

**Faculty of Health**  
**Department of Psychology**  
**PSYC 4080A 6.0: NEUROPSYCHOLOGY OF ABNORMAL BEHAVIOUR**  
**Tuesday/8:30-11:30/**  
**Fall-Winter/2018-2019**

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**Instructor**

Instructor: Dr. Erez Freud

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Office Hours: By appointment

Email:

**Course Prerequisite(s): Course prerequisites are strictly enforced**

- HH/PSYC 1010 6.00 (Introduction to Psychology), with a minimum grade of C.
- HH/PSYC 2021 3.00 (Statistical Methods I) or HH/PSYC 2020 6.00 (Statistical Methods I and II)
- HH/PSYC 2030 3.00 (Introduction to Research Methods) or substitutes
- HH/PSYC 2240 3.00 (Biological Basis of Behaviour)
- Students must be in an Honours program in Psychology and have completed at least 84 credits (excluding (EDUC) education courses)

**Course Credit Exclusions**

Please refer to [York Courses Website](#) for a listing of any course credit exclusions.

**Course website:** [Moodle](#)

**Course Description**

The major goal of this course is to examine the relations between the brain and behavior so that we can arrive at a better understanding of how complex cognitive behavior is mediated by the underlying neural substrate. While the emphasis of the course is on the detailed behavior of patients with brain damage, we will also look at behavioral and lesion studies with animals. Finally, we will consider studies with normal subjects using a range of recent neuroimaging techniques (PET, MRI, TMS, ERP, MEG). The primary focus of this class is on higher cortical functions and the course covers topics such as disorders of memory, language, spatial organization and object recognition. The questions to keep in mind throughout the course are: what can we learn about normal behavior and its underlying neural substrate through neuropsychological studies, and how can we design experiments that will enhance our knowledge of brain and behavior organization. Lectures will include videotape demonstrations of patients as well as discussion of testing procedures and methods for working with patients. Occasionally, a guest lecturer (or patient) will be invited to cover some specialized topic.

## Program Learning Outcomes

Upon completion of this course, students should be able to:

1. Demonstrate in-depth knowledge in cognitive neuropsychology.
2. Critically evaluate, synthesize and resolve conflicting results in neuropsychology
3. Articulate trends in cognitive neuropsychology.
4. Locate research articles and show critical thinking about research findings in cognitive neuropsychology.
5. Express knowledge of cognitive neuropsychology in written form.
6. Engage in evidence-based dialogue with course director and peers.
7. Demonstrate an ability to work with others.

## Specific Learning Objectives

By the end of this course, you should have a clear understanding of the material described above and should be able to describe the theories and mechanisms that underlie many behaviors such as perception, memory and language. You will understand the neurophysiological systems and the consequence of damage to such systems. You will also acquire methodological and conceptual skills for designing studies that shed light on brain-behavior correspondences. You will also learn to read and critique psychological articles, to access relevant archived material and databases and to present written text using APA format.

## Required Text

The text for the class is Kolb, B. and Whishaw, I.Q. 2015. Fundamentals of Human Neuropsychology. 7th Edition, Worth Publishers. Because this text covers neuropsychology well but does not place specific emphasis on higher cortical functions, there may be additional papers to be read for each topic. These papers will be placed on the class website. There are also supplementary references, which I have added to the end of the course outline (or may appear on the syllabus but will be marked as optional). These are not part of the course per se but are given so that you may easily pursue a topic if it is of deeper interest to you.

## Course Requirements and Assessment:

Assessment	Date of Evaluation (if known)	Weighting
Term test	TBD	20%
Debate quiz	10/16/2018	5%
Proposal sketch	TBD winter term	5%
Oral presentation	Winter term	20%
Proposal write-up	4/3/2019	40%
Participation	During the class	10%
Total		100%

## Description of Assignments

The term test – 33 multiple choice evaluation of the first term material. The debate quiz – 5 multiple choice evaluation of the topics covered in the debate. The proposal sketch is a brief

description of a research idea along with short bibliography or literature search record. The oral presentation is a scheduled 30 minute talk to the class describing the proposed research project. The purpose of this presentation is to communicate and receive feedback from other students and instructor to assist the write-up. The formal write-up is the major assignment and follows guidelines provided by the instructor. Participation includes general attendance and feedback to peers during presentations as well as demonstrated engagement with the course material.

