NROC61
LEARNING AND MOTIVATION
UNIVERSITY OF TORONTO SCARBOROUGH
FALL 2012

INSTRUCTOR: **Prof. Rutsuko Ito**
OFFICE HOURS: **Tuesdays 1-3pm Room S627**

COURSE E-MAIL: **nroc61.utsc@gmail.com**
COURSE WEBSITE: **Blackboard**

TAs: **Paul McKeever**
Saira Meese-Tamuri
Crystal Dykstra
Maryam Sharif-Razi

Note about communication: *Please post 2content related questions to relevant blackboard discussion forum for the benefit of other students.* All other questions must be sent to nroc61.utsc@gmail.com, clearly indicating who the correspondence is addressed to. E.g., put the name of the TA in the subject line. Please note that emails pertaining to NROC61 sent to personal email accounts of Professor Ito's or the TAs will NOT be answered.

LECTURES: **Thursdays 3-5pm, SW309**

TUTORIALS: **Students are required to attend weekly 1hr tutorials.**

TUT1	**Wednesdays**	**11-12**	**MW264**	**Crystal Dykstra**
TUT2	**Wednesdays**	**11-12**	**PO101**	**Saira Meese-Tamuri**
TUT3	**Wednesdays**	**12-1pm**	**MW264**	**Paul McKeever**
TUT4	**Wednesdays**	**12-1pm**	**PO101**	**Saira Meese-Tamuri**
TUT5	**Wednesdays**	**9-10am**	**IC120**	**Maryam Sharif-Razi**

COURSE DESCRIPTION:

This course explores learning and motivation from a physiological, pharmacological and behavioral perspective, introducing the principal methods and logical inferences used in experiments that use laboratory animals. However, wherever possible, it is shown how these findings can be applied to humans, especially in a clinical setting. Topics covered under learning include: different types of associative learning and their neural basis with a focus on the notion that the mammalian brain is organized into multiple learning and memory systems. Topics covered under the category of motivation include the neural basis of eating, drinking and sleep and the neural correlates of reward and emotion.

TENTATIVE COURSE SCHEDULE:

Week	Dates	Topic	Assigned Lecture Readings
1	Sep 13	Course Introduction	

2	Sep 20	Pavlovian Conditioning	RI Handout
3	Sep 27	Laws of association	RI Handout
4	Oct 4	Instrumental conditioning	RI Handout
5	Oct 11	Learning and Memory systems **Annotated Reference List due in tutorials**	RI Handout
6	**Oct 18**	**Midterm * in class (2hrs)**	
7	Oct 25	Central Reward systems	RI Handout
8	Nov 1	Hypothalamus and motivation 1	Chapter 16
9	Nov 8	Hypothalamus and motivation 2	Chapter 16
10	Nov 15	Limbic system and emotions	Chapter 18
11	Nov 22	Stress and arousal **Minireview Assignment due in tutorials**	Chapter 15
12	Nov 29	Biological Clocks: Sleep and Wakefulness	Chapter 19
	TBA	**Final exam****	

* Content listed for Weeks 1 to 5 inclusive and highlighted in light blue will be tested on the midterm.
** Content listed for Weeks 6 to 12 will be on the final exam.

I reserve the right to make alterations to the course content/schedule.

Resources:
Main Texts
Handouts will accompany Lectures 2-6. For Lectures 7-12, please read assigned chapters of Bear, Connors & Paradiso, **Neuroscience: Exploring the Brain** 3rd edition.
You will also be assigned primary readings, which you will be expected to read.

Lecture slides and PDFs of papers for assigned reading will be posted on the course website (in the "Content" section) ***by 12.00 at the latest*** on the day of the lecture. You may find it useful to print out a copy of the slides and bring it to the lecture for note taking.

Scheduling conflict: A web option will not be offered for this course, so it would be your responsibility to ensure that you are able to attend all the lectures and tutorials.
We will not answer emails concerning scheduling conflict, nor will we make special exceptions for missed tutorials as over 40 students are on the wait list for this course.

Evaluation

The tests will be based on the materials covered in the lectures, and ALL assigned readings.

1. Midterm Test (30% overall grade)

This test will consist of multiple-choice questions and short and long answer questions on the material covered in Lectures 1-5.

