

BIO A02 H3 Y
Life on Earth: Form, Function and Interactions
Summer 2015
COURSE SYLLABUS

Course Goals and Overview

The goal of this UTSC course (BIO A02H3Y) is to continue developing the foundational skills needed to become a successful Biologist.

During the term you will learn:

- (1) the major principles of animal physiology with the focus on structure and function;
- (2) the key concepts of ecology and evolutionary biology;
- (3) some essential skills to become an active learner of science;
- (4) some basic laboratory techniques that are required to pursue your chosen field in science;
- (5) some approaches for 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.

BIO A02H3 Y is a lecture and laboratory course designed to encourage students to think broadly and critically about some major areas of study in Biology (e.g. Animal Physiology & Ecology and Evolutionary Biology). There is one **3-hour Biology Lecture each week** and **one 3-hour Lab (Practical) every two weeks**. The **Biology Lectures** are on Thursdays 4:00-7:00 p.m. in AA112. The **Lab practicals** will be scheduled on Thursdays or Fridays.

Course Personnel

There are several key people you should get to know in this course: (1) the Instructor, (2) the Lab Coordinator, and (3) your Lab TA.

(1) Instructor:

Dr. Connie Soros

Office: SW563B (only during office hours)

Email: biolife@utsc.utoronto.ca (include Soros in the subject line)

Please use your UofT email address

OFFICE HOURS: Available on Mondays 11:00am-12:00pm, Thursdays from 3pm-4pm either in my office or by appointment

(2) Course/Laboratory Coordinator:

Sheila Rush

Office: SW241 (by appointment). Please use your Uof T account for contact. Email:

biolife@utsc.utoronto.ca (title email: Rush and BIO A02 in the subject line)

Sheila Rush handles matters such as late enrollment, missed tests, missed labs, marks management and general advising as related to the course as a whole. If you need to reschedule a Practical or your Midterm Exam, you must contact Sheila.

Teaching Assistant (TA) – Lab TA

Students must attend the specific Practical (Lab Section) in which they are registered. Each lab is led by a Teaching Assistant (= TA), who will guide you through the lab exercises/experiments. Learn your Teaching Assistant's name and use the email address provided by your TA to contact your TA if you have questions/concerns regarding your labs or lab assignments. The Lab TA contact information for all sections is also provided in your Lab Manual.

The **BIO A02H3 Y Labs are located in Room SW237.**

(3) Communication within BIO A02

The key source for information for BIO A02 is on the Course Webpages provided on Blackboard. You have Blackboard pages for both the Lecture and your Practical Section. Information such as Contact Information and Office Hours, Biology Lecture Outlines and Notes, Assignment Instructions, Test Dates and Locations and Other Useful Resources will be posted on Blackboard throughout the course. Lab Information and marks will be posted on Blackboard. Announcements and the Video-taped Lecture (see Weboption link) for BIO A02 will be posted on Blackboard, so check the BIO A02 Course Webpages frequently and regularly. Always check the BIO A02 Course Webpages for information before contacting the Instructors/Lab Coordinator, or your TA.

Check the Blackboard Course Webpages for BIO A02 regularly and frequently!!

Students should use their UTORid to log on to BIO A02 Course Blackboard page. Log onto Blackboard by clicking the "Portal" link on the UTSC Homepage NOTE: You will need a UTSC computer account in order to logon onto Blackboard.

Always use your UTSC email address for contacting the Instructors, the Course/Lab Coordinator, and the Teaching Assistants (TAs). Emails from other email addresses will not be answered. Include the Instructors name and course code in the "Subject Line"

Textbooks and Lab Manual

The complete Textbook Package can be **purchased at the UTSC Bookstore** located above Tim Horton's in the Bladen Wing.

(1) The **Textbook** for BIO A02H3Y is:

Russell PJ, Wolfe SL, Hertz PE, Starr C, Fenton B, Addy H, Maxwell D, Haffie T, Davey K.
2013. Biology: Exploring the Diversity of Life. (2nd Canadian ed.). 3-volume paperback.
Toronto: Nelson Education Ltd. 1253 p.

