

EEB440H, *Ecology and Evolution of Plant-Animal Interactions*, Course Syllabus, Fall 2014
Department of Ecology & Evolutionary Biology, University of Toronto

Professors:

Megan Frederickson (coordinator)	RW510	m.frederickson@utoronto.ca
James Thomson	RW505	james.thomson@utoronto.ca

TA:

Rebecca Batstone	RW507	rebecca.batstone@mail.utoronto.ca
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The course instructors are available for office hours by appointment.

Course Description:

This course explores the richness of interactions between plants and animals, including antagonistic interactions (e.g., herbivory), mutualistic interactions (e.g., pollination, seed dispersal and ant-plant associations), and interactions involving multiple species and across trophic levels.

Objectives:

- To promote your personal development from acting mostly as a student to acting mostly as a scientist.
- To demonstrate the applicability of ecological and evolutionary concepts you have been exposed to in earlier courses.
- To provide the experience of developing an original research proposal through deep reading of the primary literature.
- To improve your oral and written communication skills.

Organization of the course:

We will use class time on Tuesdays and Thursdays primarily for lectures and discussion of the assigned readings. The Friday sessions will involve a variety of lab and tutorial activities. You must attend all sessions and you are responsible for all of the material. See the draft schedule below for more information, but be aware that schedule changes may occur. These will be announced in class, on the course website, or possibly by e-mail.

Prerequisites:

One of the following: EEB318, EEB319, EEB321, EEB323, EEB324, EEB328, EEB401, EEB403, EEB404, EEB405, EEB406, EEB407, EEB409, or EEB410

Times and Location:

- Lectures are Tuesdays and Thursdays from 1-2pm in Ramsay-Wright 143
- Labs/tutorials are Fridays 1-3pm, also in Ramsay-Wright 143, unless otherwise announced

Course Website:

Like most courses, EEB440 uses Blackboard for its course website. To access the course website, or any other Blackboard-based website, go to the U of T Portal login page at <http://portal.utoronto.ca> and log in using your UTORid and password. Look for the My Courses module, where you'll find the link to the EEB440 course website. Please check the site regularly for announcements, assignments, and readings.

Readings:

We are not requiring a textbook. There will be required and recommended readings provided on Blackboard. We expect that you will read the assigned articles before coming to class. You may benefit

from consulting Pellmyr and Herrera's *Plant-animal Interactions: An Evolutionary Approach* (Wiley-Blackwell, 2002); a few readings will be taken from this text.

Evaluation:

Participation* (i.e., attendance, contribution to discussions, etc.)	20%
Writing assignments (2 assignments worth 20% each)	40%
First exam	20%
Second exam	20%

*Recognizing that students vary in how comfortable they feel participating in class, we will down-weight the participation grade for students who score well on assignments and exams.

Assignments:

The required format for submission of the assignments will be announced. Typically, we will want hard copies (double-sided and lacking cover pages to save paper), but will accept electronic copies in special circumstances (e.g. if you are too ill to come to campus). **Late assignments will be docked 10% per day for 5 days, after which they will not be accepted.** Exceptions to the lateness penalties for valid reasons such as illness, compassionate grounds, etc., will be entertained only when supported by written documentation (e.g., a completed U of T Verification of Student Illness or Injury form).

We expect to require some assignments to be submitted through Turnitin.com. We are required to inform you that: "Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site". (Text from <http://www.teaching.utoronto.ca/teaching/academicintegrity/turnitin.htm>). If you have objections to this, see course staff early to set up alternative arrangements. More information about Turnitin.com is available at: <http://www.teaching.utoronto.ca/teaching/academicintegrity/turnitin/guide-students.htm>

Course Policy on Email Usage:

We welcome questions, but please keep them brief and focused, and please check the course website and documents before asking about standard procedural matters. Your email must include in the subject line the course identifier and a clear statement of purpose (e.g., EEB440H: Question about writing assignment); otherwise it is likely to be deleted or directed by spam filters. Using your UTOR account is most reliable. You can expect that messages will be read within 48 hours, but the timing and nature of our replies will be at our discretion. Questions we deem to be of general interest may be answered orally in class or through Blackboard email/announcements, rather than in email responses to the students who asked them. Please note that the University has a policy on the Appropriate Use of Information and Communication Technology (see www.enough.utoronto.ca).

On Writing:

Clear writing is essential for you to do well in this course. We expect all assignments and your answers to exam questions to be well written. You should always use proper grammar and punctuation and pay attention to style. The university provides a number of resources to help you write well (see www.writing.utoronto.ca).

On Academic Integrity: (text from OSAI, Sept. 2014)

"Academic integrity is fundamental to learning and scholarship at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the U of T degree that you earn will be valued as a true indication of your individual academic achievement, and will continue to receive the respect and recognition it deserves.

