

**Faculty of Health
Department of Psychology
PSYC 3250 3.0 M: Neural Basis of Behaviour
Thursdays 11:30-2:30: Vari Hall (VH) B
Winter, 2024**

This class will be held synchronously, but audio recordings of the in-class lecture will be posted to eClass. Audio recordings are not intended to replace class attendance and are only provided as a secondary resource for students who are unable to attend class for medical reasons. As this is a fully synchronous course, recordings are NOT considered part of the class delivery. Audio quality and/or comprehensiveness is not monitored or guaranteed.

Instructor and T.A. Information

Instructor: Dr. Gary R. Turner

Office: Sherman Health Science Research Centre, Rm. 2040

Office Hours: By appointment

Email: grturner@yorku.ca

T.A.	Patrick Hewan	Sarah Houshangi-Tabrizi
Email	pathewan@yorku.ca	sarahtab@yorku.ca
Office	N/A	N/A
Office Hours	By appointment	By appointment

Course Prerequisite(s): Course prerequisites are strictly enforced

- HH/PSYC 1010 6.00 (Introduction to Psychology)
- HH/PSYC 2240 3.00 (Biological Basis of Behaviour)
- Completed at least 54 earned credits

Course Credit Exclusions

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

Course website: [eClass](#) All course materials will be available on the course eClass site. The site will be your central access point for course.

Course Description

This course will review the neural bases of behavior from a cognitive neuroscience perspective, with an emphasis on human cognitive function and dysfunction. Initial lectures will consist of a general introduction to functional neuroanatomy, cortical organization, and the various methods used by cognitive neuroscientists. These will be followed by lectures focusing on specific areas of cognitive functioning and related disorders (e.g., attention & neglect; memory & amnesia; language & aphasia, etc.). Case reports will be used to illustrate key points. Students will explore findings from cognitive, neuropsychology, and neuroscience studies to understand the relationships between brain, behaviour, and cognitive function.

Program Learning Outcomes

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

1. Demonstrate in-depth knowledge of the neural basis of behaviour.
2. Articulate trends in neuropsychology.
3. Express knowledge of the neural basis of behaviour in written form.
4. Describe and explain limits to generalizability of research findings in the neural basis of behaviour.
5. Demonstrate ability to relate information from neuropsychology to own and others' life experiences.

Specific Learning Objectives

At the end of this course, students should have a thorough understanding of how cognitive, neuropsychology, and neuroscience research approaches and techniques are combined to investigate mind/brain relationships from a cognitive neuroscience perspective. Students should also be able to demonstrate in-depth knowledge of the neurocognitive processes, structures, and functional networks associated with a broad range of human perceptual and higher-level cognitive abilities, as well as disorders of perception and cognition.

Required Text

- Gazzaniga, M. G., Ivry, R. B., & Mangun, G. R. (2018). *Cognitive neuroscience: the biology of the mind*. New York: W. W. Norton & Company, Inc. (5th edition). Text available through the book store as an e-text and hard copy.

Note: Students are responsible for the required textbook readings and these materials will be assessed in the midterm and final take home exams. However, students should consider the lectures and lecture recordings as the primary materials conveying the course content.

Course Requirements and Assessment:

Assessment	Date of Evaluation	Weighting
Midterm Test	February 15	30%
Term Paper	April 04 (Due on eClass: 11:59 pm)	25%
Final Exam	During Exam Period (April 10-26)	45%
Total		100%

Description of Assignments

Details regarding the midterm test, term paper assignment, and final exam will be discussed during lectures.

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 89, B+ = 75 to 79, etc.)

For a full description of York grading system see the York University Undergraduate Calendar – [Grading Scheme for 2023-24](#)

Missed Tests/Midterm Exams/Late Assignment

For any missed quiz or late assignment, students MUST complete the following online form which will be received and reviewed in the Psychology undergraduate office. At this time, due to COVID-19 an Attending Physician’s Statement (APS) is not required, however, a reason for missing an evaluated component in the course must be provided.

- NO MAKE UPS:
 - If the mid-term is missed for MEDICAL reasons, the grading weight will be distributed to final term paper (15%) and final exam (20%) which will be cumulative.
- NO EXTENSIONS:
 - Any work handed in after the scheduled due dates will be subject to a 10% penalty per day** (10% for 1 min to 24 hrs.; 20% for 24 hrs + 1 min to 48 hrs. etc.)
 - This is non-negotiable (unfortunately!). PLEASE plan accordingly.
 - NOTE:** For students with accommodations, deadlines and penalty periods will be determined on a case-by-case basis in accordance with the accommodations granted.