### **Grading as per Senate Policy**

The grading scheme for the course conforms to the 9-point grading system used in undergraduate programs at York (e.g., A+ = 9, A = 8, B+ = 7, C+ = 5, etc.). Assignments and tests\* will bear either a letter grade designation or a corresponding number grade (e.g. A+ = 90 to 100, A = 80 to 90, B+ = 75 to 79, etc.)

(For a full description of York grading system see the York University Undergraduate Calendar - [Grading Scheme for 2017-18](#))

### **Late Work/Missed Tests or Exams**

Students with a legitimate reason for missing a course test, exam, or term paper deadline, such as illness, compassionate grounds, etc., which is confirmed by supporting documentation, may request accommodation from the Course Instructor. Further extensions or accommodation will require students to submit a formal petition to the Faculty. Students must email the instructor in advance of any missed test, exam, or term paper deadline if at all possible; otherwise, within 24 hours afterward. Appropriate documentation (See A, B below) verifying the circumstances for the missed test, exam, or term paper deadline must be provided to the instructor within one week (7 calendar days). Failure to provide appropriate documentation will result in a grade of 0.3

A. Tests, exams, or term paper deadlines missed for medical reasons must be supported by an Attending Physician's Statement, which can be downloaded at the following link: <http://myacademicrecord.students.yorku.ca/pdf/attending-physicians-statement.pdf> NOTE: The instructor and/or psychology undergraduate office will verify all medical notes. Falsification of any documentation relating to a missed test, exam, or term paper deadline is a serious academic offence (see "Academic Policies" below). B. Tests or exams missed for non-medical reasons must be supported by appropriate documentation (e.g., copy of a death certificate, traffic accident report, etc.) Pre-booked travel is not a legitimate excuse for missing a test, exam, or term paper deadline. In the case of a missed test, exam, or term paper deadline that is j

### **Important New Information Regarding Missed Tests**

For any missed tests or late assignments, students MUST complete the following online form which will be received and reviewed in the Psychology undergraduate office.

[HH PSYC: Missed Tests/Exams Form](#). Failure to complete the form within 48 hours of the original deadline will result in a grade of zero for the test/assignment.

## Add/Drop Deadlines

For a list of all important dates please refer to: [Fall/Winter 2017-18 - Important Dates](#)

	<b>FALL (F)</b>	<b>YEAR (Y)</b>	<b>WINTER (W)</b>
Last date to add a course <b>without permission</b> of instructor (also see Financial Deadlines)	Sept. 18	Sept. 18	Jan. 16
Last date to add a course <b>with permission</b> of instructor (also see Financial Deadlines)	Oct. 2	Oct. 23	Jan. 30
Drop deadline: Last date to drop a course without receiving a grade (also see Financial Deadlines)	Nov. 9	Feb. 8	March 8
Course Withdrawal Period (withdraw from a course and receive a grade of “W” on transcript – see note below)	Nov. 10 - Dec. 4	Feb. 9 - Apr. 3	March 9 - Apr. 3

**\*Note:** *You may withdraw from a course using the registration and enrolment system after the drop deadline until the last day of class for the term associated with the course. When you withdraw from a course, the course remains on your transcript without a grade and is notated as "W". The withdrawal will not affect your grade point average or count towards the credits required for your degree.*

## Information on Plagiarism Detection

The written assignments will be tested using online services (such as <https://smallseotools.com/plagiarism-checker/>) to detect cases of plagiarism.

## Electronic Device Policy

Laptops will be permitted, however the usage of electronic devices for non-course related activity will be prohibited.

I will use socrative app to conduct in-class polls. Please download it to your phones/ laptops (<https://b.socrative.com/login/student/>) - Room name : **RT9LR9T**

## Attendance Policy

Weekly attendance will be recorded and contribute to the participation component of the course grade.

## Academic Integrity for Students

York University takes academic integrity very seriously; please familiarize yourself with [Information about the Senate Policy on Academic Honesty](#).

