

Fundamental neurosciences (2F03)

Venue of lectures: PC/155

Time: M & W - 1:30-4:30

Course Instructor: Dr. Ullal, G.

Contact: Department of Psychology, Neuroscience and Behaviour (room 108).

Tel. 21331; email: ullalg@mcmaster.ca

Office Hours: ***There are no specific “Office Hours”. Please feel free to email me and make an appointment for any day during the week.***

Course Objectives:

This course is primarily aimed at offering a glimpse of complex neural systems in normal and diseased states. We will address the neural structures and mechanisms underlying this.

The textbook for the course: Dale Purves *et al.* Neuroscience 4th Edition, Sinauer Associates Inc. USA. 2008. The chapters pertaining to each lecture are indicated in the Schedule below.

1. **Course website:** A scheme of every forthcoming lecture along with important slides will be posted on the WebCT, prior to every lecture. Students are encouraged to visit the site regularly to look for any important announcements that would appear periodically.
2. **Text:** In the Course Outline provided below, page numbers of the text have been indicated. However, the lectures and examinations **DO NOT STRICTLY** adhere to the contents of the text book. Students are therefore advised to print the slides off the WebCT and make notes during the lecture.

NOTE: Examinations are based on lectures. The lectures will cover material from the textbook as well as from outside sources. Skeleton PowerPoint slides for the lecture will be posted prior to every class. Students are advised to make their own notes in class.

3. **Examinations:** There will be two midterm examinations and one final examination. The midterm examinations will be worth 25% each and the final will be worth 50% of the total. All the exams (including final) will be based on a few short answers and multiple-choice questions. They will be held during the class hour.

MISSED EXAMINATIONS: There will **NOT** be a re-examination for missing any of the midterm examinations. However, if a student misses any examination owing to an illness or any other legitimate reason, the final examination will be rated proportionately higher provided an official permission is routed through the University Administration. No examination will be re-scheduled unless there is cancellation of the class by the University.

CONFLICT OF EXAMINATIONS: All the examinations (including the final) are conducted during the regular class-hour. If any other examination conflicts with this examination, please contact the authorities conducting the other examination.

“IMPORTANT ANNOUNCEMENTS”: Important announcements regarding the course will be periodically posted in the **Announcement Box** of the course. Please remain updated.

MCMASTER UNIVERSITY GRADING SCALE:

Grade	Equivalent Grade Point	Equivalent Percentages
A+	12	90-100
A	11	85-89
A-	10	80-84
B+	9	77-79
B	8	73-76
B-	7	70-72
C+	6	67-69
C	5	63-66
C-	4	60-62
D+	3	57-59
D	2	53-56
D-	1	50-52
F	0	0-49

Schedule of Lectures

More elaborate information about every session will be posted on the WebCT periodically before every lecture.

All examination questions will come from material covered in the lecture

Suggested readings are meant to assist in the understanding of the course material. They do not confine to the text.

Examinations are entirely based on the lecture material.

Session number	DATE	TOPIC	Suggested reading in TEXT
1	June 22 nd	Introduction to the course and the nervous system	
2	June 24 th	Investigating the nervous system-1 Electrophysiology and Neuroimaging	Ch1
3	June 29 th	Investigating the nervous system- 2 Molecular biology and Neural Network, and Gross Anatomy	Ch 1
4	July 6 th	Meninges, CSF, Blood flow and the Blood Brain Barrier	Ch 1
5	July 8 th	1st Midterm examination (45 minutes- in class) followed by lecture: Neuron, Glia, Axon transport and Signalling Endosome,	

6	July 13 th	Resting Membrane Potentials, Nerve Impulse, Nerve conduction, Synapse and Synaptic Plasticity	Parts of Ch 2-5 and 8
7	July 15 th	Somatosensations and Pain	Ch 9-10
8	July 20 th	Vision	Ch 11-12
9	July 22nd	2nd Midterm examination (45 minutes- in class) followed by lecture: Vestibular mechanisms	Only material covered after the 1st test will be tested
10	July 27 th	Pyramidal and Extrapyrarnidal Motor System	Ch 16-19
11	July 29 th	Cerebellum and the Servo Mechanism	Ch 16-19
12	Aug 5th	FINAL EXAM (2 hrs-in class)	This is cumulative

The final examination is cumulative. It will cover the entire material covered in the lectures.

A Note on Academic Dishonesty

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of

credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at <http://www.mcmaster.ca/academicintegrity>

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one’s own or for which other credit has been obtained.
2. Improper collaboration in group-work.
3. Copying or using unauthorized aids in tests and examinations.

Message from the Chair of Psychology

The Instructor cannot be responsible for returning long distance calls from students. Any student wishing to reach an Instructor is invited to e-mail the instructor.