

## Department of Biology Course Outline

SC/BIOL 4320, Vertebrate Endocrinology  
Fall 2016

### 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.

### Course Instructors and Contact Information

Dr. German Reyes  
416-7362100 X 77618  
203 Life Science Building  
greyes@yorku.ca  
**Office hours:** Wednesdays 9:30AM to 11AM LSB 102B or by appointment

### Schedule

M 19:00–22:00, CB 115

### Evaluation

Midterm test = 30%  
Presentation = 25%  
Final exam = 45%

Final course grades may be adjusted to conform to Program or Faculty grades distribution profiles.

### Important Dates

First class: Sept 12, 2016  
Last class: Dec 5, 2016  
Last date to add the course without permission of instructor: Sept 21, 2016  
Last date to add the course with permission of instructor: Oct 5, 2016  
Last date to drop the course without receiving a grade: Nov 11, 2016  
Thanksgiving holiday (no class): Oct 10, 2016  
Mid-term test: Oct 17, 2016 (Test only, no lecture)  
Article Summary Due: Nov 18, 2016  
Presentation dates: Nov 21, 28, Dec 5 (?) 2016  
Final exam: To be scheduled and published by the Registrar's Office

NOTE: for additional important dates such as holidays, refer to the "Important Dates" section of the Registrar's Website at <http://www.yorku.ca/yorkweb/cs.htm>

## Resources

**Course webpage:** moodle.yorku.ca

The website will include announcements, course materials, and a discussion forum.

Recommended textbook:

Endocrinology / Mac E. Hadley, Jon E. Levine. 6<sup>th</sup> Edition. Available in Steacie library.

Additional resources:

Greenspan's basic & clinical endocrinology. Available in Steacie library.

Vertebrate endocrinology / David O. Norris. Available in Steacie library.

## Learning Outcomes

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

1. Describe basic principles and concepts of Endocrinology.
2. Understand approaches to endocrine research.
3. Describe mechanisms of hormone actions.
4. Understand how hormones regulate various physiological processes.
5. Develop the ability to critically analyze research articles.
6. Understand the consequence of dysfunction of hormones.

## Course Content

Lecture Topics:

Lecture 1, Sept 12 <sup>th</sup>	Introduction
	Endocrine methodology
Lecture 2, Sept 19 <sup>th</sup>	Mechanism of hormone action
	Brain and Pituitary Hormones
Lecture 3, Sept 26 <sup>th</sup>	Melatonin
	Hormone and calcium regulation
Lecture 4, Oct 3 <sup>rd</sup>	Gastrointestinal hormones
	Pancreatic Hormones
Oct 10 <sup>th</sup>	<b>Thanksgiving (University closed)</b>
Oct 14 <sup>th</sup>	<b>Presentation topic Due</b>
Oct 17 <sup>th</sup>	<b>Mid-term exam (90 min, No lecture after)</b>
Lecture 5, Oct 24 <sup>th</sup>	Thyroid hormone
	Adrenal hormones
Lecture 6, Oct 31 <sup>st</sup>	Growth hormone and body growth
Lecture 7, Nov 7 <sup>th</sup>	Reproductive hormones
Lecture 8, Nov. 14 <sup>th</sup>	Reproductive hormones
Nov 18 <sup>th</sup>	<b>Article Summary Due (Drop Box, 2<sup>nd</sup> Floor LSB)</b>
Nov 21, 28 & Dec 5 (?)	<b>Student presentations</b>
Dec 5	Review Session
Dec 7 <sup>th</sup> – 22 <sup>nd</sup>	Fall Term Exam Period

## Experiential Education and E-Learning

Moodle website

## Other Information

**Exams:** Exams will consist of several types of questions (multiple choice, fill in the blank, short and long answers), and will be designed to assess your understanding of lecture materials and ability to apply what you learn to solve problems.

**Critical review:** The review will be a critique of a primary research article published within the last 5 years in a scientific journal. The topic should be related to Endocrinology. Select a research article and read it carefully. Evaluate the significance, originality, and quality of the research. Assess both strengths and weaknesses of the article.

**Presentation:** Each student will do an in class presentation about the research article. Schedule will be posted on Moodle.

## Course Policies

**Missed tests:** Students with a documented reason for missing a test, such as illness, compassionate grounds, etc, which is confirmed by supporting documentation, may request accommodation from the course director. There will be no make-up exam for the mid-term. Instead, the weight of the midterm exam will be transferred to the final exam. Deferred standing for final exam will be granted to students who miss the final exam for a valid reason and submit a request within 3 days of the missed exam. Further accommodation will require students to submit a formal petition to the faculty.

**Assignment submission:** Critical reviews must be handed in during the class on or before the due date to the course director. No email submission will be accepted. The penalty for late submission is 1 point (out of the 15 points) deduction per day. Exception to the lateness penalty for valid reasons such as illness, compassionate grounds, etc, may be entertained by the course director but will require supporting documentation.

**E-mail policies:** Emails to the course director should include BIOL4320 on the subject line and your name and student number at the end of the email. Emails that do not meet these requirements will not be answered.

**Missed classes:** Class attendance is expected. If you miss a class, it is your responsibility to obtain notes from a classmate.

## 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.

Student's 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/>

### **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

[http://www.registrar.yorku.ca/pdf/exam\\_accommodation.pdf](http://www.registrar.yorku.ca/pdf/exam_accommodation.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-and-or-harassing-behaviour-in-academic-situations-senate-policy/>