

University of Toronto Scarborough – Department of Biological Sciences  
**BIOB34 – Animal Physiology – Fall 2017**

**Course Instructor:** **Dr. Jason Brown**  
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Email: nysuloem.brown@utoronto.ca  
Office Hours: Tuesdays 10:30am-12:30pm  
                  Thursdays 10:30am-1:30pm  
                  \*\*I will also be available for questions outside of the  
                  lecture hall immediately following class

**Course Coordinator:** **Jennifer Campbell**  
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Office Hours: Mondays and Wednesdays 9-11am  
                  Tuesdays and Thursdays 2-4pm

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**Course Description:** An introduction to the principles of animal physiology rooted in energy usage and cellular physiology. A comparative approach is taken, which identifies both the universal and unique mechanisms present across the animal kingdom. Metabolism, respiration, circulation, water regulation, movement and neural circuits are the areas of principal focus.

**Prerequisites:** BIOA01H3 and BIOA02H3 and CHMA10H3 and CHMA11H3

**Exclusions:** (BIOB30H3), BIO270H, BIO204H

**Lectures:** Tuesdays and Thursdays 9:10-10am, AC223

Tentative Lecture Topics:

- |                           |                            |
|---------------------------|----------------------------|
| 1 – What are Animals?     | 6 – Nitrogen Excretion     |
| 2 – Metabolism            | 7 – Respiratory Physiology |
| 3 – Thermal Physiology    | 8 – Nervous Physiology     |
| 4 – Feeding and Digestion | 9 – Muscle Physiology      |
| 5 – Osmoregulation        |                            |

Lecture notes will be posted (in PowerPoint format only) on Blackboard ~24 hours before each lecture. **NOTE: I reserve the right to make changes to the lecture notes after they are posted.**

**Tutorials:** Thursdays 5:10-7pm, AC223

**\*\*NOTE:** This tutorial slot is shared with BIOB10 and BIOB50

Tutorial Schedule for BIOB34:

September 7 – Integrative Research Poster Project (Introductory Meeting)

September 14 – Integrative Research Poster Project (Group Meeting and Dynamics Workshop)

September 28 – Lecture

October 26 – Lecture

November 16 – Integrative Research Poster Project (Poster Presentation Rehearsal and Feedback)

November 23 – Integrative Research Poster Project (Poster Presentation Day, from 5-9pm)

November 30 – Lecture (\*\*This will be the last lecture of the course\*\*)

**Textbook:** There is no required textbook for this course; however, in my experience, many students enjoy having a textbook to supplement their lecture notes. If you so desire, I would recommend the following textbook:

*Animal Physiology*, 4<sup>th</sup> edition, 2016, by R.W. Hill et al.

➔ This book is available at the UTSC Bookstore in both hard-bound and loose-leaf form.

I will post suggested readings, where applicable, from this textbook; however, this textbook may discuss material not covered in class, and I may discuss material in class not covered by the textbook. **You are responsible for all material covered in class only.**

### **Evaluation:**

Term Tests	35%	(25% best; 10% worst)
“Life of Animals” Videos and Quizzes	20%	(1% per video/quiz)
Integrative Poster Research Project	10%	
Final Exam	35%	

### **Important Notes Regarding Evaluations:**

#### **Term Tests**

There are two Term Tests in this course. The dates and times of the Term Tests will be determined by the Registrar’s office during the first few weeks of the semester, and I will post this information on Blackboard as soon as it is available.

Term Tests may cover any material covered in this course, but the lectures emphasized on each Term Test will be announced in class and on Blackboard. Term Tests will be 2 hours and will comprise of multiple choice questions only. Students will have choice with regards to which

questions they answer (e.g., answer 24 of 30 multiple choice questions). **The Term Test questions will require students to think critically and creatively about the lecture content as students will be expected to explain novel observations and solve problems. This reflects my belief that undergraduate students need to develop not only their scientific knowledge but, more importantly, their competency for thinking, reasoning, and scientific inquiry.**

To help student prepare for Term Tests, *optional* quizzes (here *optional* means not worth any marks) will be posted on Blackboard each week. ***Students are strongly encouraged to discuss these quizzes with the course instructor when they encounter any difficulties, either by email or during office hours (preferred).***

