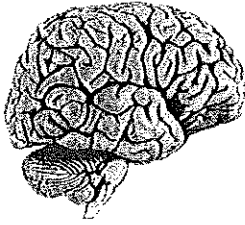


Tutorial  
Syllabus  
also  
incl.



**NROC61 TENTATIVE COURSE SYLLABUS:  
Spring 2007**

**NEUROSCIENCE II: LEARNING AND MOTIVATION**

**Instructor:**

Dr J. C. LeBoutillier  
Room S-557  
287-7430

Office hours: Wed and Thursday 2:30 -3:30 pm

Email: [nroc61@utsc.utoronto.ca](mailto:nroc61@utsc.utoronto.ca)

Please note, this is the only email account that will be monitored for this course.

**Teaching Assistants:**

Bernice Sist	<a href="mailto:b_sist@hotmail.com">b_sist@hotmail.com</a>
Kimia Honarmand	<a href="mailto:kimia0221@gmail.com">kimia0221@gmail.com</a>
Andreea Moraru	<a href="mailto:andreea.moraru@utoronto.ca">andreea.moraru@utoronto.ca</a>
Crystal Dykstra	<a href="mailto:crystal.dykstra@gmail.com">crystal.dykstra@gmail.com</a>

**Lectures:**

Tues 9:00 – 12:00 S128

**Tutorials:**

TUT0001	Wed	11:00	12:00	MW 229	Bernice
TUT0002	Wed	11:00	12:00	SW 143	Andreea
TUT0003	Wed	11:00	12:00	BV 514	Kimia
TUT0004	Wed	11:00	12:00	MW 264	Crystal

**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:**

For the lecture part of the course, the student will be responsible for:

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

### **Tutorials**

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

1. Using the library (or internet) referencing services to obtain a list of current references on an assigned topic.
2. A 10 minute class presentation describing an empirical article followed with 3-5 minutes for class discussion.
3. A mini-review of 5 to 7 empirical articles.

Details on each of these assignments are posted in the tutorial section of the course Intranet.

### **Grading**

The assignment of grades will be based upon the following:

1. One midterm examination - 20% . This test will include MC and written components such as FIB, short answers.
2. A final examination - 40%. The format of the final will be similar to the midterm. You will be responsible for all lecture and text material covered during the course, but only the assigned readings not covered on Test 1.
3. Tutorial grade 40 %
  - a. Abstract list – 10 %
  - b. Class presentation – 5 %
  - c. Mini review --15%
  - d. Class participation – 10 %

### **Missed Tests and Presentations**

Makeup exams 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.
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/](http://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 medical note downloaded from the UTSC website 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. In the event that time does not permit us to reschedule your presentation during the term, you may be required to give your presentation during the reading week before the final exams. Failure to give your presentation on the assigned date will result in a grade of zero

### **Late Assignments**

Late abstract lists and mini review will be accepted with a penalty of 10% per day. All assignments are due at the start of the tutorial.

### **Texts**

We will be using 3 chapters from the Purves text you used last year in NROB60. In addition, chapters from 2 additional texts will be used as indicated in the course schedule which follows. Copies of all texts are available on short-term loan. Text information will be discussed further at the first class.

Purves et al., **Neuroscience** 3<sup>rd</sup> edition

Rosenzweig et al., **Biological Psychology : An Introduction to Behavioral and Cognitive Neuroscience** 4th edition

Carlson, **Physiology of Behavior** 8<sup>th</sup> edition

### ***Assigned Readings***

You will also be required to read the following articles. Copies of these articles are available in the library and most can be downloaded from our library as pdfs.

Damasio, AR. (2002). Remembering when. *Scientific American* 287 (September) pp 66-73.

Fields, R.D. (2004). The other half of the brain. *Scientific American* 290 (April) 54-61.

Gura, T. (2003). Obesity drug pipeline not so fat. *Science*, 299, 849-852.

Hall, S.S. (2003). The quest for a smart pill. *Scientific American* (Sept) 54-65.

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

Kinsley, CH & Lambert, KG. (2006). The maternal brain. *Scientific American* (January), 72-79.

LeDoux, J.E. (1994). Emotion, memory and the brain. *Scientific American* (June), 2270, 50-57.

Nestler, E.J., & Malenka, R.C. (2004). The addicted brain. *Scientific American* (March) 290 78-85.

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

Sapolsky, R. (2003). Taming stress. *Scientific American*, (Sept) 87-95.

Siegel, J.M. (2003). Why we sleep. *Scientific American*, (Nov) 289, 92-97.

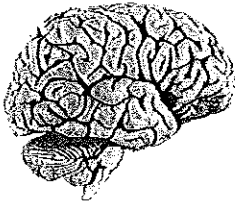
Treffert, D.A. & Christensen, D.D. (2005). Inside the mind of a savant. *Scientific American*, (Dec) 108-113.

Walsh, B.T. & Devlin, M.J. (1998). Eating disorders: progress and problems. *Science*, 280, 1387-1390.

