

**Psychology 371\*:  
Research Problems in Behavioral Neuroscience  
Fall Term 2012**

**Instructor:** Peter Gagolewicz  
Phone: 533-6000 x 74968  
E-mail: 9pjpg2@queensu.ca  
Office: Humphrey 319  
Office hours: Tue. 10:00-11:00 am (or by appointment)

**Teaching Assistants/**

**Lab Instructors:** Amy Chee  
Chloé Soutar

**Lectures:** Time: Tuesday, 8:30-10:00 am  
Friday, 10:00-11:30 am  
Room: Biosciences Complex 2111

**Labs:** Time: Lab A: Tuesday, 11:30-2:30 pm  
Lab B: Wednesday, 11:30-2:30 pm  
Room: Craine 420

**Text:** The required readings for the course consist of review articles  
a-3(e)-4(o286.85 608.62 Tm5wTme3ETBT1 0 0 1 162.02 520.03 Tm[ )Tm[ ])T&TBT1 0 T/F2

## SCHEDULE OF TOPICS

| Date   | Topic   | Readings            |
|--|---|---------------------|
| <hr/> <b>SECTION I: THE RODENT BRAIN</b> <hr/>       |   |                     |
| Sept 11  | Course introduction                             |                     |
| Sept 14  | Rats as a model to study brain & behavior       | Kolb & Tees 1990    |
| Sept 18  | Structure and function of the rodent neocortex  |                     |
| Sept 21  | No class  |                     |
| Sept 25  | Animal use in research and teaching             | handouts provided   |
| Sept 28  | No class  |                     |
| Oct 2  | Models of cortical dysfunction and disease      | TBA                 |
| Oct 5  | Research Methods for behavioral neuroscience    |                     |
| <hr/> <b>SECTION II: MEMORY AND PLASTICITY</b> <hr/> |   |                     |
| Oct 9  | Neurobiology of navigation and spatial memory   | Lee et al. 1998     |
| Oct 12   | Tools in memory research: The Morris water maze | Cain & Saucier 1996 |
| Oct 16   |   |                     |
| Oct 19   |   |                     |
| Oct 23   | Synaptic mechanisms of learning and memory      | Bear 2003           |
| Oct 26   | The dynamic memory trace                        |                     |
| Oct 30   | Human Brain Plasticity I: Skill acquisition     | Münste et al. 2002  |
| Nov 2  | Rhythms of the brain                            | Buzsaki             |
| Nov 6  | NeuroTopic #2: Memory (presentations)           |                     |
| Nov 9  |   |                     |
| Nov 13   |   |                     |
| <hr/> <b>SECTION III: COMPLEX PROCESSES</b> <hr/>    |   |                     |
| Nov 16   |   |                     |

## **Academic Integrity**