



NROC61 TENTATIVE COURSE SYLLABUS

Fall 2010

LEARNING AND MOTIVATION

Instructor:

Dr J. C. LeBoutillier

Room S-557

416-287-7430

Office hours: Tues and Thurs from 2 -3 pm.

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NOTE: Please place NROC61 in the subject header

Lectures:

In class 11-12 on Tuesdays and additional weekly online lectures.

All announcements will be made through Blackboard which should be monitored regularly.

Tutorials:

Students are required to attend weekly tutorials.

Course Description:

This course introduces the students to learning and motivation from a physiological and behavioral perspective. Topics covered under the category of motivation include: physiological basis of eating, drinking and sexual behavior, sleep, and the neural correlates of reward. Topics covered under learning include: learning categories, memory systems and the cell and molecular basis of learning and memory.

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. Tina Doyle, the UTSC AccessAbility Manager 416-287-7560 is available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. The sooner you let us know about your needs, the quicker we can assist you in achieving your learning goals in this course.

Course Material:

Students will be responsible for:

1. All material covered during lectures
2. Assigned text chapters and primary readings
3. Tutorial assignments

Tutorials

The tutorials are intended to familiarize the student with the general knowledge base of neuroscience, namely the published literature. The 3 tutorial assignments will include:

1. Using the library (or internet) referencing services to obtain 3 current empirical articles on an assigned topic. For each journal article submit the original abstract and an annotated bibliography (Refer to assignment 1 handout on Blackboard). References must be from the last 3 years. Each article must include a different methodology to examine your topic i.e. for the 3 papers required for this assignment you will have 3 different methods. Be sure to list your references following APA format.
2. A 10 minute oral presentation describing one of the empirical articles selected in assignment 1 followed by 3-5 minutes of class discussion.
3. A mini review of 5 to 7 empirical articles. The review paper must discuss at least 3 different methodologies to investigate your assigned topic and should be approximately 5 pages in length. In addition to these 5 pages, you must include a cover page, an abstract and a reference page. Thus, your final paper will be about 8 pages in length. Your TA will not read any content beyond 9 pages. **APA format is required for the submission of this paper.** The time stamp on blackboard will be used as the official time submitted. In addition, the total word count of your paper is required on your title page. Your review paper is due on **Wed Nov 23, 2010**. Final papers will be submitted electronically to the blackboard assignment box as well as through turnitin (details at the end of the syllabus). Failure to submit to both Blackboard and Turnitin on time will result in a penalty for the assignment. Details will be discussed at the first tutorial.

Grading

The assignment of grades will be based upon the following:

1. One midterm examination - 25%. This test will include MCQs and written components such as definitions and long answers.
2. A final examination - 35%. The format of the final will be similar to the midterm. You will be responsible for all lecture material covered during the course, but only the assigned readings and text chapters not covered on Test 1.
3. Tutorial grade 31%
 - a. Abstract list – 5 %

Topics will be assigned following your first tutorial and this assignment will be due no later than the start of your tutorial on **Oct 26, 2010**.
 - b. Class presentation – 5 %

Each presentation will be **15 minutes** in length – **10 minutes** to present details of the article (purpose of study, methods, results, relevance of findings, etc.) and **5 minutes** to answer questions about the article from the class. Marks will be awarded for clarity of presentation, use of visual aids/handouts and the ability to answer questions about the research article at the end of the presentation. A demonstration will be provide in the second tutorial.

c. Mini review -17 %

d. Class participation – 4 %

Students are expected to attend and participate in weekly tutorials.

4. Lecture Quizzes – 9% (3 quizzes, 3 % each).

The goal of these quizzes is to encourage you to keep up with the empirical readings in the course and better prepare you for the tests and exams.

Content from the empirical articles will be tested as follows:

Sept 28 Quiz 1 on McKinley and Marx articles

Oct 19 Quiz 2 on Wright, Kinsley & Lambert, and Goldstein articles

Nov 9 Quiz 3 on Squire, Tsien, and Medina et al. articles

Missed Tests and Presentations

Makeup tests and quizzes will not be scheduled in this course. If you miss the midterm test you will be permitted to write a final cumulative exam on all course content valued at 60% of your final grade provided you meet the following criteria.

1. Notify me by email ASAP following the missed test at the course email.
2. Deliver a medical note from a physician to me within 2 weeks of the test. Please use only the official medical note available for download at www.utoronto.ca/~registrar/. No other notes will be accepted. If these criteria are not met a grade of zero will be assigned.

