prepare standard lab reports using the CSE name-year reference style.

Course Assignments and Tests:

Assignment or Test	Due Date	Contribution to Final Mark (%)	Learning Outcomes Assessed
Midterm exam, first two modules	Saturday 21 Oct., Room TBA, 7:00 – 9:00 PM	25	1, 2
Weekly laboratory assignments	Some assignments are due at the end of the laboratory period; some are to be submitted electronically in Portable Document Format (PDF) via the CourseLink dropbox. The CSE name-year citation format is required for all reports—see Citation Format on page 5. See the <i>Semester at a Glance</i> file on CourseLink for lab assignments & their weighting, and the specific laboratory assignment for details.	40	1,2,3,4
Final exam	Monday 04 Dec., 8:30-10:30 AM, Room TBA	35	1,2,3,4

Additional Notes (if required):

Laboratory assignments: Some assignments are due at the end of the laboratory period, some are required to be submitted electronically in portable document format (PDF) via the CourseLink dropbox. See the *Semester at a Glance* file on CourseLink for lab assignments & their weighting, and the specific laboratory assignment for details.

Midterm and final exam: Multiple choice format. For the midterm and final exams, students will be fully responsible for material from the reading and homework assignments, as well as the information presented in lecture, labs, and the online lecture materials posted on the CourseLink course website.

The final exam is a comprehensive exam with emphasis on modules 3 and 4.

Final examination date and time:

Monday 04 Dec., 8:30-10:30 AM, Room TBA

Final exam weighting: 35%

Course Resources**Required Texts:**

The required textbook for the course is: Campbell Biology, Second Canadian Edition plus Mastering Biology. It is available in physical and in e-book format. A few copies of the textbook will be available in the library on a two hour in-library loan basis. The *Semester at a Glance* file on Courselink includes the relevant chapter readings for the lecture series.

Mastering Biology provides on-line access to all learning resources for the current edition of Campbell Biology. The Mastering Biology course id is: MBBOWLEY87165 *Note: Mastering Biology is an additional learning aid associated with the text; we will use CourseLink for all communication and information management for Biol*1050.*

Lab Manual:

The BIOL*1050 lab manual will be available on CourseLink in the *Contents* area.

Other Resources:**Courselink:**

CourseLink will be used to relay information related to the course. The course website on CourseLink should be consulted daily for general course information, announcements, detailed information about assignments, room locations for the midterm, lecture readings, access to semester marks, and study resources. We will use the **Announcements** section to provide clarification, additional instructions, and information regarding the current activities in the course. PDF versions of lecture slides will be available in the **Contents** section the morning of each lecture to facilitate note taking. *Be aware that the pdf versions may not contain all the information presented in lecture.*

In order to access the materials posted on the Biol*1050 Courselink site, students must pass an on-line quiz for Biol*1050 regarding Academic Integrity. This quiz is available on the Biol*1050 Courselink homepage; select the Quizzes tab located on the upper ribbon. A link is also provided to the University's web tutorial on Academic Integrity. Until successful completion of the Biol*1050 quiz only the course outline and first lab outline will be visible to registered students.

If you have difficulties accessing information, tutorials, posted grades etc., email **biol1050@uoguelph.ca** *Note that if you are in arrears regarding tuition fees, access to the CourseLink website will be unavailable until you have settled matters with the Registrar's Office.*

Lectures:

PDF versions of the slides used in lecture will be posted in the **Contents** section on Courselink. Additional material and videos will also be posted on Courselink throughout the semester. At least two of the instructors (Drs. Robinson and Bowley) plan to record their lectures and provide links to these (provided the technology works) on the Courselink site. These podcasts are provided for the convenience of students officially registered in the course and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

Citation Format for Reports:

The required format for citing references in reports is the **CSE Name-year** style. **A document outlining the style required for Biol*1050 has been posted in CourseLink under Contents.** *Do not rely on other guides to the CSE name-year format you may find posted on the Library or other websites.*

Field Trips: None

Additional Costs: None

Course Policies

Grading Policies:

Tracking Marks: We will use CourseLink to collate marks throughout the semester. It is your responsibility to review these grades and report any discrepancies. Keep paper and/or other reliable back-up copies of all in- and out-of-class assignments: If issues arise, you may be asked to resubmit your work.

