UNIVERSITY OF
TORONTO

Cognitive Neuroscience (PSY493H1F)

Fall Session, 2023
In-person course
Class time/location: Wednesdays, 2 – 5 pm in SS2108

Course Summary

This is a capstone lecture course surveying research on how the mind arises from the brain. The first objective of the course is to understand how processes in human brains (ranging from the firing of a single neuron to the dynamics of billions) support cognitive abilities (such as recognizing a face, remembering a birthday from childhood, understanding the words in a spoken lecture, or planning a route home from class). The second objective of the course is to understand the methods of contemporary cognitive neuroscience research, to enable students to read primary literature and to understand ongoing debates.
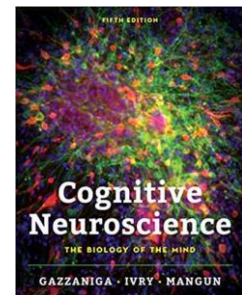
Course Team

Instructor: Dr. Paul Whissell (paul.whissell@utoronto.ca)
Virtual Office Hours: Every Tuesday, by appointment, on Zoom

Teaching Assistant: Kendall Mar

Recommended Textbook (optional)

Cognitive Neuroscience: The Biology of the Mind. 5th edition. 2018. Gazzaniga, M., Ivry, R. and Mangun, M. Published by W. W. Norton & Company. ISBN: 9780393667851.

Assessments

This course includes four main assessments: a term test, a written assignment, a quiz and a final exam.

The term test and final exam will be administered in-person and on-campus. Both assessments will be closed book. The term test will be administered during class hours in our usual room. The final exam will be administered at a date decided later by the Faculty of Arts and Sciences.

The quiz and written assignment will both be completed online. These assessments have a due date but are not time-limited (you can take as much time as you like to complete them, as long as you submit them by the due date).

Marking Scheme and Important Dates

- **30% Term Test on October 11,** based on Lectures 1 – 4
  - In-person, on-campus
  - 2 hours allotted
  - 20 multiple choice questions (each worth 1 mark) and 5 short written answer questions (each worth 8 marks), total of 60 marks
  - Closed book
- **10% Quiz due on December 6**
  - Online quiz on assigned research articles, details will be given later in term
- **15% Research Assignment due on December 6**
  - Online assignment, details will be given later in term
- **45% Final Exam between December 9 – 20,** based on Lectures 5 – 10
  - In-person, on-campus
  - Format TBA
  - Closed book

Study Guide

To assist you in preparing for your assessments, a study guide will be provided on Quercus. This guide will identify key highlights of lecture content that are likely to be tested. If you can provide detailed answers to the questions in this guide, it is likely you will score at least a B grade (70+) on all assessments.

Course Schedule

Lecture slides (*.pdf format) will be posted on or before the dates specified. Lectures will be given live in class.

Posting Date	Topic
Sept 13	Lecture 01: Introduction to Cognitive Neuroscience; Review of Neuroanatomy
Sept 20	Lecture 02: Methods in Cognitive Neuroscience
Sept 27	Lecture 03: Sensation/Perception; Object Recognition
Oct 4	Lecture 04: Attention
Oct 11	**TERM TEST (LECTURES 1 – 4)**
Oct 18	Lecture 05: Memory
Oct 25	Lecture 06: Language
Nov 1	Test Review Session*, Discussion of Research Assignment + Quiz
Nov 8	**Study Week, No planned activities**
Nov 15	Lecture 07: Emotion
Nov 22	Lecture 08: Cognitive Control
Nov 29	Lecture 09: Social Cognition
Dec 6	Lecture 10: Consciousness + Review Session; **Assignment + Quiz Due**
Dec 9 – 20	**FINAL EXAM (LECTURES 5 - 10), Date TBA**

Course Policies

Specific Medical Circumstances

If you become ill and it affects your ability to do your academic work, consult me right away. Normally, I will ask you for documentation in support of your specific medical circumstances. This documentation can be an Absence Declaration (via ACORN) or the University's Verification of Student Illness or Injury (VOI) form. The VOI indicates the impact and severity of the illness, while protecting your privacy about the details of the nature of the illness. You can submit a different form (like a letter from a doctor), as long as it is an original document, and it contains the same information as the VOI. For more information on the VOI, please see http://www.illnessverification.utoronto.ca. For information on Absence Declaration Tool for A&S students, please see https://www.artsci.utoronto.ca/absence. If you get a concussion, break your hand, or suffer some other acute injury, you should register with Accessibility Services as soon as possible.

