Syllabus BIOL339

General Course Information

BIOL 339: Animal Physiology
Fall 2022 (Sept to Dec 2022)
3.0 CR
Blended
Pre-requisites: BIOL 205/3.0 or BCHM 218/3.0
Monday 9:30 -10:20 AM, Thursday 10:30-11:20 AM

Instructor Information

Name: Christopher D. Moyes (he/him, Prof Moyes, Chris)
Office address: 3121 Bioscience Complex
Student hours: There are no specific office hours but students are encouraged to drop in at their convenience to see if I am available.
Contact: Reach me by email at chris.moyes@queensu.ca
Website: https://biology.queensu.ca/people/department/professors/moyes/

About Prof Moyes: I study the regulation and evolution of genes and enzymes that ensure metabolic pathways provide enough energy to meet biological demands. My teaching spans cell biology, biochemistry and animal physiology, which creates a lot of opportunities to show connections between the different disciplines.

Teaching Assistant Information: will be posted on the course website.

Important University Dates

Visit https://www.queensu.ca/artsci/important-dates for an up to date list of important dates. At present, these are the dates available to us.

- Thursday September 1, 2022 **Fall Term begins**
- Monday September 5, 2022 **Labour Day** (no class)
- Tuesday September 6, 2022 **Fall term classes begin**
- Monday September 19, 2022 **Last date to drop Fall Term classes without financial penalty**
- Monday September 19, 2022 **Last date to add Fall Term classes**
- Monday October 11, 2022 to Friday October 14, 2022 **Fall mid-term break**
- Tuesday November 1, 2022 **Last date to drop Fall Term classes without academic penalty**

- Monday November 7, 2022 **Last date to apply for accommodation for an official examination conflict for the December examination session.**
- Monday December 5, 2022 **Fall term classes end**
- Tuesday December 6, 2022 to Thursday December 8, 2022 **Fall Term study period**
- Thursday December 8, 2022 to Thursday December 22, 2022 **Fall Term examinations**

Welcome Message

Welcome to Animal Physiology. On behalf of the teaching team, I am very happy to be back in person and look forward welcoming students back to the classroom. The course is designed in a way to optimize flexibility for students, with many options for how you get to 100 marks for the course. I very much favor approaches that let a student choose how they want to engage with the material. However, at the end of the course, the expectation is that you have learned the basic principles of animal form and function and are able to apply them to novel situations.

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 be 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. It may not seem like it, but I am thrilled when students want to engage me on the material, and happy to have students drop in to my office to chat about the course or their academic interests. 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 collaborative quizzes. 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. If the nature of the problem is unique or personal, reach out to Dr Moyes via email to discuss the next steps.

Course Learning Outcomes

The goals of Biology 339 are to provide students with a comprehensive appreciation of physiological processes under the unified themes of following:

1. Identify the components of the different physiological systems and their chemical and physical basis.
2. Discuss how systems arise from the integration of processes at different biological levels of organization, spanning molecular, cellular, organs, and whole animals.
3. Explain how homeostasis is maintained in various systems through hormonal regulation and feedback pathways.
4. Discuss the evolutionary diversity in specific physiological systems of animals.
5. Explain how animals deal with environmental stress, particularly temperature, water, osmotic and oxygen limitations.
6. Compare and contrast short-term and evolutionary solutions to physiological challenges.

Course Materials

The following textbook is recommended, with an e-version available from the campus bookstore. **Moyes, CD and Schulte PM. 2016. Principles of animal physiology. Third edition. Pearson. San Francisco.**

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, etc-anything that helps you flesh out the story.

Live lectures will be supported by slides posted in advance. These lectures are not recorded but are examinable. The point of this approach is to promote your ability to listen and distill lectures into the important ideas.

Course Timeline

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

- Week 1 Introduction to Physiology
- Weeks 2 & 3 Physiological Principles
- Weeks 4 & 5 Nervous systems
- Weeks 6 & 7 Midterm 1 and Muscles and locomotion
- Weeks 8 & 9 Cardiorespiratory physiology
- Weeks 10 & 11 Homeostasis
- Week 12 Midterm 2

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 larger assignments and exams. 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 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

- **Content Quizzes**: 25 marks from 5 End-of-Unit Quizzes. These are based on your mastery of the recorded lectures, which we treat as the Core Content. There are no extensions to the deadlines, because they are open for very wide windows, with a formal deadline Thursdays, but an additional 72h to submit without penalty.
- **Collaborative Quizzes**: 20 marks from 5 quizzes. Your 20 marks come from your best 4 quizzes.
- **Midterm Assessments**: 30 marks from 2 midterms. Your best midterm is worth 20%, and the second best is worth 10%.
- **Major Assignment**: 25 marks from 1 of 3 options that offer different routes to extensions from the course material.

- **Final Exam**: There is no required final exam for students who have completed everything. There is a final exam set up to be available for students who missed up to 30 marks worth of assessments. There is no need for documentation for missed activities. It will be the standard scantron, multiple choice exam, scheduled by the Exams Office for the December exam period. There are no options to complete it remotely.