Assignment of grades at the University of Guelph is outlined in the Undergraduate Calendar. The definitions for each of the numeric grade ranges are as follows:

80-100 (A) Excellent. An outstanding performance in which the student demonstrates a superior grasp of the subject matter, and an ability to go beyond the given material in a critical and constructive manner. The student demonstrates a high degree of creative and/or logical thinking, a superior ability to organize, to analyze, and to integrate ideas, and a thorough familiarity with the appropriate literature and techniques.

70 - 79 (B) Good. A more than adequate performance in which the student demonstrates a thorough grasp of the subject matter, and an ability to organize and examine the material in a critical and constructive manner. The student demonstrates a good understanding of the relevant issues and a familiarity with the appropriate literature and techniques.

60 - 69 (C) Acceptable. An adequate performance in which the student demonstrates a generally adequate grasp of the subject matter and a moderate ability to examine the material in a critical and constructive manner. The student displays an adequate understanding of the relevant issues, and a general familiarity with the appropriate literature and techniques.

50 - 59 (D) Minimally Acceptable. A barely adequate performance in which the student demonstrates a familiarity with the subject matter, but whose attempts to examine the material in a critical and constructive manner are only partially successful. The student displays some understanding of the relevant issues, and some familiarity with the appropriate literature and techniques.

0 - 49 (F) Fail. An inadequate performance.

Exams and Assignment Submission:

We do not provide makeup labs or exams. Unless academic consideration has been granted, missed assignments, presentations, and exams will receive a grade of zero (0).

In-Laboratory Submissions:

Some laboratory assignments are due at the end of the laboratory period. Make sure you hand in your assignment before exiting the laboratory room. Late submission of assignments will not be accepted; such assignments will receive a grade of zero (0).

CourseLink Drop Box Submissions:

Certain laboratory assignments are required to be submitted electronically in portable document format (**PDF**) via the CourseLink dropbox. **If your report is not uploaded to CourseLink in the required format prior the due date/time you will receive a grade of 0.**

I. Due date:

Reports are due prior to 11:00 pm of the day prior to your next laboratory period. At 11:00 pm the dropbox will no longer accept reports and **any file uploads in progress at that time will also fail.** If you miss the deadline, do not bother emailing the report—it will not be accepted.

We strongly advise that you upload the report before 10:00 pm on the due date so you have time to:

- 1) Upload the file; and*
- 2) Confirm that it was the correct file you wanted to submit for grading.*

II. Format:

Reports uploaded to the CourseLink dropbox must be in a portable document format (**PDF**). If you upload a file in a format other than this, your assignment will be considered “not submitted” and you will receive a grade of 0. The CSE name-year citation format is required for all reports.

Course Policy on Student Technology:

The vast majority students will use their own technology such as smartphones, laptops and tablets for the University of Guelph’s online Learning Management System (aka CourseLink).

In this course it is your responsibility to ensure that you can access the course materials and complete online course requirements, including submission of assignments on CourseLink in the required format, within the time allotted regardless of technological issues you may encounter.

There are many places on campus or in your local town where WiFi wireless connections and computers may be accessed or signed out if your own technology is non-functional.

Course Policy regarding use of electronic devices and recording of lectures:

Electronic recording of classes is expressly forbidden without the prior consent of the Lead Instructor. This prohibition extends to all components of the course, including, but not limited to, lectures, seminars, and lab instruction. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the Lead Instructor.

Some of the instructors may record podcasts of their lectures. These podcasts are provided for the convenience of students officially registered in the course and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

Classroom Etiquette:

Disruptive behaviour: You are expected to avoid behaviour that interrupts the learning environment for fellow students. This includes, but is not limited to, use of cell phones and use of electronic devices for purposes unrelated to the course.

Turn your cell phone off; Turn the sound off on your computer; Disable movie & video feeds, and remove offensive pictures from your desktop/screen saver.

A student that engages in disruptive behaviour will be asked to leave the classroom for the remainder of the period. Any student demonstrating repetition of disruptive behaviour will require a permission note from the Dean of the Ontario Agricultural College to attend future lectures.

University Policies

Academic Consideration:

The University of Guelph is committed to supporting students in their learning experiences and responding to their individual needs and is aware that a variety of situations or events beyond the student's control may affect academic performance. Support is provided to accommodate academic needs in the face of personal difficulties or unforeseen events in the form of Academic Consideration.

