

Syllabus BIOL103 F23

General Course Information

BIOL 103: Fundamentals of Biology: Organisms to Ecosystems 3.0 CR

Pre-requisites: none

Instructor Information

Information on the teaching team is available via the course website, accessible to all students enrolled in the course.

Important University Dates

Visit <https://www.queensu.ca/artsci/events> for an up-to-date list of important dates.

Welcome Message

Welcome to Biology 103. Our focus will be on organismal biology—from physiology to ecosystems. Much of the subject matter that we cover, especially early in the course, may be familiar to you from your high school biology courses. Nevertheless, it is likely that you will be exposed to plenty of new and interesting aspects of biology and that you will find the course challenging and the learning to be rewarding.

Equity, Diversity, and Inclusivity Statement

Queen's University recognizes that the values of equity and diversity are vital to and in harmony with its educational mission and standards of excellence. It acknowledges that direct, indirect and systemic discrimination exists within our institutional structures, policies and practices and in our community. These take many forms and work to differentially advantage and disadvantage persons across social identities such as race, ethnicity, disability, gender identity, sexual orientation, faith and socioeconomic status, among other examples.

Land Acknowledgement

We acknowledge that Queen's is situated on traditional Anishinaabe and Haudenosaunee territory. We are grateful to be able to live, learn and play on these lands. – [Four Directions Indigenous Student Centre, Queen's University](#)

Expectations

Throughout this course, there will be opportunities for you to interact with your instructor and your classmates. My hope is that students are willing to put in the effort necessary to learn the material and see the opportunities in applying what they have learned to novel scenarios.

Students will interact with their peers and have opportunities to learn from their colleagues during learning activities that include virtual labs and study sessions. You are expected to behave with integrity and respect at all times both in face-to-face interactions and when engaging with each other online. See the netiquette and discussion guidelines below which I expect each of us to adhere to when interacting with one another whether in person or online.

The nature of the support in the course depends on the problems students encounter. There are OnQ Discussion forums to post most questions about how the course runs as well as general questions about the material. We emphasize these forums so that the whole community can learn together.

Course Learning Outcomes

On successful completion of this course, you should be able to:

1. Identify the roles of the major physiological systems in diverse animals and how they are regulated through electrical and chemical signals to achieve change or maintain homeostasis
2. Describe the structure and function of nerves and muscles and explain how they contribute to physiological and behavioural processes.
3. Apply knowledge of tissue and organ system functioning and integration to diagnose or predict common diseases and organismal dysfunctions.
4. Discuss the mechanisms by which evolution shapes biological diversity, citing examples from the history of life captured in the fossil record, in extant diversity, or through direct observation of evolution in action.
5. Compare the nature of interactions between organisms at the level of the population, the community and the ecosystem.
6. Describe the main cycles governing the flow of nutrients and energy through communities and ecosystems and recognize the importance of ecological interactions and biodiversity in building a sustainable future.

Course Materials

The following textbook is recommended, with an e-version available from the campus bookstore. **Campbell Biology, Third Canadian Edition, Urry et al.** You will need both a copy of the text and access to Mastering Biology. If you have access to the text, hardcopy or electronic, then you can purchase a separate Master Biology subscription. The link is here. Ensure that you remove the option that you don't want before Checkout.

The Core Content of the course will be available via recorded lectures, with slides and transcripts available. These are provided to save students the trouble of writing down what is

said in the lecture and to minimize confusion about specifics. However, the notes should be treated as a starting point for you to collate and reorganize in ways that support your learning. Students often augment scripts with their own notes, adding in comments, hyperlinks, definitions - anything that helps you flesh out the story.

Course Timeline

The specific events in the course are available on the course homepage, but an abbreviated version is below.

- Unit 1: Weeks 1 - 3 Evolution
- Unit 2: Weeks 4 - 6 Physiological Principles
- Unit 3: Weeks 7 - 9 Homeostasis
- Unit 4: Weeks 10 - 12 Ecology

Suggested Time Commitment

In this course, you should expect to invest on average 8 to 10 hours per week. This will include the time you spend in class, studying course material, and completing weekly homework or preparing for your assessments. You are encouraged to use a term at a glance and a weekly study schedule (visit [SASS](#)) that distributes the 8-10 hours per week and avoid 'cramming'. This way you will be more likely to complete the course successfully and remember what you learned longer.

Timing of Final Examinations

The Final Exam is scheduled only for those students who missed activities with approval granted after a legitimate and complete request is submitted and accepted.

