

# BIO220H1S - From Genomes to Ecosystems in a Changing World

## Ecology and Evolutionary Biology, University of Toronto

### Course Syllabus - Winter 2015

#### The BIO220 team

Lecturers: <b>Prof. John Stinchcombe</b> (Lectures 1 to 11) <b>Prof. Nicole Mideo</b> (Lectures 12 to 23)	<b>Jill Wheeler</b> , Course and Lab Coordinator <b>Carol Finlay</b> , Course Administrator <b>Dom Fenech</b> and <b>Mary Ann Honig</b> , Laboratory Technicians + many <b>Teaching Assistants (TAs)</b>
<b>BIO220 office: bio220@utoronto.ca</b> - Please direct all course enquiries to the BIO220 office and not to individual team members; the office will re-direct enquiries as appropriate. - ES 3045A (Earth Sciences Centre, enter off 33 Willcocks, take stairs to third floor; same location as BIO120 office in Fall 2013), 416-978-7588 - Please include your full name and student number in your e-mail message. - Office hours: Monday to Thursday from 10:00 a.m. to 12:00noon, or by appointment	

#### Course description

Dynamics of genetic and ecological change in biological systems, from genomes to ecosystems. Evolutionary genetic and ecological perspectives on wide-ranging topics including disease, aging, sexual conflict, genetics of human differences, conservation, and global climate change. Applications of evolutionary, ecological, and molecular-genetic principles and processes. Responsibilities of human societies in a changing world.

Prerequisite: BIO120H1F | Exclusion: BIO150Y1Y | Recommended: BIO130H1S, BIO230H1F

#### Required course materials

1. **BIO220 Laboratory Manual Winter 2015** (available from the U of T Bookstore)
2. **iClicker** (available from the U of T Bookstore)
3. There will be other required readings, such as journal articles; these will be available from the course site on the Portal.

#### Course site on the Portal

The BIO220 site on the U of T Portal ([portal.utoronto.ca](http://portal.utoronto.ca)) contains: copy of this course syllabus, announcements, lecture slides, lab-related content, discussion board, and test and lab marks. Only students who are enrolled in BIO220 on ROSI have access to this site (within 24-48 hours of enrolling). **It is mandatory that you check the announcements at least once a week.** For information about using the Portal: <http://www.portalinfo.utoronto.ca/students.htm>.

## Lectures

- Tuesday and Thursday 1:10-2:00 p.m. in Convocation Hall (CH)
- Partial lecture slides may be available on the Portal before lectures. To conserve paper and ink, we request that you consider printing: six slides per page, on both sides of a page or use previously used paper, and using only black ink.

## Lecture tutorials (optional)

**Thursdays 12:10-1:00 p.m.** (in Con Hall):

This is the time when you can ask the Lecturer questions about the content of the lectures. Attendance is optional. Format is “question and answer.” ***Please note that the lecture tutorials are offered instead of the Lecturers holding office hours.***

## Lecture and Tutorial Schedule

Week	Date	Labs	Tuesday	Thursday	
			Lecture 1:10-2 p.m.	Tutorial 12:10-1 p.m.	Lecture 1:10-2 p.m.
1	Jan 5-9	No labs	1 (Stinchcombe)	yes	2 (Stinchcombe)
2	Jan 12-16	No labs	3 (Stinchcombe)	yes	4 (Stinchcombe)
3	Jan 19-23	1-1	5 (Stinchcombe)	yes	6 (Stinchcombe)
4	Jan 26-30	1-2	7 (Stinchcombe)	yes	8 (Stinchcombe)
5	Feb 2-6	2-1	9 (Stinchcombe)	yes	10 (Stinchcombe)
6	Feb 9-13	2-2	Help Session (Stinchcombe)	yes	11 (Stinchcombe)
			<b>Term Test 6:10 – 7:20 p.m.</b>		
	Feb 16-20	Reading Week – no classes			
7	Feb 23-27	3-1	12 (Mideo)	yes	13 (Mideo)
8	Mar 2-6	3-2	14 (Mideo)	yes	15 (Mideo)
9	Mar 9-13	4-1	16 (Mideo)	yes	17 (Mideo)
10	Mar 16-20	4-2	18 (Mideo)	yes	19 (Mideo)
11	Mar 23-27	5-1	20 (Mideo)	yes	21 (Mideo)
12	Mar 30-Apr 3	5-2	22 (Mideo)	yes	23 (Mideo)
Faculty exams (April 8-30): <b>Final Exam</b> (Lectures 11 to 23, and Lab Chapters 1 to 3)					

