#### Psychology 371\*: Research Problems in Behavioral Neuroscience Fall Term 2013

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	Office hours: Thursday 11:30 am to 1 pm (or by appointment)

#### Teaching Assistants/

Lab Instructors:	Chloe Soutar Jeffery Rocca	email: chloe.soutar@gmail.com email: j.rocca@queensu.ca	
Lectures:	Time: Monday, 8:30 Thursday, 10 Room: Walter Light H	11:30 am	
Labs:		esday, 8:30-11:30 am lay, 2:30-5:30 pm	
Text:	and book chapters se	s for the course consist of review arti elected to complement the topics cover to the readings are available on the I	ered
Assessments:	NeuroTopic presenta Labs (3): Participation: Final exam:	tion:	15% 45% 10% 30%

<u>NeuroTopic presentation</u>: One ~20 min seminar presentation summarizing the introduction, methods, results, and conclusions of an experimental paper assigned by the instructor. Included in this presentation is a brief (1 page in enough!, point form acceptable) summary of the paper presented. This summary will be distributed to all students in the course and forms part of the course reading material.

Labs: Three lab assignments (15% each). Your lab instructors will provide detail.

<u>Final exam</u>: The exam will consist of short-answer and essay-type questions. Material from lectures, NeuroTopic presentations, and the required readings will be examined.

<u>Participation</u>: Active contributions to discussions during lectures and NeuroTopic presentations (please note: attendance is not the same as active participation).

## SCHEDULE OF TOPICS

Date	Торіс	Readings
	SECTION I: THE RODENT BRAIN	
Sep. 9 Sep. 12	Introduction I: The course Introduction II: Rats as model to study brain & behavior	Kolb & Tees 1990
Sep. 16 Sep. 19	The rodent cortex I: Structure and function Animal use in research and teaching Dr. Andrew Winterborn	handout
Sep. 23	The rodent cortex II: Models of dysfunction and disease	Vanderwolf 1992
	SECTION II: MEMORY AND PLASTICITY	
Sep. 26	Navigation & spatial memory I: Neurobiology	Lee et al. 1998
Sep. 30 Oct. 3	Navigation & spatial memory II: Morris water maze NeuroTopic #1: Neocortex (presentations)	none
Oct. 7 Oct. 10	THANKSGIVING: NO CLASS presentations continued	
Oct. 14 Oct. 17	Plasticity I: Learning/memory mechanisms Plasticity II: The dynamic memory trace	Morris 2013 McGaugh 2000
Oct. 21 Oct. 24	Neurogenesis I: History, evidence, and functions Neurogenesis II: The "Depression Link"	Leuner 2006 Jacobs 2002
Oct. 28 Oct. 31	NeuroTopic #2: Memory and plasticity (presentations) continued	
	SECTION III: COMPLEX SYSTEMS AND BRAIN STATE	S
Nov. 4 Nov. 7	Sleep I: Neurobiology Sleep II: Functions	Hobson 2005 Frank & Benington 2006
Nov. 11 Nov. 14	Rhythms of the brain I Rhythms of the brain II	Ahmed & Cash 2013 Wagner 2001

- Rhythms of the brain II Nov. 14
- NeuroTopic #3: Sleep and brain rhythms (presentations)... Nov. 18
- ...continued Nov. 21

Nov. 25 The question of "consciousness" Vanderwolf 1998

Open session: Final discussions, questions, out to lunch..... Nov. 28

Exam period: FINAL EXAM

## Academic Integrity

Academic integrity is constituted by the five core fundamental values of honesty, trust, fairness, respect and responsibility (see

http://www.academicintegrity.org/fundamental\_values\_project/index.php). These values are central to the building, nurturing and sustaining of an academic community in which all members of the community will thrive. Adherence to the values expressed through academic integrity forms a foundation for the "freedom of inquiry and exchange of ideas" essential to the intellectual life of the University (see the Senate <u>Report on Principles</u> and Priorities)

Students are responsible for familiarizing themselves with the regulations concerning academic integrity and for ensuring that their assignments conform to the principles of academic integrity. Information on academic integrity is available in the Arts and Science Calendar (see <u>Academic Regulation 1</u>), on the Arts and Science website (see <u>http://www.queensu.ca/artsci/academics/academic-integrity</u>), and from the instructor of this course.

Departures from academic integrity include plagiarism, use of unauthorized materials, facilitation, forgery and falsification, and are antithetical to the development of an academic community at Queen's. Given the seriousness of these matters, actions which contravene the regulation on academic integrity carry sanctions that can range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university.

Web-based academic resources: http://www.asus.queensu.ca/acsfacts

Academic integrity regulations: http://www.queensu.ca/artsci/integrity/instructor/education.html

# **Disability Accommodations Statement**

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