

Department of Biology Course Outline

SC/BIOL 4320, Vertebrate Endocrinology Fall 2022

Course Description

Vertebrate endocrine structure and function; synthesis and regulation of hormones; mechanisms of hormone actions and hormonal integration of physiological processes. Three lecture hours. One term. Three credits.

Prerequisites

SC/BIOL 2020 3.00, SC/BIOL 2021 3.00, SC/BIOL 2030 4.00.
Course credit exclusion: HH/KINE 4448 3.00.

Technical Requirements

You must have access to reliable high-speed internet connection (wi-fi) and a computer to take this course, including access to audio (including microphone) and a web cam. Some aspects of the course will involve video conferencing software (e.g. Zoom). Reliable access to eClass and ability to stream videos from eClass are required.

Course Instructors and Contact Information

Course Director: Dr. Michael Cardinal-Aucoin (he/him)

Email: mdca@yorku.ca

Office hours: via Zoom (email to schedule appointment in advance)

Land Acknowledgement

York University recognizes that many Indigenous Nations have longstanding relationships with the territories upon which York University campuses are located that precede the establishment of York University. York University acknowledges its presence on the traditional territory of many Indigenous Nations. The area known as Tkaronto has been care taken by the Anishinabek Nation, the Haudenosaunee Confederacy, and the Huron-Wendat. It is now home to many First Nation, Inuit, and Métis communities. We acknowledge the current treaty holders, the Mississaugas of the Credit First Nation. This territory is subject of the Dish with One Spoon Wampum Belt Covenant, an agreement to peaceably share and care for the Great Lakes region.

Schedule

MW 11:30am-1:00pm (EST) CB 115

- We will generally meet each Monday of term, unless otherwise indicated.
- This course will be delivered using a hybrid approach that combines synchronous class meetings and lectures during the scheduled lecture period with asynchronous components to be completed independently.
- We may sometimes meet via Zoom (link provided on eClass).

Evaluation			
Component	Date	Value	
Term Tests (online via eClass)			
Term test (cumulative)	Monday, Nov. 14	= 35%	= 35%
Group Presentation			
Proposal	Sept. 30	= 5%	} = 30%
Presentation	Nov. 16 – Dec. 6	= 15%	
Summary handout	With presentation	= 5%	
Participation	Throughout presentations	= 5%	
Term Paper			
Peer review	Dec. 2	= 8%	} = 28%
Paper	Dec. 13	= 20%	
Discussion Forums			
Introduction Forum	Sept. 7-19	= 1%	} = 7%
Discussion Forum 1: COC Pill	Sept. 20-Oct. 9	= 3%	
Discussion Forum 2: Hypertension	Oct. 17-Nov. 6	= 3%	
Total			= 100%

Important Dates
 See Evaluation section above.

➤ **NOTE:** For additional important dates such as holidays, refer to the “Important Dates” section of the Registrar’s Website at <https://registrar.yorku.ca/enrol/dates>.

Resources

Norris, D.O. and Carr, J.A. (2021) Vertebrate Endocrinology, 6th edition. Academic Press: London, UK. (*Older editions are fine.*)

➤ The textbook is recommended but not required.
 ➤ Readings will be assigned from the textbook and other resources. All readings will be made available on the course eClass page.

Learning Outcomes

Upon successful completion of this course, students should be able to:

1. Describe basic principles and concepts of endocrinology.
2. Determine suitable approaches and proper experimental designs for endocrine research.
3. Illustrate mechanisms of hormone actions.
4. Summarize how hormones regulate various physiological processes.
5. Evaluate the consequence of dysfunction of hormones.
6. Discuss the broader social implications of hormones and endocrinology.

Course Content

EXPANDED COURSE DESCRIPTION:

This course is designed to provide a broad overview of vertebrate endocrinology. Course topics will include the various classes of hormones, sources of hormones, production and synthesis of hormones, receptors and target tissues, mechanisms of action and regulation,

and methods used in endocrinology. The course will explore the function of endocrine systems, with a focus on integration across systems. Lecture and readings from the primary literature will focus on classical endocrine systems.

In addition, this course will place hormones and endocrinology in their broader social context. It will explore how our understanding of hormones and their various applications impact aspects of society and the environment as well as the ethical ramifications that arise from their study and use.

Experiential Education and E-Learning

- This course will be delivered using a hybrid approach that combines synchronous class meetings and lectures during the scheduled lecture period with asynchronous components to be completed independently.
- This course includes several experiential components culminating in a group presentation and final paper in which students research a selected topic in endocrinology.

Other Information

Learning Environment

Everyone learns more effectively in a respectful, safe, and equitable learning environment free from discrimination or harassment. I invite you to work with me to create a classroom space—both real and virtual—that fosters and promotes values of human dignity, equity, non-discrimination and respect for diversity. These values and practices are in accord with York Universities policies on equity and inclusion promoted by the Centre for Human Rights, Equity and Inclusion (<https://rights.info.yorku.ca/>). Please feel free to discuss with me any questions or concerns you have about equity in our classroom or in the Lakehead community. If I cannot answer your questions or help you address your concerns, I encourage you to contact the Centre for Human Rights, Equity and Inclusion Human Rights and Equity (<https://rights.info.yorku.ca/contact-us/>).

Behaviour and Conduct

- Students are expected to ensure that the classroom and laboratory learning environments are inclusive, respectful, peaceful, and safe.
- Interactions and relationships with instructors and other students (in person, online, in email, etc.) within the academic context should be professional and characterized by integrity, courtesy and mutual respect.
- Lectures should be interactive - please get engaged in the material and ask as well as answer questions!
- I fully encourage a reduction in the use of paper but if you bring your laptop to take notes, please refrain from using the internet in class (otherwise you will be banned from bringing your computer).
- Please be considerate in lectures and refrain from talking as it will disturb the learning environment.
- For your benefit and the benefit of students around you, turn your phone off to ensure it does not ring during lecture and to avoid the urge to text or you may be asked to leave the lecture hall.

