



BIOL*1050 Biology of Plants & Animals in Managed Ecosystems

Fall 2019

Section(s): C01

Department of Plant Agriculture

Credit Weight: 0.50

Version 1.00 - September 03, 2019

1 Course Details

1.1 Calendar Description

In this course students will investigate the biology of plants and animals in the context of agroecosystems and other managed ecosystems. Students 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 will address key concepts in evolution, plant and animal structure, physiology and ecology. Students lacking Grade 12 or 4U Biology should consult with their program counsellor prior to taking BIOL*1050 in first semester.

1.2 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.

1.3 Timetable

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 9, 2019. 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.

1.4 Final Exam

Time: TBD, Room: TBA

2 Instructional Support

2.1 Instructional Support Team

Instructor: Eric Lyons
Email: elyons@uoguelph.ca
Telephone: +1-519-824-4120 x52232
Office: ECBL 1230
Office Hours: Wednesdays 10:30-12:00 ECB 1230
 Plant Agriculture

Instructor: Andy Robinson
Email: andyr@uoguelph.ca
Telephone: +1-519-824-4120 x53679
Office: ANNU 122
Office Hours: by appointment only
 Animal Biosciences

Instructor: Bernard Grodzinski
Email: bgrodzin@uoguelph.ca
Telephone: +1-519-824-4120 x53439
Office: CRSC 408/118
Office Hours: By Appointment Only
 Plant Agriculture

Instructor: Alexandra Harlander
Email: aharland@uoguelph.ca
Telephone: +1-519-824-4120 x52021
Office: ANNU 247
Office Hours: by appointment only
 Animal Biosciences

Lab Co-ordinator: David Kerec
Email: dkerec@uoguelph.ca
Telephone: +1-519-824-4120 x52788
Office: ECBL 1516
 Plant labs

Lab Co-ordinator: Robert Jones
Email: rjones12@uoguelph.ca
Telephone: +1-519-824-4120 x56891
Office: ANNU 255
 Animal labs

2.2 Teaching Assistants

Teaching Assistant: Alexandra Ficht

Email: sect. TBD	ficht@uoguelph.ca
Teaching Assistant: Email: sect. TBD	Nicole Berardi nberardi@uoguelph.ca
Teaching Assistant: Email: sect. TBD	Rachel Whaley rwhaley@uoguelph.ca
Teaching Assistant: Email: sect. TBD	Mariana Roedell Peixoto mroedell@uoguelph.ca

2.3 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 personal email address. Emails are only accepted from your uoguelph.ca account.

Queries that can be readily answered by information that has been posted on the CourseLink course website will NOT be answered.

All Correspondence should:

- Include a subject line of the nature of the email
- Include your name, ID and section you are enrolled
- Spell out all abbreviations (do not use acronyms)
- Be brief and to the point

Note that it may take at least one working day to respond to an email query.

3 Learning Resources

3.1 Required Resources

Campbell Biology (Textbook)

Second Canadian Edition.

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.

BIOL*1050 Lab Manual (Lab Manual)

Available on CourseLink.

3.2 Recommended Resources

CourseLink (Website)

<http://courselink.uoguelph.ca>

CourseLink will be used as our method 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 News section to provide clarification, additional instructions, and information regarding the current activities in the course. PDF versions of lecture materials will be available the morning of each 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.

3.3 Additional Resources

Lectures (Other)

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 Lyons) 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 (Other)

The required format for citing references in reports is the CSE Name-yearstyle. 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

Mastering Biology (Textbook)

Mastering Biology provides on-line access to all learning resources for the current edition

of Campbell 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.

4 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

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. The labs will enhance your understanding of the lecture material and explore other aspects of animal and plant biology.

4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. understand and identify variables related to biological processes
 2. apply statistical methods to assess and interpret observed biological processes
 3. form and test hypotheses
 4. search peer-reviewed literature to expand their knowledge of biological processes
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5 Teaching and Learning Activities

5.1 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 (re)Production Lecturer: Dr. Eric Lyons
 - Sexual reproduction of plants
 - Seed structure and function
 - Vegetative reproduction of plants

- Climate change effects on plants
- Plant-animal interactions: pollinators and organisms involved in colony collapse disorder

1. Nutrient/Energy Flow in Animals Lecturer: Dr. Andy Robinson

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

1. Energy Flow in Plants Lecturer: Dr. Bernard Grodzinski

- 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

1. Animal Functioning Lecturer: Dr. Alexandra Harlander

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

6 Assessments

6.1 Marking Schemes & Distributions

Name	Scheme A (%)
Midterm Exam 1	12
Midterm Exam 2	13

Name	Scheme A (%)
Final Exam	35
Weekly Lab Assignments	40
Total	100

6.2 Assessment Details

In Class Exam 1 (12%)

Date: Fri, Sep 27, 12:30 PM - 1:20 PM, ROZH 101
First module. Multiple choice format.

In Class Exam 2 (13%)

Date: Mon, Oct 21, 12:30 PM - 1:20 PM, ROZH 101
Second module. Multiple choice format.

Weekly Lab Assignments (40%)

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 Semester at a Glance file on CourseLink for lab assignments & their weighting, and the specific laboratory assignment for details.

Final Exam (35%)

Date: TBD
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.

7 Course Statements

7.1 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: You may be asked to resubmit work at any time.

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.

7.2 Exams and Assignment Submissions

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.

Due Dates:

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:

Upload the file; and

Confirm that it was the correct file you wanted to submit for grading

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.

7.3 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.

7.4 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

8 University Statements

8.1 Email Communication

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

8.2 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. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

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

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

8.3 Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of

Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses

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

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

8.4 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.

8.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance and not later than the 40th Class Day.

More information can be found on the SAS website

<https://www.uoguelph.ca/sas>

8.6 Academic Integrity

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 encourages academic integrity. 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.

Undergraduate Calendar - Academic Misconduct

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

Graduate Calendar - Academic Misconduct

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

8.7 Recording of Materials

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

8.8 Resources

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars

<https://www.uoguelph.ca/academics/calendars>
