

BIO A02

Life on Earth: Form, Function and Interactions

Summer 2018

COURSE SYLLABUS

Objectives and Outcomes

The primary goal of this course (BIO A02) is to provide students with the strong foundation required to become a successful biologist. During the term you will learn:

- (1) the major principles of plant and animal form and function;
- (2) the key concepts of ecology focusing on the interactions among organisms and between organisms and their environment;
- (3) an examination of the diversity of life in the plant, animal and fungal kingdoms;
- (4) some basic laboratory techniques that are required to pursue your chosen field in science;
- (5) some approaches for finding and reading relevant biology research articles;
- (6) the proper approach to collecting and analyzing data and then communicating the results using the writing and critical thinking skills presented in labs.

Course Personnel

Name	Title	How to contact ¹	Office and Office Hours ²
Dr. Rachel Sturge	Instructor	E-mail biolife@utsc.utoronto.ca (include Sturge in subject)	SW563B Hours: TBA
Karolyn Keir	Lab/Course Coordinator for BIO A02 - Contact regarding late enrollment, missed tests, missed labs, marks management and general advising as related to the course as a whole	E-mail biolife@utsc.utoronto.ca (include Keir and A02 in subject) ³	SW238 Hours: TH 2-3pm or by appointment
Nicole Alber	Lecture / Laboratory – Bio Help TA	nikki.alber@utoronto.ca (include biohelp in the subject)	Please see Blackboard.
	Laboratory TA	TBA in your first lab	

¹All e-mails must be sent from your university issued e-mail account (@mail.utoronto.ca). Please refer to the section “Communicating information within BIO A02” on page 3 for further details.

²All Course Personnel are only available in their offices during stated office hours.

³Karolyn Keir will only respond to e-mails during regular business hours (M-F, 9am-5pm)

2018 Summer Semester - Important Dates

For a list of all important dates for this semester, go to:

<http://www.uts.utoronto.ca/registrar/dates-and-deadlines>

LECTURE SCHEDULE

	DATE	TIME	LOCATION
LEC01	Thursday	12 – 3pm	SW 319

LAB PRACTICALS AND SCHEDULE

	DATE	TIME	LOCATION
PRA 0001	Thursday	9 – 12PM	SW 237
PRA 0002		9 – 12PM	
PRA 0003		3 – 6PM	

Week	Lab #	Practical	Dates (2018)
1	1	Odd numbered practicals (ie. P0001, P0003)	May 10 th
2	1	Even numbered practicals (ie. P0002)	May 17 th
1	2	Odd numbered practicals	May 24 th
2	2	Even numbered practicals	May 31 st
1	3	Odd numbered practicals	June 7 th
2	3	Even numbered practicals	June 14 th
READING WEEK → NO CLASSES			June 21 th
1	4	Odd numbered practicals	June 28 th
2	4	Even numbered practicals	July 5 th
1	5	Odd numbered practicals	July 12 th
2	5	Even numbered practicals	July 19 th

Course Organization & Evaluation

The final grade in BIO A02 will be determined as follows:

Lab Exercises	5 labs	15%	3% per lab Lab 1: 3% Lab Report Labs 2-5: 0.5% for quiz + 2.5% for Lab Report)
	Lab Assignment	3%	Submitted at the beginning of Lab 2
	Formal Lab Report (FLR)¹	7%	Due at the start of July 2018; exact date will be announced in lab and on Blackboard
Lecture Material	Exam 1	20%	June 7, 12-2pm
	Exam 2	20%	July 12, 12-2pm
	Exam 3	20%	Will be scheduled during the Final Exam period
	Lecture Participation	10%	iClicker polling participation and completion of in class assignments.
	Online assessments	5%	Learning curves

¹ A late penalty of 10% per day including weekends applies. Your FLR will be submitted to Turnitin through Blackboard; failure to do so or to submit a Turnitin readable document will **result in a grade of zero**.

In BIO A02 Summer 2018, we use Turnitin.com for the submission of the FLR. You should be aware of the following policy for the use of Turnitin at the University of Toronto:

"Normally, students are required to submit their course essays to Turnitin.com for review of textual similarity and detection of plagiarism. In doing so, students will allow their essays to be used 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".

A. Lecture Topics (*tentative; may change over course*)

Module 1: Plant Form and Function	<ul style="list-style-type: none"> • Structure and function • Reproduction • Growth & Development • Defense (time permitting) • Plant Diversity & Fungi Diversity
Module 2: Animal Form and Function	<ul style="list-style-type: none"> • Nervous systems & Physiology • Cardiovascular & Respiratory Systems • Metabolism, nutrition and digestion • Endocrine Systems (time permitting) • Animal Diversity
Module 3: Ecology	<ul style="list-style-type: none"> • Animal Behaviour • Population, Community and Ecosystem Ecology • Biomes • Global Ecology • The Anthropocene

