

BIOM*3000 Functional Mammalian Neuroanatomy

Course Outline

Course Instructor and Coordinator

Dr. Nadia Tazeen

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Email: nfarhan@uoguelph.ca

Office hours: By appointment

Wednesdays 12:00---1:00pm

COURSE STRUCTURE

This is a lecture only course.

Lectures: Monday, Wednesday, Friday

10:30am---11:20am

Room 214, JT Powell Building

There will be visits to the Human Anatomy Lab in the OVC main building during lecture time on the following days

Monday, 20th March, 2017 --- half the class

Monday, 22nd March, 2017 --- half the class

Formative term tests will be held *outside of lecture times*

Test #1: Friday, 3rd February, 2017

From 6:00---7:30pm

Room 1714, LLC

Test #2: Friday, 10th March, 2017

From 6:00---7:30pm

Room 1714, LLC

Test #3: Friday, 31st March, 2017

From 6:00---7:30pm

Room 1714, LLC

Final Test: Thursday 13th April, 2017

From 7:00---9:00pm

Room TBA

COURSE DESCRIPTION

This course will introduce students to the anatomical organization and basic functional principles of the nervous system. Knowledge of fundamental neuroscience will provide students with a better understanding of many biological processes that impact daily life, including learning, memory, and emotions. The course initially includes a review of the major cell types of the nervous system and the basic principles of brain function, and continues with an examination of neuronal/anatomical circuitry of the functional systems. The relationship between normal anatomy, physiology, and behavior will be the focus of the course, while clinical case studies will provide further insight into normal functioning and understanding the consequences, when nervous system signaling goes awry.

The main principles of neuroanatomy will be presented in lectures. Symposia will be based on clinical case study presentations. Lecture topics will include: Nerve cells, gross anatomy and functional organization of the nervous system, spinal cord and the nerve tracts, cranial nerves, brain stem, cerebellum, cerebral cortex, basal ganglia, hypothalamus, thalamus, limbic system and development of the Nervous system.

Prerequisite(s): **1 of BIOM*3100, BIOM*3200, HK*3940, PHYS*2030, PSYC*2410, ZOO*3200**

Restriction(s): This is a priority access course. Enrolment may be restricted. Please visit the Department of Biomedical Sciences website for more information.

Credits: 0.5 CEUs

COURSE GOALS

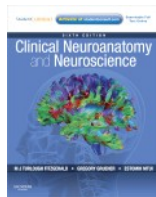
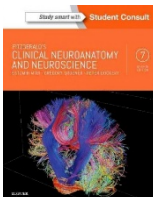
The overarching goal of this course is to provide students with an understanding of the functional organization of the mammalian nervous system and equip them with an insight of scientific inquiry and research in the field of neuroscience. This course will highlight the human nervous system as a mammalian model and will examine the gross and microscopic anatomy of the central nervous system

LEARNING OBJECTIVES

By the end of this course, students will be able to:

1. Identify major landmarks of the central nervous system and describe their functions
2. Explain the morphological stages of the development of the central nervous system
3. Integrate structure and function of the nervous system to explain affective responses to external and internal stimuli
4. Communicate scientific ideas based on the pathology and reparative processes of the nervous system

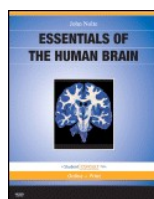
RECOMMENDED TEXTBOOKS



Clinical Neuroanatomy and Neuroscience 7th (or 6th) Ed.
Elsevier Saunders.

ISBN 7th: 9780702058325

ISBN 6th: 9780702037382



Essentials of the Human Brain

Mosby Saunders.

ISBN 97803230457

COURSE ASSESSMENT

Assessment type	Weight	Description
Term tests *	30%	<ul style="list-style-type: none">• Test #1: February 3rd• Test #2: March 10th• Test #3: March 31st
Case study	15%	Symposia throughout the semester
Participation	15%	Assessed throughout the term
Final Exam	40%	Comprehensive; includes full semester April 13th 7:00---9:00PM; Room TBA

* **The term tests are scheduled outside of class time, from 6---7:30pm, Room1714, LLC.**

Term tests and final exam:

The term tests and final exam will consist of multiple choice questions, diagram labeling, and short answer questions. The term tests and final exam will be cumulative, covering the course material (lecture and case studies), up to the test date for term tests and full semester for the final exam.

Case Studies:

Symposia will be held throughout the semester where student group will present their case study. The presentations will be evaluated in two ways; by the course instructor and peer evaluation.

Participation

Participation will be evaluated in several ways during the course and your mark will be determined by your input into these aspects

Breakdown of marks (15%)

Lab attendance and Quiz – 5

Two In class case studies – 2+2

Three Quizzes – 2+2+2

TEACHING METHODS

Lectures

A 50 minute lecture twice or thrice per week. Lecture notes (power point slides for the lecture) will be posted to CourseLink prior to each lecture as a PDF file.

Case studies

Students will be randomly assigned into groups of 4 to 5 and each group will be assigned a clinical case. Within the group presentation, students will address the signs and symptoms of the patient leading to diagnosis, normal structure and function of the involved areas and how these have been altered in the patient.

Human Anatomy Lab

Students will visit the Human Anatomy Lab where they will visualize parts of the brain, spinal cord, cranial nerves, and vessels of the brain and have the opportunity to ask questions and

COURSE POLICIES AND PROCEDURES

Attendance

Students are expected to come to class on time and turn cell phones to vibrate/silent so as not to disrupt the lecture and disturb the fellow students.

CourseLink

This will be used extensively throughout BIOM*3000. Ensure to visit the site often!