(2) **Textbook Policy:** *We **strongly** recommend that students use the textbook, but it is not required. Although the 2nd and 1st Eds. have much in common, the material in some chapters has changed substantially and Lecture material may refer to specific page numbers and Figures in the 2nd Ed. textbook. Therefore having the 2nd Ed. may improve your ability to follow the Lectures and study effectively. Previous textbooks will not include an ebook or access to **Mindtap Study Guide. Regardless of the textbook you use, you are responsible for learning the material as presented in Lecture.***

(3) **Mindtap** is an additional, online supplement to help you master the material presented in BIO A02 H3 Y.

- (4) The **Textbook Website (ebook)** developed by the Publisher of the textbook has additional resources that students will find useful in both introductory biology courses (BIO A01 and BIO A02). An Access Code to this site is included.

1. The **Lab Manual**, which is required for all Lab Practicals is:

Rush S., Gladilina E., Armstrong, C., 2015. BIO A02H3 Y - Life on Earth: Form, Function and Interactions – Lab Manual for Summer 2015. Toronto, Ontario: University of Toronto Scarborough Printing Services.

There are changes in the Summer 2015 Lab Manual. Photocopies of old, and now out-of-date, lab manuals are NOT ACCEPTABLE.

The **Lab Manual can be obtained from the Blackboard course page** (in the folder entitled “Lab Manual Summer 2015”). The Lab Manual is NOT FOR SALE at the Bookstore! The digital copy is the ONLY copy provided for Summer 2015!

Copies of Lab Reports will not be provided by your TA! It is your responsibility to bring your own Lab Manual materials to your Practical in order to complete your assignments.

STUDENTS MUST HAVE THEIR OWN COPY OF THE APPROPRIATE LAB INFORMATION when they come to their Practical. It is the responsibility of each student to read each lab in advance and bring the printed lab material to each of their scheduled Practicals.

Course Materials:

Lab Coats / Protective Eyewear

Lab coats are required for all Biology labs at UTSC; protective eyewear is required for some labs as indicated in your Lab Manual. **Lab coats and protective eyewear are sold in various locations on campus (BioSA, EPSA, Bookstore).** Disposable gloves and other supplies will be provided in the labs as needed. Students should bring pencils, pens, markers, rulers, erasers, and calculators to all labs. **Always check your Lab Manual for any special requirements for each of your labs.**

Statement regarding Use of Turnitin

During the Summer 2015 Semester, we will be using the program “Turnitin” for the submission of Assignments (e.g. Formal Lab Reports) in BIO A02. More information will be provided once all of the details have been worked out. For now, you should be aware of the following policy for the use of Turnitin at the University of Toronto.

“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”.

Any form of plagiarism whether intentional or unintentional on any material for BIO A02 will NOT be tolerated and you WILL receive a grade of ZERO for any work that is plagiarized.

Course Organization

The content in **BIO A02** will be delivered through twelve 3-hour Biology Lectures, and five 3-hour labs. Students will be evaluated through lab quizzes and reports, one assignment, one formal lab report, one mid-term test and a final exam.

The students’ understanding of the material covered in the first part of the course will be evaluated on Mid-Term Test, using a multiple-choice question format. This Test will be scheduled in mid-June 2015; the date/time and location will be announced later and posted on the BIO A02 Course Webpages.

The students’ understanding of the material covered in the second part of the course will be evaluated on the Final Exam, which is may be cumulative. The Final Exam will also use a multiple-choice question format and will be scheduled in the UTSC Exam Period in August 2015; the details will be announced later and posted on the BIO A02 Course Webpages.