The exam dates for each Term are listed on the Faculty of Arts and Science webpage under [Important Dates](#). Student exam schedules for the Fall Term are posted via SOLUS immediately prior to the Thanksgiving holiday; they are posted on the Friday before Reading Week for the Winter Term and for the summer term, they are individually noted on the Arts and Science Online syllabi. **Students should delay finalizing any travel plans until after the examination schedule has been posted. Exams will not be moved or deferred to accommodate employment, travel/holiday plans or flight reservations.**

Assessment

- **Dynamic Study Modules:** 8 marks for completing the DSM in MasteringBiology.
- **Unit Quizzes:** 32 marks from 4 End-of-Unit Quizzes. These are based on your mastery of the recorded lectures and associated readings, which we treat as the Core Content.

- **Study Sessions:** 16 marks from 4 study sessions, where you work within a group to answer questions and explore the broader ramifications of the questions.
- **Virtual Labs:** 44 marks from 5 labs. Each has Individual Activities that must be completed to gain access to Group Activities.

Essential requirements and flexibility to succeed

Assignments in this course have been designed with flexibility for academic consideration for all students. We encourage all students to complete the various assessments.

- The Content Quizzes have wide windows and firm deadlines. After the quiz closes, the results are published and discussed. For these reasons, no extensions are possible.
- If a student misses other activities with approved¹ accommodations, they will be entitled to make up those missed marks via a final exam.

Grading Scheme and Grading Method

All activities in this course will be assessed with a numerical grade. Your course average will then be converted to a final letter grade according to Queen’s Official Grade Conversion Scale:

Grade	Numerical Course Average (Range)	Grade	Numerical Course Average (Range)
A+	90-100	C+	67-69
A	85-89	C	63-66
A-	80-84	C-	60-62
B+	77-79	D+	57-59
B	73-76	D	53-56
B-	70-72	D-	50-52
		F	49 and below

Questions about the Course and Contacting the Teaching Team

Please post any questions about content and logistics to the appropriate Help forum, where everyone can benefit from the exchanges. Requests that are confidential or urgent should be directed to the Course Coordinator, via the email posted on the course website.

Course Announcements

Any changes to the course or any other form of announcements are made via the course homepage. Students in the course are encouraged to sign up to automatically receive a notice that an new announcement has been posted.

Course Feedback

At various points during the course, I may ask you to take part in a variety of feedback activities, such as surveys, questionnaires, and exit tickets. This feedback enables the teaching team to

make any adjustments necessary to improve your learning environment. Additional feedback will be sought throughout the course. All surveys are anonymous and are directly related to activities, assessments, and other course material.

[Accommodations for Disabilities](#)

Queen's University is committed to achieving full accessibility for people with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all their academic activities. The Senate Policy for Accommodations for Students with Disabilities was approved at [Senate in November 2016](#). If you are a student with a disability and think you may need academic accommodations, you are strongly encouraged to contact the **Queen's Student Accessibility Services (QSAS)** and register as early as possible. For more information, including important deadlines, please visit the [QSAS website](#).

Because of the nature of the activities, there is no need for space-based accommodations. There are also no time-based accommodations. Quizzes are open for wide windows. If your disability prevents you from completing the activity, then you will be able to make up the missing marks via the Final Exam.

[Academic Consideration for Students in Extenuating Circumstances](#)

[Academic Integrity](#)

Many of the activities in the course are designed around peer-based learning. We create these activities to help you engage each other in a collaborative setting. With other activities, you are expected to demonstrate your individual mastery of the material, and because of this, you are expected to complete the work on your own.

Students are responsible for familiarizing themselves with the regulations concerning academic integrity and for ensuring that their assignments and conduct conform to the principles of academic integrity. Information is available in the Arts and Science Calendar¹ (see on the Arts and Science website², and at Biology's website³. Departures from academic integrity include plagiarism, use of unauthorized materials, facilitation, forgery and falsification, and are antithetical to the development of an academic community at Queen's. Given the seriousness of these matters, actions which contravene the regulations on academic integrity carry sanctions that can range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university.

¹ <http://www.queensu.ca/artsci/academic-calendars/regulations/academic-regulations>,

² <http://www.queensu.ca/artsci/academics/undergraduate/academic-integrity>

³ <http://www.queensu.ca/biology/undergrad/integrity.html>

Copyright of Course Materials

Unless otherwise stated, the material on the course website is copyrighted and is for the sole use of students registered in BIOL103. The material on the website may be downloaded for a registered student's personal use but shall not be distributed or disseminated to anyone other than students registered in this course.

Technology Requirements

We do not foresee using Turnitin or remote proctoring in this iteration of the course.