

**EEB321H, *Community Ecology*, Course Syllabus, Winter 2015**  
**Department of Ecology & Evolutionary Biology, University of Toronto**

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The course instructors are available for office hours by appointment.

**Course Description:**

This course is a comprehensive survey of community ecology, providing the information and analytical tools to allow students to investigate and understand the structure of natural communities. Lab computer exercises provide training in sampling, simulation, and data analysis.

*Objectives:*

- Explore key concepts in community ecology
- Develop students' knowledge base of organisms and natural history, theory and practice of sampling, quantitative analysis, and simulation
- Encourage critical thinking about numerical data
- Refine ability to understand and critique papers from the primary literature

*Relationship to other Ecology courses:*

Interactions between pairs of species, such as competition and predation, are important aspects of community ecology, but these are treated extensively in EEB319H, Population Ecology. Therefore, EEB321 focuses on larger clusters of species.

*Organization of the course:*

There are two lectures and one lab each week. The lab is highly integrated with the lectures and heavily represented on the exams. Regular attendance is critical. Address organizational questions to Frederickson.

*Prerequisites:*

BIO120/220 or BIO150 and a course in statistics. ENV234 is recommended preparation.

*Times and Locations:*

- Lectures are Mondays and Wednesdays from 1-2pm in Ramsay-Wright 110
- Labs are Thursdays from 9am-noon in Ramsay-Wright 107 & 109 (CQUEST rooms) or Sidney Smith 561, unless otherwise indicated

**Course Website:**

Like most courses, EEB321 uses Blackboard for its course website. To access the course 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 EEB321 course website. Please check the site regularly for announcements, assignments, and readings.

**Textbooks:**

We are not requiring a regular textbook, but we are asking you to purchase a textbook software program called SimUText (details forthcoming). There will also be required and recommended readings provided through Blackboard. You may also benefit from consulting any of the major ecology textbooks available, such as those authored by Begon, Townsend, and Harper (*Ecology: From Individuals to Ecosystems*) or Krebs (*Ecology*). If you are an EEB specialist (or simply planning to take other ecology courses at U of T, such as EEB319), you should own one of these texts. An excellent, but more specialized text is *Community Ecology* by Morin.

**CQUEST:**

You will need to set up a CQUEST account if you do not have one already; go to <https://acct.cquest.utoronto.ca> to set up your account. This must be done before the first lab!

**Evaluation:**

Mid-term exam	28%
Final exam	28%
Participation (both sections):	4%
Lab assignments *	40%

\* The lowest lab assignment grade will be replaced by the average grade from the other assignments or the final exam grade, whichever is higher.

Assignments will be related to laboratory exercises; if you attend the lab, it should be straightforward to do well on the assignments. The second test will take place in the final exam time slot. The large majority of the final exam will be based on the second half of the course, but we will expect you to know key ideas from the first part of the course. The tests will be mixed format, ranging from some multiple-choice questions to short essay questions. There will be some computational questions. The participation grade will be based on attendance, attentiveness, and contribution to lecture and lab activities.

**Assignments:**

The required format for submission of each assignment 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., EEB321H: Question about lab 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](http://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](http://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](http://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 of lectures and labs:**

<b>Week</b>	<b>Date</b>	<b>Topic/Assignment</b>	<b>Instructor(s)</b>
<b>1</b>	Jan. 5	Course introduction	Frederickson, Gilbert, TAs
	Jan. 7	Competition and the niche	Frederickson
	Jan. 8	No lab—labs begin the following week	
<b>2</b>	Jan. 12	Predation, trophic cascades, and keystone species	Frederickson
	Jan. 14	Indirect interactions	Frederickson
	Jan. 15	LAB 1	TAs
<b>3</b>	Jan. 19	Mutualism	Frederickson
	Jan. 21	Parasitism and disease	Frederickson
	Jan. 22	LAB 2	TAs
<b>4</b>	Jan. 26	Disturbance and succession	Frederickson
	Jan. 28	Food webs, ecological networks, and stability I	Frederickson
	Jan. 29	LAB 3	TAs
<b>5</b>	Feb. 2	Food webs, ecological networks, and stability II	
	Feb. 4	Causes and consequences of diversity I	Frederickson
	Feb. 5	LAB 4	TAs
<b>6</b>	Feb. 9	Causes and consequences of diversity II	Frederickson
	Feb. 11	Review for mid-term	Frederickson
	Feb. 12	MID-TERM EXAM	
<b>7</b>	Feb. 16	Family Day—University Closed	
	Feb. 18	Reading Week—No Classes	
	Feb. 19	Reading Week—No Classes	
<b>8</b>	Feb. 23	The Neutral Theory of Biodiversity: a null model for species coexistence	Gilbert
	Feb. 25	Predicting local coexistence using the invasion criteria	Gilbert
	Feb. 26	No lab	
<b>9</b>	Mar. 2	Predicting niche and fitness differences: phylogenetic community ecology	Gilbert
	Mar. 4	The invasion criteria, stabilizing differences and fitness differences	Gilbert
	Mar. 5	LAB 5	TAs
<b>10</b>	Mar. 9	Island biogeography	Gilbert
	Mar. 11	Metapopulations and metacommunities part 1	Gilbert
	Mar. 12	LAB 6	TAs
<b>11</b>	Mar. 16	Metapopulations and metacommunities part 2	Gilbert
	Mar. 18	Temporal trends in diversity	Gilbert
	Mar. 19	LAB 7	TAs
<b>12</b>	Mar. 23	Trends in diversity over large spatial and temporal scales	Gilbert
	Mar. 25	When does the invasion criteria fail? Stochasticity, community composition and neutral predictions	Gilbert
	Mar. 26	LAB 8	TAs
<b>13</b>	Mar. 30	Applied ecology: lessons for conservation	Gilbert
	Apr. 1	Wrap-up and review	Gilbert
	Apr. 2	Optional Q and A in lab session with professor and TAs	Gilbert, TAs