Course Content

1. Lecture Topics (may change slightly over the course of the semester)

Module 1: Plant Form and Function

- Lecture 1: Tree of Life – Plants
- Lecture 2: Plant Cells and Tissues
- Lecture 3: From Tree to Seed
- Lecture 4: Transport, Plant Nutrients and Soil

Module 2: Animal Form and Function

Lecture 5: Tree of Life Fungi, Tree of Life Animals

Lecture 6: Animal Anatomy and Physiology and the Nervous System

Lecture 7: Endocrine, Muscular and Skeletal Systems

Lecture 8: Cardiovascular and Respiratory Systems, Digestive and Metabolic Pathways, Regulation

Module 3: Ecology

Lecture 9: Biology of Animal Behaviour, Population Interactions

Lecture 10: Population Ecology, Community Ecology

Lecture 11: Ecosystem Ecology, Conservation Biology and the Importance of Biodiversity

Lecture 12: Human Impacts on Biological Sciences

Lab Topics:

Lab 1 – An Examination of Vegetative and Flower Morphology of Plants/
Investigating the Effects of Nutrients on Plant Growth: Setup for
Formal Lab Report

Lab 2 – Behavioural Responses in Terrestrial Isopods, Collection of Data for Formal
Lab Report

Lab 3 – Physiological Responses to Temperature using *Daphnia* spp.

Lab 4 – Population Sampling Methods, Population Growth Experiment: Set up

Lab 5 – Population Growth Experiment using an Aquatic Plant Bioassay: Analyzing
Data

Summer Sessional dates

Monday, May 4	Classes begin in F and Y courses.
Sunday, May 10	Last day for students writing deferred examinations in August to adjust their current course load (on ROSI only).
Monday, May 18	Last day to add F and Y courses (on ROSI only).
Monday, May 18	Victoria Day → University closed.
Monday, June 8	Last day to drop F courses without academic penalty and have them removed from the transcript.
Monday, June 8	Last day to add or remove the CR/NCR mode of assessment (on ROSI) for an F section course. (Note: For details go to www.utsoc.utoronto.ca/registrar)
Monday, June 15	Last day to drop UTSC F courses and have them remain on the transcript with a grade of LWD indicating withdrawal without academic penalty. After this date grades are assigned whether or not course work is completed (with a '0' assigned for incomplete work) and are calculated into GPAs.
Monday, June 15	Last day of classes and last day for submission of term assignments in F courses.
Tuesday, June 16 - Saturday, June 20	Reading Week (Note: Classes or exams may be held on other campuses.)
Tuesday, June 16 - Saturday, June 20	Final examinations in F courses.
Monday, June 22	Classes begin in S courses and resume in Y courses.
Wednesday, July 1	Canada Day → University closed.
Monday, July 6	Last day to add S courses.
Monday, July 20	Last day to drop Y courses without academic penalty and have them removed from the transcript.
Monday, July 20	Last day to add or remove the CR/NCR mode of assessment (on ROSI) for a Y section course. (Note: For details go to www.utsoc.utoronto.ca/registrar)
Monday, July 27	Last day to drop S courses without academic penalty and have them removed from the transcript.
Monday, July 27	Last day to add or remove the CR/NCR mode of assessment (on ROSI) for an S section course. (Note: For details go to www.utsoc.utoronto.ca/registrar)
Saturday, August 1	Last day to confirm intention to graduate at the 2015 Fall Convocation.
Monday, August 3	Civic Holiday → University Closed
Tuesday, August 4	Last day of classes and last day for submission of term assignments in S and Y courses. (Note: Classes are held on this date only for courses that normally meet on a Wednesday .)
Wednesday, August 5 – Thursday, August 6	Study Break.
Wednesday, August 5 - Thursday, August 20	2015 Winter deferred examinations.
Thursday, August 6	Last day to drop UTSC S and Y courses and have them remain on the transcript with a grade of LWD indicating withdrawal without academic penalty. After this date grades are assigned whether or not course work is completed (with a '0' assigned for incomplete work) and are calculated into GPAs. (Note: See www.utsoc.utoronto.ca/registrar for LWD dates for courses on other campuses.)
Friday, August 7 – Thursday August 20	Final examinations in S and Y courses.
November TBA	2015 Fall Convocation. Check "Ceremony Dates" at www.convocation.utoronto.ca for the date of the UTSC ceremony.

