

NEURAL BASIS OF BEHAVIOUR

PSYC 3250 3.0 Section B

Fall Term 2014-15
ROOM ????, Wednesday 11:30-14:30
Faculty of Health, York University

Course Director

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Course Description

This course presents the fundamentals of the physiology of behaviour. Special importance is placed on the information-processing properties of the nervous system in order to provide a uniform framework for the understanding of such topics as sensory perception, attention, movement, emotion and language with experimental examples from the lab and clinical studies/research illustrating the effects of impaired brain function. Some questions we will attempt to address are: Why can you see dim stars in your peripheral vision but not be looking at it?; Why does a hair in your mouth feel so big; whereas you can not feel the same hair if it was on your back? Why do you itch? How does suppression mechanisms in frontal cortex modulate sensory signals? How does plasticity occur in the brain? Can music and dance help brain function?

Learning Objectives

1. This course presents the fundamentals of the physiology of behaviour. At conclusion of the course you will understand beginning neural processing and relation to behaviour.
2. Understanding how we process sensory information from the world
3. Understand how motor functions are accomplished in our brain
4. The effect of emotion on neural processing
5. Get Exposed to special topics within Society for Neuroscience (www.sfn.org)

Prerequisites

1. AK/AS/HH/SC/PSYC1010 6.0 or AK/PSYC2410 6.0 with a **minimum grade of C**.
2. AK/AS/HH/SC/PSYC 2240 3.0 or AK/PSYC 3145 3.0. [i.e. Biological Basis of Behaviour].

Course Format

Lectures/discussion/movies with textbook reading assignments and use of podcasts and internet resources.

Readings

The course will primarily use Neil R. Carlson's Physiology of Behavior (11th Edition, Allyn & Bacon). The text will be supplemented with internet resources, movies and lectures. I highly recommend that you make use of the online resources.

Final mark will be based on:

- Quizzes** – During *some* classes there will be a 10 minute quiz. If you are late for class there are no make up quizzes. If you miss a quiz there are no makeup quizzes. The quiz will be on a topic from the current lecture and/or previous material you should know and understand. The quizzes are worth a 15% total of the course. Any missed quiz you WILL need a doctor's note otherwise you receive 0 for that quiz. e.g. Hypothetical student's quiz calculation, if you missed 1 of 5 quizzes during the term and did NOT drop a doctor's note to our Faculty Secretary (rm282 BSB) within 8 days of the missed quiz you get zero for that quiz and you completed the 4 other quizzes with 80%, 40%, 100% and 55% we will calculate your mark as follows $(0+80+40+100+55)/5 = 55\%$ for the quizzes. 15%
- Midterm exam 1** in class [WEEK 5 – see below] (pgs 7-8, Chpts 2,3,4). 2hr exam followed by lecture - 80% Multiple choice and 20% short answer (space of 5 lines). *There will be no makeup exams for Midterm exam 1. If you miss a midterm your final exam will be worth 30% more (no exceptions).* 27%
- Midterm exam 2** in class [WEEK 8 – see below] (Chpts 5,6,7) 2hr exam followed by lecture - 80% Multiple choice and 20% short answer (space of 5 lines). *There will be no makeup exams for Midterm exam 2. If you miss the midterm your final exam will be worth 35% more (no exceptions).*
- Last Exam** in class [WEEK 12 – see below] (pgs 7-8, Chpts 2,3,4,5,6,7,8,11,14) 3hr exam on all material in all lectures and course readings). Please note: I will most probably not answer e-mails regarding class material in the last 5 days before the exam so please prepare them ahead of time. 33%
- Participation** in class, online discussion in moodle, completion of online tutorial on academic integrity (see below for link). 20%

5%

E-mail etiquette

We will respond to e-mails during Monday to Friday within 24hrs. During the weekend e-mails will not be responded to.

Academic Integrity

Please go to the website and complete the tutorial at York University (<http://www.yorku.ca/academicintegrity>), to read the section 'For Students,' and to complete the Academic Integrity Tutorial: (http://www.yorku.ca/tutorial/academic_integrity/).

Please view the university policy on plagiarism and academic dishonesty at

http://www.yorku.ca/secretariat/policies/document.php?document=69#_Toc89156096

Ideally, when you were in first year you should have been required to complete the Academic Integrity Tutorial as part of your course. If you have it please e-mail the certificate of completion to the teaching assistant and neural@yorku.ca at your earliest convenience.

Schedule for PSYC 3250 A (Thursday)
NEURAL BASIS OF BEHAVIOUR
 Dr. Joseph DESOUZA, neural@yorku.ca

<u>Date</u>	<u>Topic</u>	<u>Reading</u>
Week 1	Introductions Neglect Neurons	Chpt. 1 (pgs 7-8) Chpt. 2
Week 2	Review more neural topics Neuroanatomy Psychopharmacology (if time)	Chpt. 2 Chpt. 3 Chpt. 4
Week 3	Neuroanatomy review Psychopharmacology	Chpt. 3 Chpt. 4
Week 4	Lecture Research Methods	Chpt. 5
Week 5	2hr Term Test (possible) Research Methods – Neuroimaging	pg7-8, Chpts 2,3,4 Chpt. 5
CO-CURRICULAR WEEK		
Week 6	Visual System Perception and Action	Chpt. 6
Week 7	Auditory, Somatosensory, Vestibular and the rest of the senses Tentative Guest speaker: David Baldini (Magician) – the interface between attention and illusions	Chpt. 7
Week 8	2hr Term Test Motor control lecture	Chpts 5,6,7 Chpt. 8
Week 9	Motor control (con't)	Chpt. 8
Week 10	Emotion	Chpt. 11
Week 11	Communication Disorders	Chpt. 14
Week 12	Last exam	Chpts. 1(pgs7-8) 2,3,4,5,6,7,8,11 & 14