[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 missed quiz or late assignment.

Add/Drop Deadlines

For a list of all important dates please refer to: [Undergraduate Fall/Winter 2023-2024 Important Dates](#)

	Fall (Term F)	Year (Term Y)	Winter (Term W)
Last date to add a course without permission of instructor (also see Financial Deadlines)	Sept. 21	Sept. 21	Jan. 23
Last date to add a course with permission of instructor (also see Financial Deadlines)	Oct. 5	Oct. 26	Feb. 7
Drop deadline: Last date to drop a course without receiving a grade (also see Financial Deadlines)	Nov. 12	Feb. 11	18-Mar
Course Withdrawal Period (withdraw from a course and receive a grade of “W” on transcript – see note below)	Nov. 13 - Dec. 7	Feb. 12 - April 10	March 19 - April 10

Add and Drop Deadline Information

There are deadlines for adding and dropping courses, both academic and financial. Since, for the most part, the dates are **different**, be sure to read the information carefully so that you understand the differences between the sessional dates below and the [Refund Tables](#).

You are strongly advised to pay close attention to the "Last date to enrol without permission of course instructor" deadlines. These deadlines represent the last date students have unrestricted access to the registration and enrolment system. After that date, you must contact the professor/department offering the course to arrange permission.

You can drop courses using the registration and enrolment system up until the last date to drop a course without receiving a grade (drop deadline).

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

Assignments will be submitted on eClass and checked for plagiarism using Turnitin software.

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.

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 university encourages students with disabilities to register with Student Accessibility Services (SAS) to discuss their accommodation needs as early as possible in the term to establish the recommended academic accommodations that will be communicated to Course Directors as necessary. Please let me know as early as possible in the term if you anticipate requiring academic accommodation so that we can discuss how to consider your accommodation needs within the context of this course.

<https://accessibility.students.yorku.ca/>

Excerpt from Senate Policy on Academic Accommodation for Students with Disabilities

1. Pursuant to its commitment to sustaining an inclusive, equitable community in which all members are treated with respect and dignity, and consistent with applicable accessibility legislation, York University shall make reasonable and appropriate accommodations in order to promote the ability of students with disabilities to fulfill the academic requirements of their programs. This policy aims to eliminate systemic barriers to participation in academic activities by students with disabilities.

All students are expected to satisfy the essential learning outcomes of courses.

Accommodations shall be consistent with, support and preserve the academic integrity of the curriculum and the academic standards of courses and programs. 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 HH/PSYC 3250 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

[PLEASE SEE NEXT PAGE]

COURSE SCHEDULE		
DATE	TOPIC	READINGS
January 11, 2024	Course Introduction	<ul style="list-style-type: none"> Chapter 2: pp. 40-70 [OPTIONAL]
January 18, 2024	Studying the neural basis of behaviour (History, Approaches & Methods)	<ul style="list-style-type: none"> Chapter 1: pp. 2-20 Chapter 3: pp. 72-86
January 25, 2024	Neuroanatomy / Neuroimaging Primer	<ul style="list-style-type: none"> Chapter 3: pp. 86-122
February 01, 2024	Neuroimaging (continued) Sensation / Perception	<ul style="list-style-type: none"> Chapter 5: pp. 168-206
February 08, 2024	Face / Object Perception (Agnosias)	<ul style="list-style-type: none"> Chapter 6: pp. 222-272
February 15, 2024	**MIDTERM EXAM (IN CLASS)**	All prior readings
February 22, 2024	**READING WEEK - NO CLASS**	
February 29, 2024	Attention & Awareness (Neglect Syndromes)	Chapter 7: pp. 274-322
March 07, 2024	Memory (Amnesic Syndromes)	Chapter 9: pp. 378-424
March 14, 2024	Language (Aphasic Syndromes)	<ul style="list-style-type: none"> Chapter 11: pp. 474-512
March 21, 2024	Cognitive Control I (Frontal Lobe Syndromes)	<ul style="list-style-type: none"> Chapter 12: pp. 514-564
March 28, 2024	Cognitive Control II (Frontal Lobe Syndromes)	<ul style="list-style-type: none"> Chapter 12: pp. 514-564
April 04, 2024	Course wrap up, final exam review	TERM PAPER DUE
April 10-26, 2024	**FINAL EXAM PERIOD**	All readings since Midterm Test