

Community Ecology and Environmental Biology

Syllabus: BIOC61H3 Fall 2017

Course Instructors: Dr. Rachel Sturge, rachel.sturge@utoronto.ca, SW 563B
Office hours: Mon or Tues 11am to 12pm or by appointment
TA: Rowshyra Castaneda, rowshyra.castaneda@mail.utoronto.ca

Recommended Textbook: Gary G. Mittelbach. *Community Ecology*.

Class meeting time: Lectures Mondays 3 – 5pm BV 363
Tutorials* Wednesdays 2 – 5pm BV 363
* Students attend on alternate weeks

1) Course Description

This class is a lecture and tutorial course that gives students an introduction to community ecology and environmental biology. Community ecology is the ecology of interactions, and foundational in biodiversity science. A basic understanding of community ecology is important to understanding, synthesizing, and applying many universal concepts in ecology. In this course, we will examine the principles and main concepts in community ecology and learn about what impacts ecological communities at local and global scales. As a group, we will increase our awareness of the communities in which we live and our influence on them.

2) Learning Outcomes

At the end of this course, students should be able to...

1. Correctly use common ecological terms and principles from the fields of community ecology and environmental biology.
2. Describe the processes that affect ecological communities, including species interactions and environmental change.
3. Characterize the structure of ecological communities.
4. Read and interpret scientific literature from the field, and use that literature to synthesize persuasive arguments in both debates and in written form.
5. Describe and make predictions about the impacts of anthropogenic activities on ecological communities.

3) Academic Honesty

All work in this course is covered by the University of Toronto's policies on Academic Misconduct (see below hyperlink), which outlines the behaviours that constitute academic dishonesty, as well as the processes for addressing academic offences. The University treats cases of cheating and plagiarism very seriously, so please **REVIEW THIS MATERIAL** as you are expected to be familiar with it.

<http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/PDF/ppjun011995.pdf>

Note that academic dishonesty includes (but is not limited to) failure to properly acknowledge other people's words, information or ideas (including information in textbooks), making up sources or facts, citing non-accredited sources (such as Wikipedia) as if they were peer-reviewed, submitting your own work in more than one course without the permission of both instructors, obtaining or providing unauthorized assistance on any assignment or test (including the use of unauthorized aids or looking at the answers of another student), misrepresenting your identity or falsifying / altering any documents required by the university (for example, a doctor's note), or putting your name on work that you did not contribute to.

All students should have confidence in their ability to master this course material and earn an acceptable grade. If you are struggling with the material, please come see me or speak with your Teaching Assistant. You should also consider forming study groups as research has shown that students who participate in study groups earn, on average, higher grades in courses than those who do not.

4) Course Policies

- Come to class on time and be ready to start as soon as class begins.
- Read all material related to that day's lecture / tutorial BEFORE class, and complete any pre-class assignments in advance.
- Ask questions and discuss the material with other students. Group discussion promotes learning.
- Be an active learner and participate fully in all aspects of the course. Hold yourself and your teammates accountable for all tasks assigned to you / them in any group activity. Be honest with yourself if you are not contributing as fully as you should be, and make positive changes, if necessary.
- If using technology, which includes (but is not limited to) cellphones, tablets and computers, please use them responsibly. The human mind is NOT capable of multitasking (as many scientific studies have shown), and distracted learners are not high-achieving learners. I reserve the right to dock points from any students caught using electronic devices for non-class activities, and also to ban them from future use of these devices while in class.

5) Assessment

a) Methods of instruction

The basic information of this course will be presented through lectures on major topics, participation in lectures and tutorials, and group-based active learning exercises. Class attendance (lecture and tutorial) is **mandatory** and prompt arrival is crucial. We will be using iClicker Cloud for lecture participation – please see Blackboard for more details.

b) Tutorials

Students will be broken into two groups based on their last names (group A and group B). Each group will attend tutorial on a different week (see schedule of classes on the last page of this syllabus for specific dates). In tutorial, students will spend time analyzing and discussing scientific papers on topics related to lecture, as well as participating in group-based exercises aimed at promoting deeper thinking about the concepts introduced in this course. Some of these activities will take place outside, and occasionally will be held offsite. For these activities, students should pay attention to any weather forecasts and dress accordingly.

Students are expected to read the assigned paper and come to tutorial prepared to discuss it. Discussion will take place in both small groups and as a class-wide discussion in which each group will present their findings for one or more questions. At the end of the class-wide discussion, students will take a quiz designed to test their understanding of the paper. Through these discussions, you will learn how to read scientific literature critically, and how to identify both the limits of a study and the general principles that we can draw from it. Reading scientific literature requires understanding of the basics of methodology, putting effort into thinking about the research and the results, and critical thinking skills. In addition, these readings will supplement the lecture material, and material from these papers will be covered on tests / exams.

In addition to paper discussions, tutorial exercises may include, but are not limited to, completing worksheets, other writing assignments, or giving small presentations to your tutorial group. Some of these activities may require that you read additional material or conduct research outside of the classroom. Any written assignments are expected to be turned in to Turnitin.com (see section 6 of this syllabus for details). More details regarding these assignments will be given out as the semester progresses.