It is recommended that you review Academic Integrity by completing the [Academic Integrity Tutorial](#) and [Academic Honesty Quiz](#).

## Test Banks

The offering for sale of, buying of, and attempting to sell or buy test banks (banks of test questions and/or answers), or any course specific test questions/answers is not permitted in the Faculty of Health. Any student found to be doing this may be considered to have breached the

Senate Policy on Academic Honesty. In particular, buying and attempting to sell banks of test questions and/or answers may be considered as “Cheating in an attempt to gain an improper advantage in an academic evaluation” (article 2.1.1 from the Senate Policy) and/or “encouraging, enabling or causing others” (article 2.1.10 from the Senate Policy) to cheat.

### **Electronic Devices During a Test/Examination**

Electronic mobile devices of any kind are not allowed during a test or examination. Students are required to turn off and secure any electronic mobile device in their bag which is to be placed under the chair while a test/exam is in progress. Any student observed with an electronic device during a test/exam may be reported to the Undergraduate Office for a potential breach of Academic Honesty.

### **Academic Accommodation for Students with Disabilities**

While all individuals are expected to satisfy the requirements of their program of study and to aspire to do so at a level of excellence, the university recognizes that persons with disabilities may require reasonable accommodation to enable them to do so. The [York University Accessibility Hub](#) is your online stop for accessibility on campus. The [Accessibility Hub](#) provides tools, assistance and resources. Policy Statement.

**Policy:** York University shall make reasonable and appropriate accommodations and adaptations in order to promote the ability of students with disabilities to fulfill the academic requirements of their programs.

The nature and extent of accommodations shall be consistent with and supportive of the integrity of the curriculum and of the academic standards of programs or courses. Provided that students have given sufficient notice about their accommodation needs, instructors shall take reasonable steps to accommodate these needs in a manner consistent with the guidelines established hereunder.

For Further Information please refer to: [York university academic accommodation for students with disabilities policy](#).

### **Course Materials Copyright Information**

These course materials are designed for use as part of the PSYC 4080A course at York University and are the property of the instructor unless otherwise stated. Third party copyrighted materials (such as book chapters, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law.

Copying this material for distribution (e.g. uploading material to a commercial third-party website) may lead to a violation of Copyright law. [Intellectual Property Rights Statement](#).

## Course Schedule

### Fall Term

Topic	Reading
<b>Introduction</b>	
Introduction to cognitive neuropsychology	You will be expected to be familiar with the material covered in Chapters 2-6 of KW7.
What is neuropsychology – concepts and discipline?	KW7 Chapter 1 (read 2-6 on own).
Models of brain-behavior relations	KW7 Chapter 10: Principles of neocortical function
Methods for understanding the relationship between brain and behavior	KW Chapter 7
Tour to the MRI scanner	
<b>The neuropsychology of vision</b>	
The visual system: Introduction.	KW7 Chapter 8 till 211 and KW7 Chapter 13 (till page 360).
Higher-level visual function Mental Imagery	KW Chapter 13 (page 360 -370), Chapter 15 (page 417 onwards).  Pearson et al., 2015 (Trends in Cognitive Sciences)
Modularity and visual cortex ( Debate class)	Kanwisher, N. Proceedings National Academy of Sciences, 2010 Behrmann M.& Plaut D. Trends in Cognitive Sciences, 2013
Two visual pathways	Goodale et al., 1991 (Nature)  Goodale & Milner, 1992 (Trends in Neuroscience)  Freud, Plaut & Behrmann, 2016 (Trends in Cognitive Sciences, 2016)
<b>The neuropsychology of attention</b>	

Spatial representation and the parietal lobes.	KW Chapter 14. KW Chapter 22.
Disorders of spatial function including hemispatial neglect.	KW Chapter 21.
<b>The neuropsychology of memory</b>	
Memory and Amnesia and memory disorders.	KW Chapter 15, 18
<b>The neuropsychology of spoken and written language</b>	
Language deficits and aphasia.	KW Chapter 19
Neuropsychological approaches to written language (reading)	KW Chapter 19

### **Winter Term**

Introduction to second term	Proposal sketch due.
How to write the “Background section” + Individual consultation	Return of proposals
How to write the “Method section” + Individual consultation	
Student presentations	