BIOC32F: Human Physiology
SYLLABUS

Instructor: Professor Joanne Nash

Overview:

Physiology may be defined as the study of the functions of living organisms. BIOC32 will address how organs and systems within the human body perform their functions at the molecular and cellular level, and the impact of these functions on the entire human body. This course will also cover how and why the human body fails in certain pathological or diseased states, and how this impacts the organism as a whole. The following topics will be covered: neurons, the special senses, the central nervous system, the endocrine system and the immune system.

Objectives:

The primary objective is to provide a solid understanding of the topics covered in this course. This course also aims to help students understand how research in the laboratory – both modern day and historically, leads to understanding of the functions of the human body, and how the latest scientific technologies are being applied to further understand the workings of the human body.

A variety of evaluation techniques will be employed to encourage student participation in class and to assess the course material covered. To help understand how scientific technologies are used in physiology, students will be introduced to peer-reviewed research articles, taught how to read and understand these articles, then produce a written assignment to demonstrate their newly acquired skills.

I hope you enjoy taking this course!

Prerequisites: BIOB34H3 or NROB60H3; **Exclusions:** (BIOB30H3), PSL300H

Teaching Assistants:
Dennison Trinh dennison.trinh@mail.utoronto.ca
Saad Muhammad saad.muhammad@mail.utoronto.ca

Communication Information:
Course announcements, communications and lecture outlines will be available on the BIOC32 course page. Lecture outlines will be posted at 7am the day before lecture. Videocaptures of the lectures will be posted 24 hours after the lecture and will be available for 2 weeks.

Lecture content-questions will not be answered be email. These types of questions will be answered during office hours. If you are not able to attend office hours, please make an appointment to see Dr Nash (jnash@utsc.utoronto.ca) another time.

Non-lecture content-related emails relevant to BIOC32, e.g. general questions, medical emergencies should be sent to jnash@utsc.utoronto.ca

Office hours:
COURSE CONTENT-RELATED QUESTIONS:
Saad - Fridays 1pm-2pm SW532

TUTORIAL ASSIGNMENT-RELATED QUESTIONS:
Dennison - Fridays 12pm – 1pm SW532

INSTRUCTOR:
Dr. Nash - Thursdays 1:15pm-2:15pm SW532

Course e-mails:
COURSE CONTENT-RELATED EMAILS: saad.muhammad@mail.utoronto.ca
TUTORIAL ASSIGNMENT-RELATED EMAILS: dennison.trinh@mail.utoronto.ca
ADMINISTRATION-RELATED EMAILS: jacampbell@utsc.utoronto.ca

General questions & course-related emergencies (not related to lecture material):
jacampbell@utsc.utoronto.ca

Recommended Textbook: Human Physiology (author Silverthorn). Pub Pearson Benjamin Cummings . Any edition is OK. It is not mandatory that you purchase this text book.

Lectures: Tuesdays and Thursdays: 12-1pm AC223.
Tutorials: Fridays 2-3pm, AC223.
Videocaptured lectures: BIOC32 is not a WebOption course. The videocaptured lectures are intended solely as study aids. Videos will be available 2 weeks after the lecture.

Tutorial Information

First Tutorial (Mandatory) Friday September 15th, 2017
In the first tutorial, the tutorial-based assignment will be described. You will also receive information that will help to understand and critique research articles. It is strongly recommended that you attend this tutorial, since important information will be given relating to subsequent tutorials.

Exam Review Tutorials
The very last tutorial and a lecture prior to the midterm have been reserved for the review of course material.

