

University of Toronto Scarborough – Department of Biological Sciences
BIOC32 – Human Physiology I – Fall 2018

Course Instructor: **Dr. Jason Brown**
Email: nysuloem.brown@utoronto.ca
Office: Portable 104, Room 110
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 and Wednesdays 9-11am
 Tuesdays and Thursdays 2-4pm

Teaching Assistants: **Terrence Chang**
Email: terrence.chang@utoronto.ca

Vernie Aguda
Email: vernie.aguda@mail.utoronto.ca

Michael Martin
Email: michaelpr.martin@mail.utoronto.ca

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
**Lectures will be available via WebOption Lecturecasts for the entire semester

Tentative Lecture Topics:

- | | |
|---|----------------------------------|
| 1 – Neurons and their Electrophysiology | 5 – Ear: Hearing and Equilibrium |
| 2 – Synapses and Neuronal Integration | 6 – Eye: Vision |
| 3 – Central Nervous System | 7 – Muscle Physiology |
| 4 – Peripheral Nervous System | 8 – Endocrine Physiology |

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 7 – Introduction to HumMod
September 14 – Tutorial #1
September 21 – Tutorial #2
September 28 – Tutorial #3
October 5 – Tutorial #4
October 12 – NO TUTORIAL (Reading Week)
October 19 – Tutorial #5
October 26 – Tutorial #6
November 2 – Tutorial #7
November 9 – Tutorial #8
November 16 – Tutorial #9
November 23 – Tutorial #10
November 30 – NO TUTORIAL

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:

Human Physiology: An Integrated Approach, 8th ed., Silverthorn

➔ This book is available at the UTSC Bookstore.

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.**

Evaluation:

Term Tests	35%	(25% best; 10% worst)
Tutorial Assignments	30%	(3% x 6 best “flipped exams”; 6% x 2 short communications)
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 (or course coordinator) 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 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, 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 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 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 to 45%. (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 to 64%, and, in addition, they will be required to complete an additional “Short Communication” (worth 6% of their final grade), which will be due no later than the last day of classes (Monday, December 3rd by 11:59pm).

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

Tutorials

Each tutorial consists of two parts.

1) The first part of each tutorial involves a “flipped exam” (based loosely on Lujan et al. 2014 Adv. Physiol. Edu. 38: 339; this article is available via Quercus, in case you are interested) that each student will complete **individually** (i.e., each student will submit their own answer). Students will have 25 minutes (the clock will start promptly at 2:10pm!) to answer one multiple choice question posted on the screen in the lecture hall. The question will be a research question related to recent lecture content and/or recent human physiology research. In attempting to answer the question, students may consult with any resources available, including other students in the class, online research journals, etc. (Therefore, students may want to bring their laptops and/or smartphones in order to access the internet.) Students will provide a ranked list of their answers, and the marks received on this exam will be based on which of their answers is correct. For example, if the student’s first answer is correct, they will receive 100%; if the student’s second answer is correct; they will receive 80%; if the student’s third answer is correct, they will receive 60%; and so on. Since there will always be five possible answers, the lowest mark that a student who participates in any tutorial can receive is 20%. If a student does not submit an answer and/or does not participate in a tutorial, they will receive 0%. Once time expires, the course instructor will indicate the correct answer and how it was derived.

2) The second part of each tutorial involves preparing to submit a “short communication”. Working in **groups of 2 or 3**, students will have 25 minutes to derive their own follow-up research question to the question posed in the first part of the tutorial, as well as a hypothesis, which they must submit before leaving the tutorial. *Students are encouraged—though not required—to discuss their research question/hypothesis with the course instructor and/or teaching assistants before submitting it.* Then, **within one week (i.e., by 11:59pm on the following Friday)**, they must test their hypothesis using HumMod (available for free at hummod.org; only available for Windows) and write up a short communication that details the research question/hypothesis, methods (i.e., the experimental manipulations made and the parameters investigated), results (in the form of tables/figures and some text), as well as their interpretation of the results. **The maximum length of this short communication is 500 words and 2 figures/tables. Any references cited do not count towards this word limit.** Students are only permitted to submit two short communications. One must be submitted before Friday, October 19th at 11:59pm, and the other must be submitted before Friday, November 30th at 11:59pm. Students can only submit a short communication if they submitted their research question/hypothesis before leaving tutorial, and, because students can only submit two short communications, if you decide not to complete a short communication for a particular week, then you are free to leave the tutorial after the “flipped exam” is complete. Also, the research question/hypothesis submitted must be the same as the research question/hypothesis on the short communication, otherwise your short communication will be rejected.

Short communications will be evaluated as follows:

a) Accepted. 10/10. No further action required.

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. 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.

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 will, therefore, have to submit another short communication in a following week.

**TAs are only required to provide feedback to those short communications that are Accepted with Revisions or Rejected.

Final Exam

The Final Exam will be scheduled by the Registrar's office (December 7-22) 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 (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.

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.***