

Time: MW 11:30 AM-1:00 PM

Location: AT2015

Instructor: Dr. Gordon Hayman

<ghayman@lakeheadu.ca>

Office

Rm SN 1014

Phone# 343-8480

Office Hours:

by appointment

Text:

Kolb, B. and Whishaw, I.Q. (2015)

Fundamentals of Human Neuropsychology

Edition: 7th, Worth Publishers

The content of this course is based on research in Cognitive Neuropsychology with the aim of understanding cognition from a neuropsychological perspective. The course provides an overview of contemporary empirical explanations of human performance and ordinary human experience. Included is research that involves a merging of interests of clinical neuropsychology and cognitive psychology. The topics include movement control and planning of action, the acquisition and use of spatial knowledge, the role of uncertainty and risk in making decisions, memory and the amnesic syndrome, and relations between memory, emotion, and cognition. Selected research will demonstrate how the study of cognitive disorders can illuminate theories of both normal and impaired cognitive functioning.

Course Materials:

The course readings include material selected from Kolb and Whishaw (2015)-- **Fundamentals of Human Neuropsychology**.

Lectures: The goals of the lectures are: 1) to define some of the major concepts in Human Cognitive Neuropsychology, and 2) to foster critical thinking and appreciation of the role of empirical research in psychology. The lectures will roughly follow, with occasional diversions, and complement the assigned chapters of Kolb and Whishaw (2008) at approximately 1 to 1 1/2 chapter per lecture. It is expected that the student will have read the relevant chapters before coming to class.

Evaluation:

Class Participation	25%
Class Presentation	25%
Research Paper	50%
Total	100%

Attendance & 11 MC quizzes
Organization & Content of Presentation
Approximately 20-25 Pages Double Spaced

The Class Presentation is selected by consultation between the Instructor and each Student and is based on a topic selected from and building on an article taken from the course textbook as well as a related set of articles selected by the student from library research. The class Presentation and Research Paper is to be based primarily on reports of empirical research that investigates the relation between cognitive/psychological function and its supporting neurological structure.

Class Website: <http://psych_memlab2.lakeheadu.ca/Psy5111/>

- Week 1 Sept 6-8
Chapter 01: The Development of Neuropsychology
Chapter 02: Research on the Origins of the Human Brain and Behavior
Chapter 03: Nervous System Organization
Chapter 04: The Structure and Electrical Activity of Neurons
- Week 2 Sept 13-15
Chapter 05: The Communication Between Neurons
Chapter 06: The Influence of Drugs and Hormones on Behavior
Chapter 07: Imaging the Brain's Activity
- Week 3 Sept 20-22
Chapter 08: Organization of the Sensory Systems
Chapter 09: Organization of the Motor Systems
- Week 4 Sept 27-29
Chapter 10: Principles of Neocortical Function
Chapter 11: Cerebral Asymmetry
Chapter 12: Variations in Cerebral Asymmetry
- Week 5 Oct 4-6
Chapter 13: The Occipital Lobes
Chapter 14: The Parietal Lobes
- Oct. 11-13 Study Break
- Week 6 Oct 18-19
Chapter 15: The Temporal Lobes
Chapter 16: The Frontal Lobes
- Week 7 Oct . 25-27
Chapter 17: Cortical Networks and Disconnection Syndromes
Chapter 18: Learning and Memory
- Week 8 Nov. 1-3
Chapter 19: Language
Chapter 20: Emotion and the Social Brain
- Week 9 Nov . 8-10
Chapter 21: Spatial Behavior
Chapter 22: Attention and Consciousness
- Week 10 Nov. 15-17
Chapter 23: Brain Development and Plasticity
Chapter 24: Neurodevelopmental Disorders
Chapter 25: Plasticity, Recovery and Rehabilitation of the Adult Brain
- Week 11 Nov. 22-24
Chapter 26: Neurological Disorders
Chapter 27: Psychiatric Disorders and Related Disorders
Chapter 28: Neuropsychological Assessment
- Week 12 Nov . 29-Dec. 1
TBA: Student Presentations