Community Ecology and Environmental Biology
Syllabus: BIOC61H3 Fall 2020

Course Instructors: Dr. Rachel Sturge, rachel.sturge@utoronto.ca, SW 563B
                                     Office hours: Wed 13:00 to 14:00 or by appointment
                                     TA: TBA

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

Class meeting time: <u>Lectures</u>   Online (posted by Monday at 3pm every week)
                               <u>Tutorials</u>*   Wednesdays 14:10 – 17:00 (online)
                                                 * 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 dishonest, 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

Potential offences include, but are not limited to:

In papers and assignments:
- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Obtaining or providing unauthorized assistance on any assignment.

On tests and exams:
- Using or possessing unauthorized aids.
- Looking at someone else's answers during an exam or test.
- Misrepresenting your identity.

In academic work:
- Falsifying institutional documents or grades.
- Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from Dr. Sturge or from other institutional resources (see http://academicintegrity.utoronto.ca/).

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

- Stay on top of course content.
- Log in to tutorials on time, stay focused on tutorial content, do not distract classmates.
- 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. There will be opportunities for group discussion virtually so please participate!
- 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.
- When using technology, which includes (but is not limited to) cellphones, tablets and computers, please use them responsible. The human mind is NOT capable of multitasking (as many scientific studies have shown), and distracted learners are not high-achieving learners. Please avoid having distractions around you when you are taking part in online learning.

5) Assessment
a) Methods of instruction

The basic information of this course will be presented through virtual lectures on major topics that will be posted to TopHat Classroom, TA-led literature reviews of recent articles, and group-based active learning exercises. Virtual tutorial attendance is **<u>MANDATORY</u>** and prompt arrival is crucial.

We will be using TopHat Classroom for this class – please see Quercus for more details. You can get access to TopHat Classroom for a discounted price through the bookstore. Please note that if you purchase from TopHat directly, it will cost you more money! Lecture and Tutorial participation will be graded based on active participation in any online quizzes / discussions / assignments and also showing up to virtual tutorial, participating fully, and staying for the entire hour each week. If you log in late, or you are unprepared or unwilling to participate, you will earn a lower grade.

b) Lectures

Lectures will be posted to TopHat Classroom every Monday by 3pm. You are expected to watch the lecture content before tutorials (which will be on Wednesdays) and will be held responsible for all material covered. There will be online lecture comprehension quizzes each week that will be run through TopHat Classroom – details regarding the timing of these quizzes will be posted to the course website. There will be active learning components to the lectures that will also be graded for both participation and correctness. Students are strongly encouraged to complete all lecture activities prior to the associated tutorial as tutorials are based on lectures and assume prior exposure to lecture content.

c) Tutorials

Students will be broken into two groups based on their last names (group A and group B). Each group will attend online tutorial on a different week (see schedule of classes on the last page of this syllabus for specific dates). Students who wish to permanently switch groups have until **Friday, September 11th** to request this – you do this by emailing the teaching assistant. After this time, no students may make a permanent switch. Students who know they will miss a tutorial may contact their TA to request a one-time switch. This must happen **ONE WEEK** before the tutorial they will miss. Only students with valid reason will be permitted to switch tutorials.

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 may require that you go outside to survey places around your place of residence. For these activities, students should pay attention to any weather forecasts and dress accordingly. Students who are uncomfortable or unable to participate in this type of exercise may contact the instructor to make alternate arrangements.

Students are expected to read the assigned paper and be prepared to discuss it in tutorial. 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 <u>will be covered on exams.</u>

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. Assignments will generally be due either at the end of tutorial or within 24 hours of tutorial – students who fail to attend the scheduled online tutorial cannot earn credit for any work that is due after tutorial.

<u>No makeup tutorials will be permitted.</u> All students are expected to attend their assigned days of online 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. **Students who miss three tutorials will automatically fail the tutorial component, receiving a zero for this portion of their final grade.**

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. Illness on the day an assignment is due is **NOT** considered an acceptable excuse for late assignments – plan to email assignments to your TA or your instructor BEFORE the deadline if you are ill on the day they are due.

d) BIOC90 Integrative Multimedia Documentary Project

This course is one of several that can be used to fulfill the BIOC90 program requirement that all students in Biological Science specialist and major programs need to complete before graduation. If you decide to enroll in BIOC90 this semester, you can do so through Acorn – you will need to enroll before the course add/drop date. Please note that if you are enrolled in more than one of the C-level courses that can be used to fulfill this program, you will need to decide which course you want the 10% grade for BIOC90 applied to (you can only apply this grade to ONE of the participating C-levels).

Please see https://www.utsc.utoronto.ca/biosci/biob90h3-bioc90h3 for a list of participating courses. It is your decision as to when you will complete BIOC90 (you do not need to do so this semester, but you do need to complete this course to graduate if you are enrolled in the most recent versions of our programs), but if you end up taking BIOC90 at a time when you are not enrolled in any of the participating classes, you cannot benefit from the assignment grade in any way. If you are not sure if you need to take BIOC90 to complete your program, please consult degree explorer – it will show up there as a program requirement if it is something you need to complete. Note: even if it is not one of your program requirements, you can still choose to complete this course if you wish to do so.