B. Lab Topics

- Lab 1:** Flower Morphology, Plant Sexual Systems and Plant Vegetative Morphology / Set-up for Formal Lab Report
- Lab 2:** Behavioural Responses in Terrestrial Isopods / Investigating the Effects of Nutrients on Plant Growth: Analyzing data for Formal Lab Report
- Lab 3:** Physiological Responses to Temperature using *Daphnia* spp.
- Lab 4:** Population Sampling Methods / Set-up for aquatic plant bioassay (Lab 5)
- Lab 5:** Population Growth Experiment using an aquatic plant bioassay

Communicating information within BIO A02

Quercus

The main source for information for BIO A02 is the Quercus course page. Information such as contact information, office hours, lecture outlines, videos and notes, assignment instructions, test dates and locations and grades will be posted on Quercus throughout the semester. Please check your BIO A02 Quercus page frequently and consult for information before contacting the Instructor, the Course Coordinator or your TA.

Students must use their UTORid to access the BIO A02 Quercus page. Log on at <https://q.utoronto.ca/>

E-mail

To help the course personnel stay organized and answer your e-mails more quickly and effectively, one central e-mail address serves BIO A02. To communicate with your course instructor and the course coordinator, please e-mail:

biolife@utsc.utoronto.ca

Include the name of the person you wish to e-mail in the subject line to help direct it to that person. If there is no name listed, **your e-mail will not be opened or answered.**

Please do not use professors' personal e-mail address for BIO A02 communication!

Remember to always contact the instructor, course coordinator or your TA using your U of T issued e-mail address.

E-mails from other e-mail services (@gmail, @yahoo, @hotmail, etc.) will not be answered!

Course Materials

1. Textbook, LaunchPad and Reef

The complete textbook package can be purchased at the UTSC Bookstore, located above Tim Horton's in the Bladen Wing. The textbook for BIO A02 is:

Morris J, Hartl D, Knoll A, Lue R. Michael M. 2016. **Biology How Life Works (2nd ed.)** W.H Freeman & Company: Macmillan Education Imprint. 1096pp.

LaunchPad is an additional, online supplement to help you master the material presented in BIO A02. It will also be used for completing online assessments as assigned in the different modules. You can purchase and access LaunchPad two different ways:

1. Packaged at no extra cost with the loose-leaf text (approx. \$138.00) or hard-cover text (approx. \$205.35) purchased through the UTSC bookstore
2. As a stand-alone item (includes the e-text) for \$88.99. This can be purchased through the UTSC bookstore website or through the Macmillan website (<http://www.macmillanlearning.com>).

For Technical Support please call: **1-800-936-6899**

Reef classroom polling is a cloud-based student response software by iClicker. This will help the BIO A02 instructor understand what you know, give everyone a chance to participate in class, and allow you to review material after class.

Creating your iClicker Reef Student Account

Go to iclicker.com.students or download the iClicker Reef Student app for your Apple or Android device to sign up for a Reef account. You should use your U of T e-mail address and student number in the student ID field. Your subscription to Reef is included with the purchase of the textbook. You can find the answers for many of your questions on the iClicker student support site:

(<https://community.macmillan.com/community/iclicker-support/iclicker-student-support>).

2. Lab Manual

The lab manual is a separate e-publication that will be posted on Blackboard. It is required for all lab practicals. It is titled:

Keir K., Gladilina E., Armstrong C. 2018. *BIO A02 - Life on Earth: Form, Function and Interactions - Lab Manual for Summer 2018*. Toronto, Ontario.

The lab manual can only be obtained from Blackboard in the folder labelled 'BIOA02 Lab Manual Summer 2018'. The manual is NOT FOR SALE at the Bookstore! Photocopies of old, out-of-date lab manuals are NOT ACCEPTABLE.

3. Laboratory Coat and Protective Eyewear

Lab coats and protective eyewear are required for all Biology labs at UTSC. Lab coats and protective eyewear are sold in various locations on campus (BioSA, EPSA, Bookstore).

Course Regulations

Lectures

Your instructor in BIO A02 creates their lectures so as to cover a great amount of material within the allotted time. In order to get maximum benefit from these lectures, students are advised to:

- **read the relevant sections in your textbook** before the lecture and become familiar with the terms and concepts to be covered
- **download posted lecture material** from Blackboard before each lecture
- **take notes during the lectures** with the aim of understanding the concepts covered
- re-read the relevant sections in your textbook as needed after lecture and create your own study notes; review your notes frequently
- **arrange to see the Instructor or the Bio-Lecture Help TA** during scheduled office hours or by appointment if you are having difficulties understanding material covered in lectures

Attendance in Labs

Attendance in the labs is required to get credit for any associated work. **Labs 2-5 will start with a quiz** on the lab background information so BE ON TIME! If you arrive at your lab within 20 minutes of the scheduled start time, you may write the quiz in the time remaining. The lab door will be closed at the end of the quiz while the TA introduces the lab. If you arrive more than 20 minutes late, you will not be allowed to participate in the lab.