2. Final exam (35% overall grade)

This test will consist of multiple-choice questions and short and long answer questions on the material covered in Lectures 6-12:

3. Tutorial grade (35 % overall grade)

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

a. **Class presentation of primary article –10 %**

Three empirical articles will be assigned, to be presented by 3 students in each tutorial (1 article each). Each presentation will be 15 minutes in length – 10 minutes to present key details of the article (purpose of study, methods, key finding, 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. A demonstration will be provided in the first tutorial.

b. **Mini review – 20%**

This assignment is designed for you to make use of the internet referencing services such as *pubmed* (http://www.ncbi.nlm.nih.gov/pubmed) in selecting a maximum of 10 current empirical articles on a given topic of choice for you to review. The list of topics will be released after your first tutorial, but you can also come up with a topic of your choice as long as it's within the scope of the topics covered in the course, and you get pre-approval from your TA. **The focus of the review should be on 'current developments' in the field, and at least 5 empirical articles must be from the last 5 years (2007-2012), while also demonstrating a good understanding of the research context (based on older studies).** The review should not be a simple recitation of facts/experiments, but should critically analyse/evaluate the evidence.

- **Annotated reference list** (4%): You will be asked to generate an abstract list of 5 empirical articles (not reviews) that will become the main focus of your review paper. This list must include the authors' name, year of publication, title of the paper, journal, page numbers, followed by a short paragraph summarizing the findings, and why you would like to include the paper in your review. The reference list must be handed in at the start of the tutorial on the Wed **10th October 2012**.
- **Mini review paper** (16%): The paper should be typed double spaced, 12pt Arial font, and should be 6-7 pages in length. In addition to these pages, you must include a cover page (title, candidate name and number), an abstract (100-120 words) and a reference page. Thus, your final paper will be about 8-10 pages in length. Your TA will not read any content beyond 10 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 21, 2012. **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.

c. **Class attendance – 5 %**

Students are expected to attend and participate in weekly tutorials.

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 Learning and Motivation
Class ID # by tutorial groups:
Paul McKeever (5495926); Crystal Dykstra (5495954); Maryam Sharif-Razi (5495982); Saira Meese-Tamuri Group A (5495965); Saira Meese-Tamuri Group B (5495975)
Class Enrolment Password; nroc61

Course Policies:

Missed exams

You are expected to make every effort to take required mid-terms/final exam. Absence from a mid-term/exam will only be granted for genuine, legitimate reasons, including a documented family emergency, or a documented severe illness. This does not include reasons of scheduling conflict. **There will be one make-up test for the midterm and final exam for those who can supply legitimate documents.** ***Exams that are missed without a genuine, legitimate reason will receive a 0% mark.***

Missed presentation

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.

Late Assignments

Late assignments will be accepted with a penalty of **10% per day**, up until the third day after the assignment is due in (Nov 24th 2012). All assignments are due at the start of your tutorial.

Contesting a grade
All requests for a re-grade must be submitted **in writing** within two weeks of the day the grade is received. Only requests that include adequate written justification of an error in the original grading will be considered. *A legitimate request will result in the entire exam or assignment being re-graded. Your overall grade may be raised, lowered, or it may stay the same.* If there has been an error in our arithmetic, please let us know and we will immediately recalculate your grade (no written request necessary). **Arbitrary requests for grade increases will not be entertained (e.g., "I need to get into grad school, so could you please give me a higher grade?").**

Video and Auditory Recording
For reasons of privacy as well as protection of copyright, unauthorized video or audio recording in classrooms is prohibited. This is outlined in the Provost's guidelines on *Appropriate Use of Information and Communication Technology*. Note, however, that these guidelines include the provision that students may obtain consent to record lectures and, "in the case of private use by students with disabilities, the instructor's consent must not be unreasonably withheld."

Accessibility
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 Access*Ability* Services Office as soon as possible. I will work with you and Access*Ability* Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC Access*Ability* Services staff (located in S302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 287-7560 or ability@utsc.utoronto.ca.

Academic Integrity
Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously.
The University of Toronto's Code of Behaviour on Academic Matters (http://www.governingcouncil.utoronto.ca/policies/behaveac.htm) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. Potential offences include, but are not limited to:

On tests and exams:
- Using or possessing unauthorized aids.
- Looking at someone else's answers during an exam or test.
- Misrepresenting your identity.

In academic work:
- Falsifying institutional documents or grades.
- Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources (see http://www.utoronto.ca/academicintegrity/).