## Laboratories

- Check the “My Grades” link on the Portal after 5:00 p.m. on Fri., Jan. 16; there will be a column that shows the week, day, time and room number of your lab.
- Labs are held in alternate weeks (bi-weekly).
- Week 1 (P\*\*01) labs begin the week of Jan. 19; Week 2 (P\*\*02) labs begin the week of Jan. 26.
- All labs are held in the Earth Sciences Centre, 25 Willcocks St.
- Labs are 2.5 hours in length. Tues. and Wed. morning labs start at 9:30 a.m.; Tues., Wed., and Thur. afternoon labs begin at 2:30 p.m.; Wed. and Thur. evening labs begin at 6:30 p.m. (There are no BIO220 labs on Mondays and Fridays.)
- **A lab coat is required for all of the BIO220 labs.**
- **Preparation for Lab 1:** Read Lab Chapters 1 (pages 1 to 7) and 2 (pages 1 to 6) and Appendix A; answer the Reading Questions #1 and bring a printed copy of your answers to Lab 1. Complete Quiz 1 on the Portal before Lab 1.
- Laboratory enrolment/changes can be done on ROSI until the evening of Sunday, Jan. 11. As of Jan. 12, laboratory enrolment and changes can ONLY be done by the BIO220 Office.
- Procedures for requesting a temporary lab change (for example, due to illness) are discussed in the “Important policies and procedures” section on the final page of this syllabus.

## Laboratory Schedule

Lab	Week 1 (P**01)	Week 2 (P**02)	Exercise	Chapter	Quiz
1	Jan 20-22	Jan 27-29	Mutualism (preparation & Week 2 plant) Climate Change (set-up) Reading Questions #1 due	2 1 A	1
2	Feb 3-5	Feb 10-12	Mutualism (Week 1 plant) Cooperation in Yeast (set-up) Reading Questions #2 due	2 3 A	2
3	Feb 24-26	Mar 3-5	Mutualism (examine nodules) Cooperation in Yeast (collect results) Reading Questions #3 due	2 3 A	3
4	Mar 10-12	Mar 17-19	Mutualism (analysis) Climate Change Presentations	2 4	
5	Mar 24-26	Mar 31-Apr 2	Climate Change (analysis) Climate Change Presentations	1 4	

## Academic support

- Questions on **lecture** content can be (1) directed to the Lecturer during the weekly Lecture Tutorial, or (2) discussed with fellow students on the BIO220 discussion forum on the Portal, which is monitored by the BIO220 Lecture TA.
- Questions on **laboratory** content can be (1) directed to Jill Wheeler during her office hours (see “Contacts” on the Portal), or (2) posted on the BIO220 discussion forum on the Portal.
- The BIO220 **discussion forums** on the Portal are for students to post their questions regarding course material. It is expected that students will respond to their classmates’ questions.

## Evaluation

<b>Lecture material</b> , including required readings	70%
<b>Lab material</b> , including required readings	30%
You must obtain a minimum average of 50% on the laboratory material (lab quizzes, assignments, etc., and lab material on the Final Exam) in order to pass the course.	

### Evaluation details:

<b>Midterm Test:</b> Tuesday, February 10, 6:10 p.m. to 7:20 p.m. (70 minutes) - Content: multiple-choice questions covering Lectures 1 to 10 (Prof. Stinchcombe), including required readings. (Lab material will not be evaluated on the Midterm Test.)	28%
<b>Final Exam:</b> during April 9-30 exam period (exact date TBA), 2 hours - Content: multiple-choice questions covering Lecture 11 (Prof. Stinchcombe) and Lectures 12 to 23 (Prof. Mideo), <u>and</u> Lab Chapters 1 to 3, including required readings. (Material from Lectures 1 to 10 is <u>not</u> covered on the Final Exam.)	47%
<b>Participation in clicker questions during lecture</b> (see Portal for detailed information)	3%
<b>Laboratory quizzes and assignments</b> (see Lab Manual for detailed information)	22%