Missed Assignment or Mid-term

If you find yourself unable to meet an in-course requirement, you may complete and submit within the 7 day deadline the BIOL*1050 Request for Academic Consideration (available on the CourseLink BIOL*1050 website) for consideration of eligibility for a grade adjustment. A valid reason and verifier are required. *Note that conflicts with other courses and vacations planned during the semester, for example, do not constitute valid reasons.*

Depending on the circumstance, documentation such as copies of obituaries, commencement invitations, and varsity rosters for sporting, 4-H, or similar competitions may also be required. If you miss one or more lectures, talk to one of your classmates about missed lecture notes.

Missed Final Exam

Contact your program counsellor; course instructors are not involved with this issue. A student who misses a final exam must submit a request for a deferred final exam with supporting documentation to his/her program counsellor. If a deferred exam is granted, the exam is usually written in February at a time arranged by the Registrar's office.

Information on regulations and procedures for Academic Consideration, Appeals and Petitions, including categories, grounds, timelines and appeals can be found in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).

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.

Detailed information regarding the Academic Misconduct policy is available in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).

Plagiarism will be strongly suspected if two or more students submit individual projects that have identical or substantially identical components. Tables, figures, paragraphs in reports should reflect your own efforts, not be copies or essential derivatives of work performed by someone else.

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 (SAS), as soon as possible.

There are many types of academic accommodations that can be made available. These accommodations include, but are not limited to, use of assistive technology, note taking, extensions to completion time limits, and allowance for extra time, computers, and/or private room for exams.

For more information, contact Student Accessibility Services at 519-824-4120 ext. 56208 or email accessibility@uoguelph.ca or visit the Student Accessibility website www.uoguelph.ca/csd/.

Course Evaluation Information:

End of semester course and instructor evaluations provide students the opportunity to have their comments and opinions used as an important component in the Faculty Tenure and Promotion process, and as valuable feedback to help instructors enhance the quality of their teaching effectiveness and course delivery.

The course evaluation for this course is electronic and will be accessible for a two week period at the end of the term. There will be five separate evaluations, one for each of the four instructors (Drs. Bowley, Harlander, Lyons, and Robinson) and for the Teaching Assistant for your assigned laboratory section Please refer to the [Course and Instructor Evaluation Website](#) for more information.

Your responses will not affect your grade. Course evaluations are distributed to individual instructors after final grades have been submitted to the Registrar, following the completion of each academic semester.

Please be honest, respectful, constructive and thorough. Instructors and review committees place great value on student course ratings and read all comments provided in course evaluations. It is helpful to provide comments on the strengths of the course, in addition to the areas for improvement. Please refrain from personal comments unless they relate to teaching and learning.

Note that faculty policies stipulate that only signed comments are made available to the Chairs of Departments or Directors of Schools, and to members of review committees. Signed comments are considered during the Tenure & Promotion process and may also be used to support a faculty member's nomination for internal and external teaching awards. Unsigned comments are made available only to the course instructor.

Drop period:

The drop period for single semester courses starts at the beginning of the add period and extends to the Fortieth (40th) class day of the current semester (the last date to drop a single semester courses without academic penalty) which is listed in [Section III \(Schedule of Dates\) of the Undergraduate Calendar](#).

The drop period for two semester courses starts at the beginning of the add period in the first semester and extends to the last day of the add period in the second semester.

Information about Dropping Courses can be found in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).

Support Services for Students

Learning Commons:

Learning Commons in the Library offers free appointments with Learning Peer Helpers and staff for advice and ideas about how to study effectively, balance your workload, and prepare for exams. To set up an appointment, see a list of their workshops, or check out online resources on studying, managing time, and reducing procrastination, visit www.lib.uoguelph.ca/get-assistance

They also have prepared an introductory video to their services: <https://vimeo.com/138104421>

START on Track:

START on Track is another great support program offered in the fall semester to assist with the transition to university life, focused primarily on those who failed midterm exams during their first semester on campus. Students who opt-in to the program are matched with a mentor who works with you one-on-one and provides assistance with problem-solving, goal-setting, referrals and encouragement.

You can learn more online at

<https://studentlife.uoguelph.ca/guidance/startontrack-fall-semester>

or email ontrack@uoguelph.ca