

University of Toronto Scarborough – Department of Biological Sciences
BIOC32 – Human Physiology I – Fall 2019

Course Instructor: **Dr. Jason Brown**
Email: nysuloem.brown@utoronto.ca
Office: SW542 (for now)
Office Hours: Thursdays 1:30-4:30pm, Fridays 8:30-11:30am
**I will also be available for questions outside of the lecture hall immediately following class

Course Coordinator: **Jennifer Campbell**
Email: jacampbell@utsc.utoronto.ca
Office: SW421D
Office Hours: Mondays 10-11am; Tuesdays 2-3pm;
Wednesdays 11am-noon; Thursdays 2-3pm
**Email for an appointment if these times do not suit

Teaching Assistants: **Vernie Aguda**
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Course Description: An introduction to human physiology covering the function of neurons, the brain, hormones and our immune systems in both healthy and diseased states.

Prerequisites: BIOB34H3 or NROB60H3

Exclusions: (BIOB30H3), PSL300H

Lectures: Tuesdays and Thursdays 12:10-1pm, AC223

Tentative Lecture Topics:

- | | |
|--------------------------------------------|----------------------|
| 1 – Organization of the Nervous System | 5 – Hearing |
| 2 – The Electrophysiology of Neurons | 6 – Vision |
| 3 – Synapses and Neurotransmitters | 7 – Skeletal Muscles |
| 4 – Brain: Functions & Protective Elements | |

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

Tutorials: Fridays 2:10-3pm, AC223

Tutorial Schedule:

September 6 – Introduction to the Course; Overview of Short Communications

September 13 – Introduction to HumMod

September 20 – Open Tutorial #1

September 27 – Open Tutorial #2

October 4 – Open Tutorial #3

October 11 – Open Tutorial #4 (**1st Short Communication Due by Friday Oct. 11 by 2pm**)

October 18 – NO TUTORIAL (Reading Week)

October 25 – Open Tutorial #5

November 1 – Open Tutorial #6

November 8 – Open Tutorial #7 (**2nd Short Communication Due by Friday Nov. 8 by 2pm**)

November 15 – Open Tutorial #8

November 22 – Open Tutorial #9

November 29 – NO TUTORIAL (**3rd Short Communication Due by Friday Nov. 29 by 2pm**)

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, which is available at the UTSC Bookstore:

Vander's Human Physiology, 15th ed., Widmaier et al.

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 only responsible for the material covered in class.**

This textbook provides you access to McGraw-Hill Connect®, which is an online learning platform featuring a smart textbook and additional practice questions that may help you to better grasp the course content. I will customize this platform to meet the specific needs of students in this course. McGraw-Hill Connect® can be accessed via a link on Quercus.

Evaluation:

Term Tests	35%	(25% best; 10% worst)
Short Communications	30%	(10% x 3 submissions)
Final Exam	35%	

Important Notes Regarding Evaluations:

Term Tests

There are two Term Tests in this course, which are held outside of class time. 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 Quercus as soon as it is available.

Term Tests may examine any material covered in this course, but the lectures emphasized on each Term Test will be announced in class and on Quercus. 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 students prepare for the Term Tests, optional quizzes (here optional means not worth any marks) will be posted on Quercus 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 the course instructor as soon as possible so that arrangements can be made 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 coordinator **within three days** after 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 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.

If you miss a Term Test for any other valid reason, please consult with the course coordinator as soon as possible. The course coordinator will determine whether the reason given for a missed Term Test is valid in accordance with university policies. Also, the 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 their Final Exam will be increased by 10%. (The weight of their remaining Term Test will be 25%).

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 by 35%.

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

Short Communications

A short communication is a concise article designed to disseminate novel research findings as quickly as possible. The methods and results are the primary focus of a short communication, while the introduction and discussion are kept brief, providing just enough information for the reader to understand the basis for the experiment and the key significance of the results.

Working in **groups of 2 or 3***, students will derive a **novel** research question and/or hypothesis. They will bring their research question and/or hypothesis to one of the Open Tutorials and discuss it with the course instructor and/or teaching assistants, who will provide feedback for improvement, where necessary. Once the instructor and/or a teaching assistant feel that the research question and/or hypothesis presented is worthy of investigation, the students will write the research question and/or hypothesis on a cue card (provided), which the instructor and/or teaching assistant will then stamp and sign. *When the students submit their short communication, they must also submit a picture of their signed, stamped card, otherwise their submission will be rejected.*

Once the students have an approved research question and/or hypothesis, they will test their hypothesis using HumMod (available for free at hummod.org; only available for Windows, but also available on UTSC lab computers) and write up a short communication that details the research question/hypothesis (with a brief introduction that gives some context), methods (i.e., the experimental manipulations made and the parameters investigated), results (in the form of tables/figures and some text), as well as interpretation of the results. **The maximum length of this short communication is 500 words and 2 figures/tables.** Figure and tables should be properly constructed using Excel (or similar software), not simply copy-and-pasted from HumMod. Students are required to cite at least four primary articles in their short communication. References cited do not count towards the word limit. References can be formatted in any manner; just be consistent.

Students are only permitted to submit three short communications. The due dates for each Short Communication are noted in the Tutorial Schedule (see above). Students are encouraged to submit their Short Communications ahead of the deadlines. Short Communications submitted after the deadlines will be rejected, and no extensions will be granted even if a Self-Declaration of Illness is submitted.

* I am frequently asked whether students can work in groups of 4. If you would like to work as a group of 4, then your short communication must address **two, related** research questions and/or hypotheses. In this case, the maximum length of the Short Communication is 750 words and 3 figures/tables.

Short communications will be evaluated as follows:

- a) Accepted. 10/10. No further action required. No feedback will be provided.
- b) Accepted with Revisions. In this case, students have two options: i) They can do nothing and receive a grade of 7/10, or ii) they can submit a revised copy of their Short Communication (within one week after receiving their grading decision), using the feedback provided by the TA to improve

their work. If their revised short communication is accepted following revisions, they will receive 10/10; if it is not, they will receive 7/10. NOTE: Students are **not** permitted to submit another short communication if they receive 7/10, so please revise your Short Communication carefully and thoughtfully.

c) Rejected. In this case, students will not be permitted to revise their short communication, and it will be considered as if no short communication were submitted. Students must, therefore, submit another short communication in place of the rejected short communication and must derive a new research question and/or hypothesis. Students should use the feedback provided by the TA to improve their future submissions. Please understand that having your Short Communication rejected does not mean that we are discounting your effort; rather, it means that there were significant deficits in your methodology, experimental design, presentation/interpretation of results, etc. that invalidated your study. (For the purposes of meeting the submission deadline requirements, you will be considered to have met the submission deadline requirement if you submitted a Short Communication before the deadline, even if it is subsequently rejected. New submissions, to replace a rejected submission, must be submitted no later than Friday, Nov. 29th at 2pm)

Final Exam

The Final Exam will be scheduled by the Registrar's office (December 6-21) and will be worth 35% of the final grade (unless, for reasons stated above, it has a higher weight). It will be 3 hours and will cover all course material, though it will place emphasis on the material discussed 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 are available by appointment to assess specific needs, provide referrals, and arrange appropriate accommodations. (416) 287-7560 or 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.***

Copyright in Instructional Settings:

If a student wishes to audio-record, photograph, video-record, or otherwise reproduce lecture presentations, course notes, or other similar materials provided by instructors, he or she must obtain the instructor's written consent beforehand. Otherwise, all such reproduction is an

infringement of copyright and is absolutely prohibited. In the case of private use by students with disabilities, the instructor's consent will not be unreasonably withheld.