Familiarize yourself with the University of Toronto's *Code of Behaviour on Academic Matters* (<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>). It is the rule book for academic behaviour at the U of T, and you are expected to know the rules. Potential offences include, but are not limited to:

In papers and assignments:

- Using someone else's ideas or words without appropriate acknowledgement.
- Copying material word-for-word from a source (including lecture and study group notes) and not placing the words within quotation marks.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Including references to sources that you did not use.
- Obtaining or providing unauthorized assistance on any assignment including:
 - working in groups on assignments that are supposed to be individual work;
 - having someone rewrite or add material to your work while "editing".
- Lending your work to a classmate who submits it as his/her own without your permission.

On tests and exams:

- Using or possessing any unauthorized aid, including a cell phone.
- Looking at someone else's answers
- Letting someone else look at your answers.
- Misrepresenting your identity.
- Submitting an altered test for re-grading.

Misrepresentation:

- Falsifying or altering any documentation required by the University, including doctor's notes.
- Falsifying institutional documents or grades.

The University of Toronto treats cases of academic misconduct very seriously. All suspected cases of academic dishonesty will be investigated following the procedures outlined in the *Code*. The consequences for academic misconduct can be severe, including a failure in the course and a notation on your transcript. If you have any questions about what is or is not permitted in this course, please do not hesitate to contact us. If you have questions about appropriate research and citation methods, seek out additional information from us, or from other available campus resources like www.writing.utoronto.ca. If you are experiencing personal challenges that are having an impact on your academic work, please speak to us or seek the advice of your college registrar."

On Accommodation: (text from Accessibility Services, Sept. 2014)

"Students with diverse learning styles and needs are welcome in this course. Please feel free to approach us or Accessibility Services so we can assist you in achieving academic success in this course."

Tentative schedule:

Week	Date	Time	Topic
1	Sept. 9	1-2pm	Course introduction
			Frederickson part 1: herbivory
	Sept. 11	1-2pm	Fundamentals of herbivory
	Sept. 12	1-3pm	Lab/tutorial
2	Sept. 16	1-2pm	Coevolution of plants and insect herbivores
	Sept. 18	1-2pm	Plant defence theory
	Sept. 19	1-3pm	Lab/tutorial
3	Sept. 23	1-2pm	Plant defence mechanisms
	Sept. 25	1-2pm	Herbivore offence
	Sept. 26	1-3pm	Lab/tutorial
4	Sept. 30	1-2pm	Vertebrate herbivory
	Oct. 2	1-2pm	Conservation and applied issues
	Oct. 3	1-3pm	Lab/tutorial
			Frederickson part 2: multi-trophic interactions
5	Oct. 7	1-2pm	Ant-plant interactions I
	Oct. 9	1-2pm	Ant-plant interactions II
	Oct. 10	1-3pm	Lab/tutorial
			First written assignment due
6	Oct. 14	1-2pm	Other multi-trophic interactions
	Oct. 16	1-2pm	Review for exam
	Oct. 17	1-3pm	First exam, in class, 120 minutes
			Thomson part 1: pollination biology
7	Oct. 21	1-2pm	Fundamentals of floral biology, pollen biology, mating systems, and incompatibility systems
	Oct. 23	1-2pm	Framework for considering plant-pollinator interactions
	Oct. 24	1-3pm	Lab/tutorial
8	Oct. 28	1-2pm	Principal groups of pollinators and their salient characteristics
	Oct. 30	1-2pm	Pollination syndromes
	Oct. 31	1-3pm	Lab/tutorial
9	Nov. 4	1-2pm	Pollen transfer efficiency & value of pollinators; pollen and nectar thievery
	Nov. 6	1-2pm	Pollinator shifts & floral evolution
	Nov. 7	1-3pm	Lab/tutorial
10	Nov. 11	1-2pm	Pollination in agriculture
	Nov. 13	1-2pm	Conservation issues; pollinator declines & phenological disruptions of mutualisms
	Nov. 14	1-3pm	Lab/tutorial
			Second written assignment due
11	Nov. 18	1-2pm	Fall break—no classes
			Thomson part 2: seed dispersal by animals
	Nov. 20	1-2pm	Advantages and evolution of dispersal
	Nov. 21	1-3pm	Lab/tutorial
12	Nov. 25	1-2pm	Principal groups of dispersers and their salient characteristics; dispersal syndromes
	Nov. 27	1-2pm	Determinants of seed shadows and plant success
	Nov. 28	1-3pm	Wrap up loose ends, discussion, review; second exam, in class, hour 1
13	Dec. 2	1-2pm	Second exam, in class, hour 2