If you miss a lab entirely, **you must contact the Course Coordinator, Karolyn Keir, before the end of your scheduled lab**. You are only allowed to miss one lab practical with valid documentation during the course of the term. Any labs missed without valid documentation or any subsequent labs missed will be assigned a grade of zero.

Students who attend lab practicals that they are not registered in (without prior discussion with the Course Coordinator) will be assigned a grade of zero for any associated work. You must attend the lab practical that you are registered in!

Only FLRs may be submitted late and must be given directly to the Course Coordinator. An appropriate late penalty (10% of the mark per day including weekends) will be applied; work will not be accepted more than 5 days late. Times and dates to hand in late material will be posted on Quercus; FLR will not be accepted on either Saturdays or Sundays.

Tests / Exams

Students who miss the midterm must contact the Course Coordinator within 3 days of the scheduled test via e-mail. Only students with a valid, documented reason will be given consideration for a makeup.

Documentation must apply to the date/time of the originally scheduled test.

Students who miss the final exam, which is scheduled during the Final Exam Period, must contact the Registrar's Office (<http://www.utoronto.ca/registrar/deferred-exams>) and follow the procedures outlined in order to arrange to write a Deferred Final Exam (DFE). The DFE will be scheduled during the December 2018 Exam Period. Please note that the format of any makeup test may differ from the original while covering the same content.

Procedure for missed labs and term tests

In order to be eligible for consideration for a missed term test or lab work, students must provide a valid documented reason to the Course Coordinator.

For missed labs and lab assignments/FLRS:

*****You must contact the Course Coordinator before the end of your scheduled lab to be eligible for a make-up lab, to be granted an extension, or to be exempt from your lab. Please remember that you are only allowed to miss one lab practical with valid documentation during the course of the term.*****

This summer we are trying a pilot program regarding the requirement of submitting the Verification of Student Illness form for missed term assignments. Specifically, if you are ill during the term, and this illness influences your ability to meet a deadline for submission of a term assignment, rather than submitting a Verification of Student Illness form in your request for accommodation you can submit a Self-Declaration of Student Illness form, indicating the days in which you were ill. This form is meant to take the place of the more typical medical form, and will be available on the department's website www.utsc.utoronto.ca/biosci.

Please note the following aspects related to this Self-Declaration of Student Illness form:

1. Similar to the submission of a medical form, YOU ARE RESPONSIBLE for contacting the Course Coordinator to make arrangements for an accommodation for this work.
2. You may use the Self-Declaration of Student Illness form ONLY for term assignments. For any term exams in this course you will need to submit a Verification of Student Illness form (See "For Missed Term Tests"). For the final exam you will need to follow the typical procedures for petitioning to write a deferred exam.
3. You may use the Self-Declaration of Student Illness form up to five times in this course. If you require an additional accommodation for a term assignment you must then use the standard Verification of Student Illness form.
4. Submitting a false Self-Declaration of Student Illness form constitutes academic misconduct, and could be subject to sanctions under the Code of Behaviour on Academic Matters.

Please submit any Self-Declaration of Student Illness forms to the Course Coordinator as soon as possible.

For missed term tests:

***** You must contact the Course Coordinator within 72 hours of the end of your scheduled term test to be eligible to write a make-up term test*****

Please submit a completed University of Toronto Verification of Illness or Injury Form. Form can be found here:

<http://www.utsc.utoronto.ca/registrar/verification-illness-or-injury>

The date/time of the original test that was missed must be clearly indicated as well as a clear statement of the medical issue.

Important UTSC Policies

1. Information on Academic Integrity

The University treats cases of plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters outlines behaviour that constitutes academic dishonesty and the processes for addressing such offences (see <http://www.governingcouncil.lamp4.utoronto.ca/wp-content/uploads/2016/07/p0701-coboam-2015-2016pol.pdf>).

2. Information Regarding AccessAbility Services at UTSC

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach the AccessAbility Services Office (**SW 302**). All enquiries are confidential. You can contact AccessAbility Services at ability@utsc.utoronto.ca or visit their website (www.utsc.utoronto.ca/ability/).

3. Information on Religious Observances

It is a policy at UTSC to provide special consideration for recognized holy days, which may be observed by our students. As a student, it is your responsibility to check the due dates for all course work and scheduled dates for tests/exams on a regular basis. Inform the Course Coordinator of any potential conflicts **at least 7 days prior** to the date of the test/assignment.

4. Information regarding final marks

After the final exam, final marks are calculated and submitted to the Department for review. Once approved, the final mark for each student in the course will be released on ROSI/ACORN. Final marks are not negotiable and instructors are not permitted to discuss final marks with students. If students have concerns about their final mark, they should consult the proper procedures to be followed as outlined by the Registrar's Office:

<http://www.utsc.utoronto.ca/registrar/petitions>

**Once final marks are posted, it is an academic offense
to ask for your mark to be changed
(see Academic Handbook for further details)**