Department of Biology Course Outline

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<thead>
<tr>
<th>BIOL5128 CURRENT TOPICS IN COMPARATIVE AND INTEGRATIVE ANIMAL PHYSIOLOGY</th>
<th>WINTER 2020</th>
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</thead>
</table>

**Course Description**

This course covers advanced topics in comparative animal physiology with an emphasis on regulatory mechanisms and homeostasis. Topics include endocrinology, metabolism, osmotic and ionic regulation, reproduction and high-light modern integrative physiology techniques. Examples are drawn from both vertebrate and invertebrate animals.

**Prerequisites (strictly enforced)**

**Course Instructor(s) and Contact Information**

Dr. Andrew Donini  
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**Schedule**

Date and Time: Friday: 10:00am-1:00 p.m.  
Location: Farquarson 166/168  
Course Session: Winter 2020 - Start date: January 10, 2020.  
Course ID.: B29A01
## Evaluation

**Written Review Article: 40%**  
Topic must be directly related to animal physiology as rooted in the natural sciences (e.g. considers diversity of functional characteristics of various kinds of organisms, animal adaptation to environmental conditions, etc.). The topic cannot be directly related to your area of study, but can be indirectly related so as to broaden your knowledge as it relates to thesis background information/preparation. Aim for a length of about 10 pages (including figures but excluding references) with font size 12 and 1.5 line spacing.  

**Oral Presentation: 40%**  
Topic is the same as for your written review. Since comparative physiology is a broad area of research aim to present to an audience with a broad background and not specialized on what you are presenting. So the audience should be considered as Animal Physiologists in the broadest sense. Presentations should be 15 to 20 minutes and discussion following the presentation will be 10 to 15 minutes. The presentation will be evaluated from 2 different standpoints as follows: Course Directors 70%; Peer Evaluation 30% (Average of all Peers).

**Participation in Meetings: 20%**  
Course members are expected to lead the discussions after presentations. We always welcome questions and discussions when we are presenting information.

## Important Dates

- **Oral Presentations** will run on January 31st and February 7th  
- **Written Review Articles** are due on February 17th.  

**Drop Deadline:** March 13, 2020 (last day to drop without receiving a grade)  
**Course Withdrawal Period:** March 14th to April 5th 2020 (course still appears on transcript with 'W')

## Resources

Current primary research articles from Comparative Animal Physiology Journals as required to complete the assigned oral presentation and written review article. A few Examples of journals are: Journal of Experimental Biology, American Journal of Physiology, Journal of Comparative Physiology, Comparative and Biochemical Physiology, General and Comparative Endocrinology

## Learning Outcomes

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

1. Explain specific modern methods in the field of comparative animal physiology  
2. Discuss how specific modern methods in the field of comparative animal physiology can be applied to test a hypothesis.  
3. Broadly discuss many current topics of research in comparative animal physiology.  
4. List funding opportunities and agencies and programs that support comparative animal physiology research and provide a brief description of the application processes.

## Professional Skills

The following skills will be reinforced in this course.

1. Reading comprehension of primary literature articles.  
2. Critical assessment of results and conclusions presented in primary literature articles.  
3. Ability to synthesize results and conclusions from many articles into a coherent written document with identification of areas of study that need to be pursued.  
4. Ability to synthesize results and conclusions from many articles into a clear, concise oral presentation.  
5. Ability to assess individual work loads and develop an effective time management strategy.
Course Content

- January 10th: Course Information (Assignments/Grading/Dates)
  - Introduction: What is Physiology?
  - Tips on creating and delivering a clear and effective oral presentation.
  - Individual 5 minute introductions to each course member's topic of graduate research (this will NOT be graded)
- January 17th: Scholarship and Grant Application Writing
- January 24th: Financial planning and Time management
- January 31st: Oral Presentations
- February 7th: Oral Presentations

Experiential Education and E-Learning

- Other Information
Course Policies

- Attendance is Mandatory. Due dates are not negotiable.
- Oral Presentations will run on January 31st and February 7th. The order and day on which individuals will present will be determined at the first meeting on January 10th.
- The written report is due February 17th. A late penalty of 10% of the grade per day will be applied.

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/](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/](http://www.yorku.ca/academicintegrity/)

**Important** A note from the Faculty of Science Committee on Examinations and Academic Standards:
Numerous students in Faculty of Science courses have been charged with academic misconduct when materials they uploaded to third party repository sites (e.g. Course Hero, One Class, etc.) were taken and used by unknown students in later offerings of the course. The Faculty’s Committee on Examinations and Academic Standards (CEAS) found in these cases that the burden of proof in a charge of aiding and abetting had been met, since the uploading students had been found in all cases to be wilfully blind to the reasonable likelihood of supporting plagiarism in this manner. Accordingly, to avoid this risk, students are urged not to upload their work to these sites. Whenever a student submits work obtained through Course Hero or One Class, the submitting student will be charged with plagiarism and the uploading student will be charged with aiding and abetting.

Note also that exams, tests, and other assignments are the copyrighted works of the professor assigning them, whether copyright is overtly claimed or not (i.e. whether the © is used or not). Scanning these documents constitutes copying, which is a breach of Canadian copyright law, and the breach is aggravated when scans are shared or uploaded to third party repository sites.

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/](http://cds.info.yorku.ca/)
- Counselling & Disability Services at Glendon - [https://www.glendon.yorku.ca/counselling/](https://www.glendon.yorku.ca/counselling/)
- York Accessibility Hub - [http://accessibilityhub.info.yorku.ca/](http://accessibilityhub.info.yorku.ca/)

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 and submit an Examination Accommodation Form at least 3 weeks before the exam period begins. The form can be obtained from Student Client Services, Student Services Centre or online at http://www.registrar.yorku.ca/pdf/exam_accommodation.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/