Missed Assessments

If you miss the term test, you must provide documentation explaining your absence (see above) and complete a make-up test in a timely fashion. If you do not complete a make-up test, you will receive a grade of 0 for the it. To ensure a make-up test can be completed as soon as possible, please contact the instructor immediately after missing a test. Most make-up tests should be scheduled within one week of the original test and completed within two weeks of the original test.

If you miss the formal final exam, you must write a deferred final exam at a later date. The deferred final exam will be similar in format to the missed final exam. To be eligible for a deferred exam, you will need to file a petition with your College RO immediately following missing the exam.

Late Policies

Late assignments will not be accepted in this course without adequate justification. If exceptional circumstances prevent you from submitting an assessment, please notify me immediately and provide me with documentation of your situation. Without documentation, I will not be able to assist.

Regrade Requests

Inquiries must be made within two weeks of the returned grade. A regrade of your assessment may increase your grade, have no effect or decrease your grade (e.g. if an

adding error is discovered during the re-evaluation). Please let us know if we can help you.

Religious Accommodation

As a student at the University of Toronto, you are part of a diverse community that welcomes and includes students and faculty from a wide range of backgrounds, cultural traditions, and spiritual beliefs. For my part, I will make every reasonable effort to avoid scheduling tests, examinations, or other compulsory activities on religious holy days not captured by statutory holidays. Further to University Policy, if you anticipate being absent from class or missing a major course activity (like a test, or in-class assignment) due to a religious observance, please let me know as early in the course as possible, and with sufficient notice (at least two to three weeks), so that we can work together to make alternate arrangements.

Intellectual Property

Class material is designed specifically for University of Toronto students enrolled in the course. Other parties should not have free access to this material. *Under no circumstances should any content be uploaded or shared online (e.g. to an information-sharing website such as OneClass, Course Hero or Youtube) without first obtaining consent from the content creator.* If you would like to share material with someone who is not a student, please speak to the content creator.

Accessibility Needs

Students with diverse learning styles and needs are welcome in this course. If you have an acute or ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) (www.accessibility.utoronto.ca) at the beginning of the academic year. Without registration, you will not be able to verify your situation with your instructors, and instructors will not be advised about your accommodation needs. AS will assess your medical situation, develop an accommodation plan with you, and support you in requesting accommodation for your course work. Remember that the process of accommodation is private: AS will not share details of your condition with any instructor, and your instructors will not reveal that you are registered with AS.

Writing

As a student here at the University of Toronto, you are expected to write well. The university provides its students with a number of resources to help them achieve this. For

more information on campus writing centres and writing courses, please visit http://www.writing.utoronto.ca/.

Academic Integrity and Plagiarism

You must complete all work in this course independently. You may not collaborate with anyone else (*though you are encouraged to ask me for help*). In keeping with the University of Toronto's dedication to academic integrity, you will be asked to submit your work to Ouriginal where it will be reviewed for textual similarity to other submissions.

All students, faculty and staff are expected to follow the University's guidelines and policies on academic integrity. For students, this means following the standards of academic honesty when writing assignments, collaborating with fellow students, and writing tests and exams. Ensure that the work you submit for grading represents your own honest efforts. Plagiarism—representing someone else's work as your own or submitting work that you have previously submitted for marks in another class or program—is a serious offence that can result in sanctions. Speak to me or your TA for advice on anything that you find unclear. To learn more about how to cite and use source material appropriately and for other writing support, see the U of T writing support website at www.writing.utoronto.ca/ . Consult the Code of Behaviour on Academic Matters for a complete outline of the University's policy and expectations. For more information, please see http://www.artsci.utoronto.ca/osai and http://academicintegrity.utoronto.ca/.

Plagiarism detection tool (Ouriginal)

Normally, students will be required to submit their course essays to the University's plagiarism detection tool for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (https://uoft.me/pdt-faq).

Other Resources

- Student Life Programs and Services (http://www.studentlife.utoronto.ca/)
- Academic Success Services (http://www.studentlife.utoronto.ca/asc)
- Counselling and Psychological Services (http://www.studentlife.utoronto.ca/hwc)