BIO A02 LABORATORY PRACTICAL SCHEDULE SUMMER 2015

Week	Lab #	Practical	Date (2015)
1	1	Odd Numbered practicals (e.g. P0001, P0003...P0005)	May 4 to May 8
2	1	Even Numbered practicals (e.g. P0002, P0004...P0006)	May 11 to May 15
1	2	Odd Numbered practicals (e.g. P0001, P0003...P0005)	May 18 to May 22
2	2	Even Numbered practicals (e.g. P0002, P0004...P0006)	May 25 to May 29
1	3	Odd Numbered practicals (e.g. P0001, P0003...P0005)	June 1 to June 5
2	3	Even Numbered practicals (e.g. P0002, P0004...P0006)	June 8 to June 12
		Reading week (NO LABS)	June 16 to June 19
1	4	Odd Numbered practicals (e.g. P0001, P0003...P0005)	June 22 to June 26
2	4	Even Numbered practicals (e.g. P0002, P0004...P0006)	June 29 to July 3
1	5	Odd Numbered practicals (e.g. P0001, P0003...P0005)	July 6 to July 10
2	5	Even Numbered practicals (e.g. P0002, P0004...P0006)	July 13 to July 17
		HAND BACK LAB MATERIAL	July 27 to July 30

Course Evaluation

The final grade in BIO A02H3 Y will be determined as follows:

Labs 1 to 5 (3marks X5 labs)	15%	of final grade
Assignment	3.0 %	of final grade
Formal Lab Report	7.0 %	of final grade
Mid-Term Test (TBA)	35 %	of final grade
Final Exam	40 %	of final grade

Course Regulations

1. Attendance at Lectures

Attendance at the Lectures is very highly recommended. In order to get maximum benefit from the Lectures in this course, students are advised:

- to read the relevant sections in your Textbook before the Lecture; see Lecture Schedule with Textbook references; do not take extensive notes or memorize the material at this stage - just read and become familiar with the terms and concepts to be covered
- to download any posted LECTURE material from the BIO A02 Webpage before each Lecture
- to come to the Lecture and take your own notes with the aim of understanding the main concepts covered
- to re-read the relevant sections in your Textbook as needed after the Lecture and create your own study notes; review your notes frequently
- to arrange to see the Instructor(s) and/or Bio-Help TAs, during scheduled Office Hours or by appointment, if you realize that you do not understand the concepts covered in the lectures, labs.

2. Attendance at Labs

Attendance in the Labs is required in order to get credit for that lab and any work associated with the lab. Most labs will start with a Quiz on the Lab Background Information so be ON TIME!! If you arrive at your lab late (within 10 minutes of the scheduled Lab 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 the door is closed – you are late!

In order to meet course requirements you are only allowed to miss one lab practical with valid reason, any other lab you may miss will be assigned a grade of zero regardless of the reason.

If you are more than 10 minutes late for a Lab or if you miss a Lab entirely, you must contact the Lab Coordinator, Sheila Rush. Labs may be rescheduled, but only in the event of a valid, unavoidable, documentable reason. Lab reports will not be accepted for missed Labs without attendance. **Any Lab Reports/Assignments allowed to be submitted late must be given to the Lab Coordinator and will be assessed the appropriate late penalty (10% of the value of the work per day including Saturday and Sunday); work will not be accepted if more than 5 days late without permission of the Lab Coordinator.**

3. Tests / Exams

If you cannot attend Friday evening or Saturday Tests/Exams for religious reasons, please notify the Lab Coordinator, Sheila Rush in writing (by email) within one week before the announced Test /Exam date; an alternative time will be presented if approved by the Instructor. Documentation may be required.

If you miss the Mid-Term Test, the Lab Coordinator, Sheila Rush, must be contacted within 72 hours (or 3 days) of the scheduled Test (by email).