No makeup tutorials will be permitted. All students are expected to attend their assigned days of tutorial and must obtain permission from the TA to switch sections. Without a valid reason, students will not be permitted to attend a tutorial section other than the one they have been assigned to. The lowest tutorial score will be dropped at the end of the semester. Note this dropped score also includes all university-accepted excused absences (such as illness.) If you will miss more than one tutorial for a university-accepted reason, you must contact your TA or myself as soon as possible so we can discuss alternate accommodations.

Late penalties

No late assignments will be accepted for work that is completed in tutorial. For all other assignments, work that is turned in late will be penalized by 10% per day, **starting with 5 minutes after the due date / time**, unless the student provides documented proof of the reason for their tardiness.

c) Exams

There will be two term tests worth 15% each, and one cumulative final exam worth 40% of your final grade. All tests / exams will be based on lectures, tutorials, and the assigned readings. Readings supplement the lecture material and are immeasurably helpful in preparing for exams. All exams will consist of multiple choice, short answer and problem-solving questions. The final exam (worth 40% of your final grade) will take place during the final exam period. It will be cumulative, and will have a similar format to the term tests.

Makeup term tests If you miss a term test due to a university-accepted reason, please contact me within three days of the missed test and provide me with documentation to support your absence. Students with a valid excuse will be given a makeup test within one week of the missed test (unless there is a valid reason for a longer delay). Students who fail to contact me within three days will earn a score of zero and no makeup test will be permitted (note that students who are unable to contact me within this time frame due to circumstances beyond their control are exempt from this). Makeup tests will consist solely of ten short answer questions. If you miss the final exam you must go through the registrar's office to request a deferred exam.

d) Accessibility

We welcome students with diverse learning styles and needs at this University and in this course. If you require some sort of accommodation, please see me or contact the AccessAbility Services Office (see below links) as soon as possible. We will work with you to ensure that you are able to meet the course learning objectives successfully. The UTSC AccessAbility Service staff are available by appointment to assess your specific needs, provide referrals, and to arrange appropriate accommodations. All enquiries are confidential.

UTSC AccessAbility: ability@utsc.utoronto.ca, (416) 287-7560, SW 302

e) Grading policies

Students are responsible for all material that is presented in lecture and tutorial. If you miss a class, you are strongly advised to obtain the notes and assignments from another student. Participation in lecture and tutorial will be an important factor in determining borderline grades, so attendance and participation are strongly advised. Please note again that **NO MAKEUP TUTORIALS ARE PERMITTED, AND STUDENTS WHO WISH TO SWITCH SECTIONS FOR A TUTORIAL MUST OBTAIN T.A. PERMISSION IN ADVANCE.** For more details, please refer to the relevant sections of this syllabus.

Category	Percent
Term Tests (2 tests, worth 15% each)	30%
Lecture and Tutorial Participation	10%
Reading Quizzes	5%
Tutorial Assignments	20%
Final Exam (cumulative, during final exam period)	35%

Late penalties

No late assignments will be accepted for work that is completed in lecture or tutorial. For all other assignments, work that is turned in late will be penalized by 10% per day, **starting with 5 minutes after the due date / time**, unless the student provides documented proof of the reason for their tardiness.

One week 'Statue of Limitations'

All grading questions about exams, homework, quizzes, group exercises, literature reviews, etc. must be addressed within one week of the scores being posted online or handed out in class. After this time, no changes will be made to existing grades unless there is a calculation error. Thus, it is essential that you check your grades regularly and contact your TA or instructor within one week if you feel an error has been made or if you are unsure why you lost points.

6) Turnitin.com

We will be using Turnitin.com for this course. You are expected to submit a digital copy of any written assignments to Turnitin.com, when instructed to do so, and turn in a hard copy to be marked by your TA. The following statement is included for your information, as per University policy:

Normally, students will be required to submit their course essays to Turnitin.com for 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.

You should have only one account for all of your University of Toronto coursework.

Schedule of Classes

Readings from Gary Milittelbach *Community Ecology* (recommended).

Week	Date	Topic	Chapter
1	Sep. 4	NO CLASS OR TUTORIAL THIS WEEK	
2	Sep. 11	Introduction & Patterns of Biodiversity Tutorial 1 - Group A	1, 2
3	Sep. 18	Biodiversity & Ecosystem Functions Tutorial 1 - Group B	3
4	Sep. 25	Population growth & density dependence Tutorial 2 - Group A	4
5	Oct. 2	Predators & Prey Tutorial 2 - Group B	5, 6
6	Oct. 9	READING WEEK - NO CLASS	
7	Oct. 16	Term Test 1 Tutorial 3 - Group A	
8	Oct. 23	Competition Tutorial 3 - Group B	7, 8
9	Oct. 30	Mutualisms & Facilitation Tutorial 4 - Group A	9
10	Nov. 6	Food chains & food webs Tutorial 4 - Group B	10, 11
11	Nov. 13	Term Test 2 Tutorial 5 - Group A	
12	Nov. 20	Metapopulations Tutorial 5 - Group B	12, 13
13	Nov. 27	Species Coexistence & Environmental Heterogeneity Tutorial 6 (A and B) – Exam Review	14
14	Dec. 4	Evolutionary Community Ecology	15