Remaining 8 Tutorials/Assignment
For the remaining 8 tutorials, the class will be divided into groups of approx. 55 - 60 students. Students will attend only **ONE** of these 8 tutorials. The format of each tutorial will be exactly the same each week. Prior to the tutorial, students must read the "Group Tutorial Research Article" by Zhang et al. At the beginning of the tutorial there will be a pop quiz consisting of 10 questions (the questions will be different each week). The pop quiz is worth 5% of your final mark. The purpose of the quiz is to check that you have read the article, so the questions will not be in-depth and are multiple choice. The TA will give a presentation on the article by Zhang et al. Students will then be divided into groups of 5 to discuss the article further. Discussions will be aided by following the 'Critique Rubric document. Students will submit a critique of the research article **fourteen** days after attending the tutorial onto the course page using turn-it-in (20% of final mark). Critiques will be written **individually**. The critiques should be no more than 2 pages long (single sides), times new roman font, size 12, double spaced. The critiques should be written following the guidelines given by the TA. Tutorial assignments will be submitted electronically using Turnitin.com in Blackboard

Course Evaluation
Evaluation: The assignments and tests for BIOC32 have been designed to ensure that the objectives of the course are met. Tests and the final will be multiple choice. Only material covered in the lectures and tutorials will be included in the exam. Material in the textbook that is not covered in the course will not be included.

Distribution of marks:
Midterm: 25% - held during scheduled term test time, 2 hours, multiple choice, Lectures 1-12.
Time and date TO BE ANNOUNCED.
Final exam: 50% - 2 hours, multiple choice, Lectures 1-24
Pop Quiz on research article (in tutorial): 5%
Tutorial assignment research article critique: 20%

Missing Midterms: If you miss the term test, and submit the appropriate documentation stating the reason (e.g.medical), the weight from the term test(s) will be shifted to the final. There will be no make-up opportunities. Please notify Dr Nash know within 3 days of missing the test submit documentation as soon as you can.

Course Outline Summary*

Lecture	Date	Topic	Chapter
1	September 5th	Introduction	1
2	September 7th	Excitable Cells	5,8
3	September 12th	Action Potential I	8
4	September 14th	Action Potential II	6,8
First Tutorial	September 15th		Read Critique Rubric and First Tutorial Research Article
5	September 19th	Chemical Synapse I	8
6	September 21st	Chemical Synapse II	8
7	September 26th	Video: Horizon Ecstasy and Agony	N/A
8	September 28th	Techniques in Neuroscience	N/A
9	October 3rd	CNS I	9
10	October 5th	CNS II	9
OCTOBER 7-13th READING WEEK			
11	October 17th	CNS III	9
12	October 19th	CNS IV	10
13	October 20th	Midterm Review	Review Lectures 1-12
14	October 24th	Sensory Physiology I	10
15	October 26th	Sensory Physiology II	10
16	October 31st	Sensory Physiology III	10
17	November 2nd	Sensory Physiology IV	10
18	November 7th	ANS	11
19	November 9th	Endocrinology I	22,23
20	November 14th	Endocrinology II	22,23
21	November 16th	Endocrinology III	22,23
22	November 21st	TBA	
23	November 23rd	TBA	
24	November 28th	TBA	
25	December 1st	Final Exam Review	Review Lectures 1-24

- Disclaimer: The above schedules, procedures and policies are subject to change in the event of extenuating circumstances.

Other Important Information

Academic Integrity: Please refer to http://www.governingcouncil.utoronto.ca/policies/behaveac for the University of Toronto's Code of Behaviour on Academic Matters. Potential offences include, but are not limited to:
In Tests and Exams: to use or possess an unauthorized aid or to look at the answers of another student's exam; misrepresentation of identity.
Medical Notes and other Official Documentation: Falsification or alteration of documentation required by the University.

AccessAbility Information: Please let me and/or AccessAbility services know if you require any accommodations to ensure that you achieve your learning goals in this course. AccessAbility services is located in SW302 (tel: 416-287-7560; email: ability@utsc.utoronto.ca/ability), where you can arrange appointments to assess and accommodate your specific needs. Enquiries are confidential.

Turnitin.com: Normally students will be required to submit their tutorial assignments using Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their assignments to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the website. Turnitin.com is most effective when it is used by all students in a particular course; however, if and when students object to its use on principle, a reasonable offline alternative must be offered. There is a wide variety of non-electronic methods that can be used to deter and detect plagiarism; for example, to require that all rough work is handed in with the paper or that the student include an annotated bibliography of the paper. Instructors may wish to consult with the Centre for Teaching and Learning Support & Innovation when establishing these alternatives.