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

## COURSE SCHEDULE

Week	Date	Topic	Assigned Lecture Readings	Assigned Primary Reading
1	Jan 9	Course Introduction Tutorial Topic Assignments Regulation of Internal Body States		
2	Jan 16	Introduction to the LSS Physiology and Neurobiology of Thirst	Rosenzweig Chap 13	McKinley et al.
3	Jan 23	Physiology and Neurobiology of Eating	Rosenzweig Chap 13	Walsh & Devlin Gura
4	Jan 30	Biological Clocks Sleep and wakefulness	Purves Chap 27	Wright Siegal
5	Feb 6	Sex, Sexuality and the Brain	Purves Chap 29	Goldstein Kinsley & Lambert
6	Feb 13	No Lecture Tutorial presentations in lecture room scheduled as follows: Bernice 9am, Andreea 10 am, Kimia 11 am, Crystal time and room TBA		
	Feb 20	READING WEEK		
7	Feb 27	Midterm test requested		
8	Mar 6	Learning and Memory: Biological Perspectives	Rosenzweig Chap 17	Damasio Hall Fields
9	Mar 13	Learning and Memory: Neural Mechanisms	Purves Chap 24	Treffert & Christensen
10	Mar 20	Neural Correlates of Reward Final Paper Review	Carlson Chap 18	Nestler & Malenka
11	Mar 27	Physiology of Emotions	Purves Chap 28	LeDoux
12	Apr 3	Stress	TBA	Sapolsky



**NROC61S Tutorial Syllabus: Spring 2007**  
**TENTATIVE SCHEDULE**  
**Neuroscience II: Learning and Motivation**

### **Teaching Assistants:**

The tutorials are intended to familiarize students with the general knowledge base of neuroscience using published literature. Tutorials will be used to answer questions about assigned readings as well as develop skills in writing, presentation, and reviewing relevant research material.

Students are required to attend all tutorials within their assigned tutorial section.

### **Primary Readings**

It is the *student's responsibility* to read each assigned primary article listed in the course syllabus BEFORE the tutorials. Teaching Assistants will address questions or concerns stemming from each article, but will NOT summarize the articles for students. We will not be covering assigned readings during the lecture period.

### **Tutorial Assignments**

Students will be responsible for completing the following tutorial assignments:

1) ASSIGNMENT 1: *List of 10 Abstracts, 5 Annotated*

Using the library/internet referencing services, students must hand in a list of abstracts of 10 *empirical* articles (i.e. articles must be original research articles NOT reviews of research concepts) on an assigned topic. In addition, for 5 of the abstracts you should submit 5 annotated bibliographies. Following each abstract you should indicate the methodology used in a few words and bold this information. A minimum of 3 different methodologies must be included in your choice of abstracts for this assignment. The referencing for these abstracts will follow APA format. You will choose papers from this submitted list for your final assignment 3. Topics will be assigned in your first tutorial and this assignment is due at the start of your tutorial on Feb 6, 2007.

2) ASSIGNMENT 2: *One 10 minute Class Presentation*

From the list of abstracts, students must select **ONE** empirical article and present the contents of that article to the class. Each presentation will be 15 minutes in length – 10 minutes to present full 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. Your presentation date will be determined during the first week of tutorials and these dates will be posted to the INTRANET.

3) ASSIGNMENT 3: *Review of five to seven articles*

From the list of abstracts, students must complete a five page written review of 5-7 *empirical* articles. The review paper must discuss at least 3 different methodologies to investigate the problem of interest.

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. A maximum of 10 pages will be accepted. **APA format is required for the submission of this paper.**

Your review paper is due at the start of your last tutorial. You should turn in a hard copy to your TA, as well as an electronic copy through turnitin. The total word count of your paper is required at the bottom of the title page of your paper.

### **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.

*Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.*

As indicated on the turnitin home page, all work submitted to Turnitin is checked against three databases of content:

- A current and archived copy of the publicly accessible Internet (more than 4.5 billion pages updated at a rate of 30-40 million pages per day);
- Millions of published works (from ABI/Inform, Periodical Abstracts, Business Dateline, ProQuest, the Gutenberg Collection of literary classics, and tens of thousands of electronic books);
- Millions of student papers submitted to Turnitin since 1996.

Students will submit all written reports to the turnitin.com site ([www.turnitin.com](http://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 spring 2007; Class ID # , 1751510; Class Enrolment Password; neuroscience. You should set up your Turnitin account for third lecture period.

## **Grading Summary**

### **Assignment 1: Abstracts – 10%**

- 10 abstracts of empirical papers between 2003 and 2007. Complete reference required using APA format - 2%
- Minimum of 3 different methods. These methods must be listed at the end of your journal abstract and highlighted - 3%
- 5 annotated bibliographies prepared from the list of 10 chosen abstracts - 5%

### **Assignment 2: Class Presentations – 5%**

- Summary (methods, results, etc)– 2%
- Critique (relevance & relationship) – 2%
- Style & delivery – 1%

### **Assignment 3: Review Paper – 15%**

- Abstract – 2%
- Clarity of review – 10%
- Use of stylized format – 3 %
  
- **What you'll want to include in the body of your paper:**
  - Introduction
    - State your topic and provide a brief background statement of the problem
    - State the three methodologies you will review
  - Body Paragraphs
    - Organize these based on the three methodologies
    - For each methodology, briefly describe the applicable articles, focusing on the following:
      - Hypothesis
      - Methods – make this the focus!
      - Findings
    - For each methodology, discuss the pro's and con's of the technique in studying your topic
  - Conclusion
    - Summarize your critique of the three methodologies again for your reader
    - End with a closing statement on, in your opinion, what methods yield the most reliable, valid and significant results for your topic

The best way to become familiar with review papers is to read them!

### **Class Participation – 10%**

- Participation in discussion of readings and presentations
- Submission of a single potential test question and answer based on the assigned empirical reading for the week. This question is due at the start of the class. You are not required to submit a question in the week of the midterm test or the final tutorial.

**Total = 40%**

### **Late Assignments**

Oral presentations **MUST** be presented on the assigned date. Students who fail to give their presentations on the assigned dates will receive a grade of zero for this component of the tutorial unless a medical note is provided to the TA. See the course syllabus for more details.

Written assignments **MUST** be handed in at the start of the tutorial period on the assigned date. Late papers will be accepted with a penalty of 10% per day.

**The Learning Skills Syllabus has been designed to model the tutorial expectations for this course and is linked to our course home page through the Intranet. This syllabus will be demonstrated during the second class and we welcome feedback on this page.**