- Course content – All lectures and other content will be posted within the *content tab*
- Announcements – Last minute changes or special announcements will be posted within the *Newsfeed*
- Discussion boards – These *forums* provide students an opportunity to ask questions and discuss what is being learned in the lecture and lab. Please direct all course related questions to the appropriate forum

Electronic Etiquette

Laptop computers are permitted in the classroom, however, research has shown that these devices can be disruptive to the classroom environment if students are not utilizing them for course related activities such as note taking. If a student is using a laptop for unrelated activities such as social media, emailing, or texting and it is evident that fellow students are being disturbed, Dr Nadia reserves the right to ask the student to leave the classroom.

Electronic audio or video recordings of the lectures are not permitted without the signed written consent of Dr. Nadia or other presenter (whether a guest speaker or a peer). The use of electronic devices during the term tests or final exam is strictly prohibited.

Email policy

The University's official method of correspondence with students is through a valid University of Guelph email account. It is the student's responsibility to keep his/her @uoguelph.ca account active and to check it on a regular basis. All emails from students must include their full name, student number, and course code. All emails will be replied within 24-48 hours.

Drop Date - the day 40

The last date to drop one semester course, without academic penalty, is Friday, March 10, 2017.

Remarking policy

Term tests or presentation

Requests for re-evaluation of a term test must be made, in writing, to Dr. Nadia within one week of return of the term test evaluation. Only tests that are written in pen will be considered for re-marking. All requests must include appropriate reason for why the student deserves additional marks. Please be aware that **remarking will result in the whole test being remarked. This may result in an increase, decrease, or no change in the original mark of the term test.**

Religious observance

Information about the University of Guelph's policy on academic accommodation of religious obligations can be found online.

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current>

Students with Disabilities

The University of Guelph accommodates students with disabilities who have registered with Student Accessibility Services (SAS; formerly the Centre for Students with Disabilities). Any students who require assistance from SAS must register with the center (preferably within the first week of class) for any accommodations. To schedule a registration appointment with a disability advisor, please call the center at 519-824-4120 Ext. 56208 or Email SAS.

Academic Consideration of missed exam or assignment

If you find yourself unable to meet course requirements by the deadline due to medical, psychological, or compassionate circumstances, please review the regulations and procedures on academic consideration in the academic calendar and discuss your situation with a program counselor and/or the course coordinator (Dr. Nadia).

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current>

In addition, students are required to inform Dr. Nadia in writing or via email in advance of the missed course work, or no longer than ONE WEEK after the missed work is due. Included in this correspondence should be student's full name, ID #, reason for academic consideration, and email contact information. Please be aware that other exams, vacation, or work schedules are *not* valid reasons for missing coursework since you can plan ahead and make alternate arrangements if necessary.

If the final exam is missed, application for a deferred exam must be made through a program counselor and The Office of the Registrar as outlined in the Academic Consideration and Appeals section of the Undergraduate Calendar.

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and enjoins all members of the University community – faculty, students, and staff – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. The University of Guelph takes a serious view of academic misconduct and it is *your* responsibility as a student to be aware of, and to abide by, the University's policy. Included in the definition of academic misconduct are such activities as cheating, plagiarism, misrepresentation, and submitting the same material in two different courses without written permission. To better understand your responsibilities, students are expected to read the section on Academic Misconduct in the Undergraduate calendar and academic integrity policies online (links below). You are also advised to discuss any questions that you may have with an academic counselor.

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current>

<http://www.academicintegrity.uoguelph.ca>

Students must also be aware that faculty has the right to use software to aid in the detection of plagiarism or copying, and to examine students orally on submitted work. For students found guilty of academic misconduct, serious penalties including possible suspension or expulsion from the University of Guelph may be imposed.

COURSE SCHEDULE*Note:* This is to be used as a guide, changes may occur. Check CourseLink regularly

WEEK	DAY	TOPIC
1	Jan 09	Introduction
	Jan 11	Cells of the nervous system
	Jan 13	Organization of the NS
2	Jan 16	Nerve impulse & Synapse
	Jan 18	Meninges - Quiz
	Jan 20	Case studies
3	Jan 23	Spinal cord
	Jan 25	Spinal tracts
	Jan 27	Case studies
4	Jan 30	Spinal tracts
	Feb 01	Cranial nerves 7-12
	Feb 03	Symposium - Group 1 and 2
	Feb 03	Term Test #1 (includes Jan11---Feb3)
5	Feb 06	Medulla
	Feb 08	Human Anatomy outreach - half the class
	Feb 10	Human Anatomy outreach - half the class
6	Feb 13	Pons, Cranial nerves 5, 6 - Quiz
	Feb 15	Midbrain, Cranial nerves 2 - 4
	Feb 17	Symposium - Group 3 and 4
	Feb 20 - 24	Winter break
7	Feb 27	Cerebellum
	Mar 01	Cerebral cortex, 1 st cranial nerve
	Mar 03	Symposium - Group 5 and 6
8	Mar 06	Guest speaker/ tutorial
	Mar 08	Blood supply of the brain - Quiz
	Mar 10 Day 40	Symposium - Group 7 and 8
	Mar 10	Term Test #2 (includes Feb 6---Mar 10)
9	Mar 13	Thalamus & Hypothalamus
	Mar 15	Basal ganglia
	Mar 17	Symposium - Group 9 and 10
10	Mar 20	Limbic system
	Mar 22	Limbic system
	Mar 24	Symposium - group 11 and 12
11	Mar 27	Guest speaker /tutorial
	Mar 29	CSF and Ventricles
	Mar 31	Symposium - group 13 and 14
	Mar 31	Term Test #3 (includes Mar13---Mar31)
12	Apr 3	Development of the Nervous system
	Apr 5	Development of the Nervous system
	Apr 7	Course Review - questions before the final?