Essential requirements and flexibility to succeed

Assignments in this course have been designed with flexibility for academic consideration for all students. The deadlines are designed to accommodate any student who might have the sort of short-term accommodations that would typically require "Short term Requests for Academic Consideration" (submitted through the Faculty of Arts and Science portal without documentation). Long-term requests will be handled on a case-by-case basis if needed.

Grading Scheme and Grading Method

When letter grades are employed, the following scale will be employed for purposes of calculating your course average:

Assignment mark	Numerical value for calculation of final mark	Assignment mark	Numerical value for calculation of final mark
A+	93	C	65
A	87	C-	62
A-	82	D+	58
B+	78	D	55
B	75	D-	52
B-	72	F48 (F+)	48
C+	68	F24 (F)	24
		F0 (0)	0

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

Prior to the course, contact Prof Moyes with any questions: chris.moyes@queensu.ca.
During the course, post your content and logistical questions to the appropriate Help forum, where everyone can benefit from the exchanges. Requests that are confidential or urgent should be sent to Prof Moyes: chris.moyes@queensu.ca.

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.

Academic Consideration for Students in Extenuating Circumstances

Academic consideration is a process for the university community to provide a compassionate response to assist students experiencing unforeseen, short-term extenuating circumstances that may impact or impede a student's ability to complete their academics. This may include but is not limited to:

- Short-term physical or mental health issues (e.g., stomach flu, pneumonia, COVID diagnosis, vaccination, etc.)
- Responses to traumatic events (e.g., Death of a loved one, divorce, sexual assault, social injustice, etc.)

- Requirements by law or public health authorities (e.g., court date, isolation due to COVID exposure, etc.)

Queen's University is committed to providing academic consideration to students experiencing extenuating circumstances. For more information, please see the Senate Policy on Academic Consideration for Students in Extenuating Circumstances.

Each Faculty has developed a protocol to provide a consistent and equitable approach in dealing with requests for academic consideration for students facing extenuating circumstances. Arts and Science undergraduate students can find the Faculty of Arts and Science protocol and the portal where a request can be submitted. Students in other Faculties and Schools who are enrolled in this course should refer to the protocol for their home Faculty.

For guidance on **submitting requests**, please see refer to the Resource Guides available on the Academic Consideration website under "Applying for Academic Consideration."

N.B: The COVID-19 pandemic is an evolving situation. If you have symptoms or are deemed a close contact of someone with COVID, please access our **COVID-Related Absence Reference Guide** on the Academic Consideration website. This guide will provide you with information on applying for consideration, the types of documentation (including non-medical documentation) you can use to support your request, as well as insight into how the Faculty office will assess these requests.

If you need to request academic consideration for this course, you will be required to provide the following name and email address to ensure it reaches our team accordingly:

Instructor/Course Coordinator Name: **Prof. Chris Moyes**
Instructor/Course Coordinator email address: **chris.moyes@queensu.ca**

Students are encouraged to submit requests as soon as the need becomes apparent and to contact their Professors/Course Coordinators as soon as possible once Consideration has been verified. Any delay in contact may limit the Consideration options available.

Please follow up with Prof Moyes using email within 3 days of receiving verification of your Consideration request.

For more information on the Academic Consideration process, what is and is not an extenuating circumstance, and to submit an Academic Consideration request, please see our website.

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 Calendar[1] (see on the Arts and Science website[2], and at Biology's website[3]. 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.

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 BIOL339. 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

Turnitin Statement

This course uses Turnitin, a third-party application that helps maintain standards of excellence in academic integrity. Normally, students will be required to submit their course assignments through onQ to Turnitin. In doing so, students' work will be included as source documents in the Turnitin reference database, where they will be used solely to detect plagiarism.
Turnitin is a suite of tools that provide instructors with information about the authenticity of submitted work and facilitates the process of grading. Turnitin compares submitted files against its extensive database of content and produces a similarity report and a similarity score for each assignment. A similarity score is the percentage of a document that is similar to content held within the database. Turnitin does not determine if an instance of plagiarism has occurred. Instead, it gives instructors the information they need to select the authenticity of work as a part of a larger process.

[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

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Remote Proctoring Statement

At this point, there are no plans to use remote proctoring routinely in the course. But if circumstances change, then select assessments in this course may use remote proctoring provided by Examity, which is a third-party, cloud-based service that enables the completion of a proctored exam or test from an off-campus location, through onQ. This cloud-based proctoring solution was chosen as part of the approach to maintaining academic integrity when remote proctoring is required. Precise details about how remote proctoring will be used in this course will be provided by the instructor.

Queen's has conducted an extensive privacy and security review of Examity and has entered into a binding agreement with terms that address the appropriate collection, use and disclosure of personal information in accordance with Ontario's privacy legislation. You should also take measures yourself to protect your information by keeping your NetID password and challenge questions private, closing all applications prior to starting an exam/test, and ensuring your device is updated and safeguarded against malware. For more information about remote proctoring, please see *http://www.queensu.ca/registrar/students/examinations/exams-office-services/remote-proctoring*