- Students are expected to attend all lectures and labs.
- Recording devices of any kind are not permitted to be used in lectures.

Email Policies and Etiquette

I will try to respond to email within two working days, but this is not always possible as there are many students and only 1 professor. I may also answer your question in the next class meeting if appropriate. Questions and answers that I deem of interest to the entire class may be posted (anonymously) on eClass or sent via course announcements if urgent. Emails that do not meet the requirements below will not be answered:

- Use your @my.yorku.ca email address when emailing instructors and others within the university. Email from other sources may be filtered out and not reach the intended recipient.
- SUBJECT LINE - Include the course code, and a brief indication of topic.
- Lecture email example: BIOL 4310 – question regarding TTFL
- Include your NAME and STUDENT NUMBER at the end of each email. I work with many students and this facilitates my ability to help you.

Course Policies

Term Test Policies: Term tests will consist of a variety of question types including multiple choice, mix-and-match, true/false, diagrams, and short answer. Term tests are non-cumulative, but it should be understood that material covered prior to the test may be included indirectly if it is essential to the understanding of the topics being tested. All term tests will be written online via the course eClass page. More detailed instructions will be provided.

A student who misses a term test will receive a zero. Exceptions to this policy may be granted at the discretion of the course director if either a medical or family emergency occurs and documentation is provided. Failure to make contact within 48 hrs. will result in a forfeiture of any opportunity to do a re-write. In the event of a missed term exam the value of the exam will be redistributed to the next term test.

Assignment Due Date Policies

Assignment due dates are indicated in the course schedule and on the course Brightspace page. Assignments submitted past the due date will be deducted 10% each day for 5 days after which the student will receive a grade of 0%. Exceptions to this policy may be granted at the discretion of the course director if either a medical or family emergency occurs and documentation is provided. It is your responsibility to contact the course director.

No Extra Credit: There is no possibility of extra credit (i.e. doing extra work if you did not do well on something) to increase your mark either during the term or after the final exam. Anyone receiving a final course grade of 49% will **automatically** have their final exam re-graded.

University Policies

Academic Honesty and Integrity

York students are required to maintain the highest standards of academic honesty and they are subject to the Senate Policy on Academic Honesty (<http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/>). The Policy affirms the responsibility of faculty members to foster acceptable standards of academic conduct and of the student to abide by such standards.

There is also an academic integrity website with comprehensive information about academic honesty and how to find resources at York to help improve students' research and writing skills, and cope with University life. Students are expected to review the materials on the Academic Integrity website at - <http://www.yorku.ca/academicintegrity/>

Access/Disability

York University is committed to principles of respect, inclusion and equality of all persons with disabilities across campus. The University provides services for students with disabilities (including physical, medical, learning and psychiatric disabilities) needing accommodation related to teaching and evaluation methods/materials. These services are made available to students in all Faculties and programs at York University.

Students in need of these services are asked to register with disability services as early as possible to ensure that appropriate academic accommodation can be provided with advance notice. You are encouraged to schedule a time early in the term to meet with each professor to discuss your accommodation needs. Please note that registering with disabilities services and discussing your needs with your professors is necessary to avoid any impediment to receiving the necessary academic accommodations to meet your needs.

Additional information is available at the following websites:

Counselling & Disability Services - <http://cds.info.yorku.ca/>

Counselling & Disability Services at Glendon -

<http://www.glendon.yorku.ca/counselling/personal.html>

York Accessibility Hub - <http://accessibilityhub.info.yorku.ca/>

- ***Students are encouraged to contact their professor to discuss accommodation needs or any way in which they can help you succeed.***

Ethics Review Process

York students are subject to the York University *Policy for the Ethics Review Process for Research Involving Human Participants*. In particular, students proposing to undertake research involving human participants (e.g., interviewing the director of a company or government agency, having students complete a questionnaire, etc.) are required to submit an *Application for Ethical Approval of Research Involving Human Participants* at least one month before you plan to begin the research. If you are in doubt as to whether this requirement applies to you, contact your Course Director immediately.

Religious Observance Accommodation

York University is committed to respecting the religious beliefs and practices of all members of the community, and making accommodations for observances of special significance to adherents. Should any of the dates specified in this syllabus for an in-class test or examination pose such a conflict for you, contact the Course Director within the first three weeks of class.

Similarly, should an assignment to be completed in a lab, practicum placement, workshop, etc., scheduled later in the term pose such a conflict, contact the Course director immediately. Please note that to arrange an alternative date or time for an examination scheduled in the formal examination periods (December and April/May), students must complete an Examination Accommodation Form, which can be obtained from Student Client Services, Student Services Centre or online at <https://secure.students.yorku.ca/pdf/religious-accommodation-agreement-final-examinations.pdf> (PDF)

Student Conduct in Academic Situations

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect. Moreover, it is the responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom and other academic settings, and the responsibility of the student to cooperate in that endeavour. Further, the instructor is the best person to decide, in the first instance, whether such an atmosphere is present in the class. The policy and procedures governing disruptive and/or harassing behaviour by students in academic situations is available at - <http://secretariat-policies.info.yorku.ca/policies/disruptive-andor-harassing-behaviour-in-academic-situations-senate-policy/>

Copyright Policy

The materials (i.e. course notes, handouts, exams, etc.) in the BIOL 4320 (Vertebrate Endocrinology) course at York University are the sole property of the instructor, unless stated otherwise by the instructor. Online posting or selling of this material to third parties for distribution without permission is subject to Canadian Copyright law and is strictly prohibited.
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