A grade of zero will be given if you do not give your presentation on the assigned date. Missed presentations will only be rescheduled provided an official documentation from one of the UTSC websites indicated above is delivered to your TA ASAP. You should be prepared to give your presentation at any tutorial following the missed date. Your TA will try to give you advance notice but this may not be possible.

Missed lecture quizzes will receive a grade of zero.

Late Assignments

Late assignments will be accepted with a penalty of 10% per day. All assignments are due at the **start** of your tutorial.

Texts

- Bear, Connors & Paradiso, **Neuroscience: Exploring the Brain** 3rd edition.

Assigned Readings

You will be required to read the following articles. Copies of these articles are available in the library and can be downloaded in an Adobe Acrobat (pdf) format from BB.

Eskandari, F. & Sternberg E.M. (2002). Neural-immune interactions in health and disease. *Annals of the New York Academy of Science* 966, 20-27.

Goldstein, I. (2000). Male sexual circuitry. *Scientific American* (August), 283, 70-75.

Kinsley, C.H & Lambert, K.G. (2006). The maternal brain. *Scientific American* (January), 72-79.

LeDoux, J.E. (2003). The emotional brain, fear and the amygdala. *Cellular and Molecular Neurobiology*, 23,727-738.

Marx, J. (2003). Cellular warriors at the battle of the bulge. *Science*, 299, 846-849.

McKinley, M.J., et. al. (2004). Physiological and pathophysiological influences on thirst. *Physiology and Behavior*, 81, 795-803.

Medina, J.H., Bekinschtein, P., Cammarota, M., & Izquierdo, I. (2008). Do memories consolidate to persist or do they persist to consolidate?. *Behavioural Brain Research*, 192, 61-69.

Squire, L.R. (2009). Memory and brain systems: 1969-2009. *The Journal of Neuroscience*, 29(41): 12711-12716.

Sutcliffe, J.G. & de Lecea (2002). The hypocretins : Setting the arousal threshold, *Nature Review*, 3,339-349.

Tsien J.Z. (2000). Building a brainier mouse. *Scientific American* (April) 282, 62-68.

Wright, K. (2002). Times of Our Lives. *Scientific American* (September) 287, 58-65.

COURSE SCHEDULE

Week	Important Dates	Topic	Assigned Lecture Readings	Assigned Primary Reading
1		Course Introduction Regulation of Internal Body States	Chapter 15 (Hypothalamus 484-90)	McKinley et al.
2		Physiology and Neurobiology of Thirst	Chapter 16	Marx
3	Sept 28	Physiology and Neurobiology of Eating Quiz 1 in lecture	Chapter 16	
4		Biological Clocks: Sleep and Wakefulness	Chapter 19	Wright
5		Sex, Sexuality and the Brain	Chapter 17	Kinsley & Lambert Goldstein
6	Oct 19	Midterm requested this week Quiz 2 in lecture		
7	Oct 26	Assignment 1 due in tutorials		Squire
8		Learning and Memory: Biological	Chapter 24	Tsien
9		Learning and Memory: Neural Mechanisms	Chapter 25	Medina et al.
10	Nov 9	Learning and Memory con'd Neural Correlates of Reward Quiz 3 in lecture	Chapter 15	Sutcliffe & de Lecea
11	Nov 23	Physiology of Emotions Assignment 3 due in tutorials	Chapter 18	LeDoux
12		Stress Final Exam Review		Eskandari & Sternberg

Content listed for Weeks 1 to 5 inclusive and highlighted in yellow will be tested on the midterm.

Content listed for Weeks 6 to 12 AND all lecture content (Week 1-12) will be on the final exam.

Turnitin:

First, some background information on this program. Turnitin.com is a tool that assists in detecting textual similarities between compared works i.e.: it is an electronic resource that assists in the detection and deterrence of plagiarism.

*Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays 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 Turnitin.com web site.*

Additional information on conditions of use can be viewed at
<http://www.utoronto.ca/ota/turnitin/ConditionsofUse.html>

Students will submit all written reports to the turnitin.com site (www.turnitin.com). Detailed instructions on setting up your account can be found on this page. You must set up your own account and will need the following information: Course name, NROC61; Class ID #, 3240703; Class Enrolment Password; imagine