Only students with a valid, documented and verifiable medical reason, or a personal documented excuse (of an extreme nature) will be given any consideration for a Make-up Test. Documentation must apply to the date/time of the originally scheduled Test. (Note: format of the Make-up Mid-Term Test may differ from the original Mid-Term Test while covering the same content). **Students who miss the scheduled makeup midterm will receive a grade of zero for the midterm regardless of the reason.**

Students who miss the Final Exam must contact the Registrar's Office (at http://www.utoronto.ca/~registrar/current_students/deferred_exams) and follow the procedures outlined in order to arrange to write a Deferred Final Exam. The Deferred Final Exam will be scheduled by during the August 2013 Exam Period. (Note: The format of the Deferred Final Exam may differ from the original Final Exam while covering the same content).

4. Required Documentation for Missed Term Work (e.g. Assignments /Labs /Tests)

In order to be eligible for consideration for a missed Mid-Term Test or to receive credit (whole/partial) for missed labs (and associated Assignments), students must provide a valid documented reason to the Lab Coordinator, Sheila Rush, as soon as possible upon returning to UTSC.

For other reasons (death in family, car accident/problems, transportation issues), students must provide verifiable documentation as appropriate to the situation and discuss the situation with the Lab Coordinator, Sheila Rush, as soon as possible.

Students should always get valid and verifiable documentation for any situation that causes them to miss any course deadlines or commitments or tests and notify **Sheila Rush within 5 days of the missed deadline.**

For medical reasons, the attending physician (who must be registered with the College of Physicians and Surgeons) must complete the Standard University of Toronto Medical Certificate. Copies of the standard University of Toronto Medical Certificate are available on the BIO A02S Course Webpages on Blackboard (see link under FAQ Section); it is also available on the UTSC Registrar's Website.

<http://www.illnessverification.utoronto.ca/>

The date/time of the original lab or test that was missed **MUST BE CLEARLY INDICATED** as well as a clear statement of the medical problem. Make sure that the Student's Name and UTSC Student Number are clearly indicated.

NOTE: Reasons such as work, vacation, sleeping-in, other tests/exams and assignments in other courses are **NOT ACCEPTABLE** reasons for not completing work in this Course.

Important University of Toronto Scarborough (UTSC) Policies

The University of Toronto Scarborough is dedicated to fostering an academic community in which the learning and scholarship of every member may flourish, with vigilant protection for individual human rights, and a resolute commitment to the principles of equal opportunity, equity and justice.

1. Information on Academic Integrity

Academic integrity is essential to the pursuit of learning and scholarship in a University, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters outlines behaviours that constitute academic dishonesty and the processes for addressing such offences (see <http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>) Potential offences include, but are not limited to:

(1) in term-work (e.g. papers, reports 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

(2) **on tests and exams:**

- using or possessing unauthorized aids
- looking at someone else's answers during an exam or test
- misrepresenting your identity

(3) **in academic work:**

- falsifying institutional documents or grades
- falsifying or altering any documentation required by the University, such as 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 your Instructor(s) or from other institutional resources (see <http://www.utoronto.ca/academicintegrity/>)

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 Instructors in BIO A02S and/or the AccessAbility Services Office as soon as possible. BIO A02S personnel will work with you and AccessAbility Services to ensure you can achieve your learning goals in this Course. The **UTSC AccessAbility Services Office** is located in **Room SW-302**. Qualified staff is available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. Note all enquiries are confidential. You can contact **AccessAbility Services** at 416-287-7560 or ability@utsc.utoronto.ca. The sooner you let us know about your needs, the quicker we can arrange the assistance need in achieving your learning goals in this Course.

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. Though not all holy days require students to be absent from school, accommodations may still be necessary in some cases. 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/Lab Coordinator of any potential conflicts at least 7 days before to the date of the test or due date of the assignment. Failure to do so may result in special consideration not being granted; documentation may be required.