Under the 'BIOC90 Module' on our Quercus Page, the C90 Course Instructor will post all the information you will need to help you decide whether you want to take BIOC90 this term. Here, you will be able to find (i) the C90 course syllabus, as well as (ii) an information session held by the course instructor covering the details of the project.

e) Exams

There will be one midterm worth 25% and one cumulative final exam worth 40% of your final grade. All 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. Both exams will be run through TopHat Classroom and will involve virtual moderating. **It is the responsibility of all students to ensure that they have a secure wifi connection and a working device before all exams.** Students who do not have access to this technology MUST let the instructor know before the exam takes place in order for alternate arrangements to be made (note: students should also let the instructor know if this will be an issue at the start of the semester so alternate arrangements can be made for all course content!)

Makeup midterm If you miss the midterm due to a university-accepted reason, please contact me within three days of the missed test and provide documentation to support your absence (see https://www.utsc.utoronto.ca/biosci/missed-term-work-policy for details on acceptable documentation and how to submit it). 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 midterm exams 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.

f) 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

g) 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 watch it as soon as you are able to and review any active learning assignments you missed as soon as possible. Participation in lecture and tutorial will be an important factor in determining borderline grades, so attendance and participation are strongly advised. For more details, please refer to the relevant section of this syllabus.

Grade Breakdown for students NOT in BIOC90 & those in BIOC90 who add 10% to different C-level

Category	Percent
Midterm Exam	25%
Lecture Participation	10%
Reading Quizzes	5%
Tutorials **(if you miss three tutorials, you will earn 0% here**)	20%
Final Exam (cumulative, during final exam period)	40%

Grade Breakdown for students in BIOC90 who decide to apply 10% grade towards BIOC61

Category	Percent
Midterm Exam	22.5%
Lecture Participation	9%
Reading Quizzes	4.5%
Tutorials **(if you miss three tutorials, you will earn 0% here**)	18%
BIOC90 Integrative Multimedia Documentary Project	10%
Final Exam (cumulative, during final exam period)	36%

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. Illness on the day an assignment is due is **NOT** considered an acceptable excuse for late assignments – plan to email assignments to your TA or your instructor BEFORE the deadline if you are ill on the day they are due.

Forms required to document missed coursework

Students miss class or tutorial for a university-accepted reason must provide documentation to support their absence. Note that if you miss course work due to an illness, you can submit a self-declaration of student illness form. This form must be submitted within three days of the missed coursework, and **MAY NOT** be used to excuse yourself from the midterm exam. There is also a limit to the number of times this form may be used. Please see https://www.utsc.utoronto.ca/biosci/missed-term-work-policy for more details on documentation.

Please note that, even though we will drop your lowest tutorial score, you still need to document all absences for tutorials – if you miss one tutorial that you have properly documented, and a second tutorial for which you have no documentation, this second absence will count as a zero, lowering your tutorial grade.

One week 'Statue of Limitations'

All grading questions about exams, homework, quizzes, group exercises, literature reviews, etc. must be addressed <u>within one week</u> 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 <u>within one week</u> if you feel an error has been made or if you are unsure why you lost points.

6) Turnitin.com

Some of your tutorial assignments will involve group and individual written work. You are expected to submit a digital copy of these assignments, when instructed to do so, through Quercus where your work will be checked via Turnitin.com. 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. Note that you do not need to have an account when submitting work through Quercus – it will be checked by turnitin automatically as part of the submission process.

Schedule of Classes*

Instructor: Dr. Rachel Sturge (rachel.sturge@utoronto.ca)
Lecture: Asynchronous online (posted by 9am every Monday)
Tutorials: Wednesdays 14:10 – 17:00 online**
** students will attend tutorial on alternate weeks

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

Week	Date	Topic	Chapter
1	Sep. 7	**NO CLASS OR TUTORIAL THIS WEEK**	
2	Sep. 14	Introduction & Patterns of Biodiversity Tutorial 1 - Group A	1, 2
3	Sep. 21	Biodiversity & Ecosystem Functions Tutorial 1 - Group B	3
4	Sep. 28	Population growth & density dependence Tutorial 2 - Group A	4
5	Oct. 5	Predators & Prey Tutorial 2 - Group B	5, 6
6	Oct. 12	**READING WEEK - NO CLASS**	
7	Oct. 19	Competition Tutorial (all students) – Exam review session	7, 8
8	Oct. 26	**MIDTERM EXAM** Tutorial 3 - Group A	
9	Nov. 2	Mutualisms & Facilitation Tutorial 3 - Group B	9
10	Nov. 9	Food chains & food webs Tutorial 4 - Group A	10, 11
11	Nov. 16	Metapopulations Tutorial 4 - Group B	12, 13
12	Nov. 23	Species Coexistence & Environmental Heterogeneity Tutorial 5 - Group A	14
13	Nov. 30	Evolutionary Community Ecology Tutorial 5 - Group B	15
14	Dec. 7	**EXAM REVIEW SESSION DURING LECTURE TIME**	

* Schedule is subject to change based on inclement weather or other unforeseen circumstances