### Important course policies and procedures (please read these carefully!)

- (1) Your **grades** for BIO220 course work will be visible to you on the Portal. It is your responsibility to check your grades and report any inconsistencies to the BIO220 Office as soon as possible.
- (2) Please **do not e-mail** individual staff members; please send all email to bio220@utoronto.ca. The Course Administrator will forward your email to the appropriate team member. Include "BIO220H" in the subject line and your full name and student number in the body of the message. You should use your UTORmail address or else your emails are likely to be diverted to Junk Mail.
- (3) The Midterm Test and the Final Exam consist of multiple-choice questions; marks are not deducted for incorrect responses. Bring an HB pencil, eraser, and your T-Card to all tests/exams; no aids are permitted (no cell phones, calculators, dictionaries, etc.).
- (4) If you **miss the Midterm Test** due to illness you must contact the BIO220 Office no later than Wednesday Feb. 11; valid documentation is required in order to be considered to write the make-up test. The make-up test will likely be written on Friday, February 27 at 8:00 a.m. Valid documentation consists of one of the following: U of T Medical Certificate (available online), U of T Health Service Form, or letter from your College Registrar.
- (5) If you **miss the Final Exam** you must contact your college registrar and initiate a petition to write a deferred exam (if granted, the exam is typically written during the next Exam Period).
- (6) **Test conflict with a scheduled class:** If you have a scheduled class at a time when the Midterm Test is being written your class takes precedence (i.e., attend your lecture and write the early test sitting for BIO220 or the make-up test on February 27). Contact the BIO220 Office no later than Tuesday, Jan. 27 to arrange to write the early sitting. Provide a copy of your timetable as proof of the conflict.

(7) If you **miss your scheduled lab period** for an authorized reason (e.g., illness), present valid documentation (see #4 above) to the BIO220 Office during office hours within one week of the missed lab to find out if space is available to attend another lab during the week that each lab is offered. If a make-up lab cannot be arranged, you will be given an opportunity to make up any in-class assignment that you missed (where applicable). It is important to note that you are permitted to make up only one missed lab with the appropriate documentation. If you do not provide valid documentation or miss more than one lab, you will receive a mark of zero for any assignment associated with the lab. Serious illness affecting two consecutive labs or more will be considered on an individual basis. **Note that you are responsible for submitting any assignments that are due for the lab you missed; no extensions will be granted for assignments on or after their due date. You can e-mail your assignment to: jill.wheeler@utoronto.ca.**

(8) **Lab quizzes** are completed on the Portal. You have one week to complete the quiz. The quizzes expire at the start time of the associated lab. No extensions will be given beyond this time. More information on the quizzes is available on the Portal.

(9) The University of Toronto is committed to **accessibility**. If you require accommodations for a disability, or have any accessibility concerns about the course, classroom or course materials, contact Accessibility Services as soon as possible: <disability.services@utoronto.ca> or <student-life.utoronto.ca/accessibility>.

(10) BIO220 has a zero tolerance policy for **plagiarism**. If you are caught plagiarizing the work of others in any of your course work, you will receive a grade of zero for the course work and the Office of Student Academic Integrity will be notified. Please note that although it is acceptable for students to discuss the assigned articles together, each student must write his or her own assignment independently. It is not acceptable for two (or more) students to submit an assignment with identical or highly similar text.

(11) **Turnitin.com**: Students may be requested to submit their lab assignments to Turnitin.com. Normally, students will be required to submit their report to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their reports 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 can choose to not submit your assignments to Turnitin.com, but you must contact the Lab Coordinator before Monday, Feb. 2 to make alternate arrangements.

(12) For your lab assignments, your assignment will be considered **late** if you do not meet the due date (i.e., submit the hard copy on time in your lab). If your assignment is one day late, you will lose 10% of your grade for the assignment (e.g., if you receive 80% your grade will be reduced to 70%). If you submit your assignment more than one day late, you will receive a grade of zero. You can e-mail late assignments to the Lab Coordinator (jill.wheeler@utoronto.ca). Please note that an assignment is still considered late if it is submitted to only Turnitin.com by the due date and time.