If you know **in advance** that you cannot write a Term Test at the scheduled time because it conflicts with some other **valid activity**, please notify me (or the course coordinator) as soon as possible so that we can make arrangements for you to write the Term Test at an alternative time. **Any such alternative time must be before the scheduled date of the Term Test.**

If you miss a Term Test due to medical illness, then you must submit a detailed UTSC Medical Certificate filled out by the physician who saw you on the day of the Term Test. This note must be submitted to the course instructor (or course coordinator) as soon as possible following the Term Test, whether in person or via email. Other medical notes will not be accepted, and if the UTSC Medical Certificate is not completed to the satisfaction of the course instructor (or course coordinator), it may be refused. The UTSC Medical Certificate can be found via the following link:

[http://www.utsc.utoronto.ca/~registrar/resources/pdf\\_general/UTSCmedicalcertificate.pdf](http://www.utsc.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf).

If you miss a Term Test for any other **valid reason**, please consult with the course instructor (or course coordinator) as soon as possible. The course instructor (or course coordinator) will determine whether the reason given for a missed Term Test is valid in accordance with university policies. Also, the course instructor (or course coordinator) may ask for any documentation required to verify the reason given.

Students who miss one Term Test for a **valid reason** (medical or otherwise) will not be permitted to write a make-up Term Test; rather, the weight of the remaining Term Test will be increased to 35% of their final grade. Students who miss both Term Tests for **valid reasons** will not be permitted to write make-up Term Tests; rather, the weight of their Final Exam will be increased to 65%. In addition, these students will be required make one “Life of Animals” video and associated quiz, which will be worth 5% of their final grade and which will be due no later than the last day of classes (Monday, December 4<sup>th</sup>). **Under no circumstances will the weight of a missed Term Test be transferred to the Final Exam, so please do not ask.**

Students who miss a Term Test for **any invalid reason** will receive a grade of zero for that Term Test.

## **“Life of Animals” Videos**

In my experience, many students taking animal physiology at UTSC are not familiar with the broad range of animals that they will be studying in the course, which, in my opinion, makes it difficult to truly appreciate the topics discussed.

To rectify this problem, each week (from Week 2 to Week 11, inclusive), links to two videos about the life of some of the animals to be discussed in this course will be posted on Blackboard. Students are expected to watch each video (approximately 5-10 minutes) and complete the associated quiz on Blackboard. Students must get a perfect score on the quiz (with a maximum of two attempts) in order to receive the 1% grade associated with the video/quiz, otherwise the student will receive a zero grade for that video/quiz. All quizzes must be completed no later than the last day of classes (Monday, December 4<sup>th</sup> at 11:59pm). **No extensions will be granted for any reason.**

## **Integrative Poster Research Project**

The details for this project are outlined in a separate syllabus posted on Blackboard and will be discussed in the tutorial session held on Thursday, September 7 from 5:10-7pm.

## **Final Exam**

The Final Exam (3 hours) will be scheduled by the Registrar's office (December 7-20) and will be worth 35% of the final grade. The Final Exam will cover all material covered in the lectures throughout the course, though it will place emphasis on the material covered since the last Term Test. It will have the same format as the Term Tests.

## Accessibility Needs:

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the AccessAbility Services Office as soon as possible. I will work with you and AccessAbility Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC AccessAbility Services staff (located in S302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 287-7560 or [ability@utsc.utoronto.ca](mailto:ability@utsc.utoronto.ca).

## Academic Integrity:

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's *Code of Behaviour on Academic Matters* (<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. Potential offences include, but are not limited to:

*In papers and assignments:*

- using someone else's ideas or words without appropriate acknowledgement
- submitting your own work in more than one course without the permission of the instructor
- making up sources or facts
- obtaining or providing unauthorized assistance on any assignment.

*On tests and exams:*

- using or possessing unauthorized aids;
- looking at someone else's answers during an exam or test
- misrepresenting your identity

*In academic work:*

- falsifying institutional documents or grades
- falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. There are other offences covered under the Code, but these are the most common. ***Please respect these rules and the values that they protect.***