PSYB65: Human Brain and Behavior
Recommended Text: Physiology of Behavior (10th ed.) Neil A. Carlson
References: Cognitive Neuroscience (2nd ed.) Gazzaniga, Ivry, and Manqun
Principles of Neural Science (4th ed.) Kandel, Schwartz, and Jessell

Instructor: Steven Duffy Ph.D. duffy@mshri.on.ca
Monday 3-5 pm

Course Outline (Tentative)

Lecture 1 (Sept. 14). Structure-function relations: An overview
- Historical perspectives
- Modern techniques of functional brain mapping
- Neurotransmitter pathways
- Techniques of molecular neuroscience

Lecture 2. (Sept 21)
1. Sleep and biological rhythms (3-4 pm)
2. Vision and hearing (4-5 pm)
   - Sensory transduction and encoding
   - Mechanisms of selective visual/auditory attention

Lecture 3. (Sept 28) Vision and Hearing (Continued)

Lecture 4. (Oct 5) Emotion and emotional learning
- Emotional behavior and communication
- Brain mechanisms of emotional expression
- Emotional learning

Lecture 5. (Oct 19) Ingestive behaviors: Regulation of feeding (3-4 pm)
Midterm 1 (4:00-5:30 pm)

Lecture 6. (Nov 2) Human Communication
- Speech production and comprehension
- Reading and writing
- Aphasia and alexia

Lecture 7. (Nov 9) Learning and Memory
- Behavioral models of implicit and explicit memory
- Neural mechanisms of implicit memory (Conditioning and Perceptual Learning)
- Synaptic plasticity and explicit learning

Lecture 8. (Nov 16) Learning and memory (continued)
Working memory (3-4 pm)
Midterm 2 (4:00-5:30 pm)

Lecture 9 (Nov 23): Control of movement and motor learning

Lecture 10 (Nov 30) Neural Basis of Psychiatric Disorders
Schizophrenia and major depression
Stress and disease
OCD and addiction

Marking Scheme: Midterm 1: 30%
Midterm 2: 30%
Final: 40%