



PSY493H1S L5101 Cognitive Neuroscience

Winter 2023

Contact Information

Instructor: Dr. Taryn E. Grieder, M.Ed., Ph.D.

Contact: taryn.grieder@utoronto.ca

Office hours: Before and after class, and by appointment

Teaching Assistant: Ryan Barker, ryan.barker@mail.utoronto.ca

Course information: Lectures Tuesdays at 5 pm. Course assessments and participation will be completed on Quercus. Students will have the opportunity for both in-person and synchronous online office hours to ask questions and clarifications about course content. Students need the ability to read and edit PDFs or Powerpoint slides and use Quercus for submission of assessments.

Course Description, Goals, and Prerequisites

Course Description: This course is an examination of the relationship between brain function and psychological processes, drawing heavily from contemporary research involving humans and animals and describing the neural bases for such psychological processes as learning, memory, language, and emotion. This course will take a biopsychological approach to examine the structural and functional aspects of the brain that allow us to perceive through our senses, move with our bodies, and perform other cognitive abilities shared by most people and many non-human animals. Special attention is given to behavioural abnormalities resulting from brain pathology.

Learning Outcomes: The goals of the course are to 1) Identify key neural substrates and relate them to their major psychological functions; 2) Describe basic neuronal functioning, neurotransmission, and neuropharmacology; 3) Understand the neurocognitive basis of sensation, perception, attention and movement; 4) Critically assess neuroscience research articles; and 5) Explain the role of various neural pathways in higher cognitive processes.

Note about prerequisites: It is your responsibility to ensure that you have met **all** prerequisites listed in the Psychology section of the A&S Calendar for this course. If you lack any prerequisites you will be removed. No waivers will be granted.

Reading Material

The recommended (but not required) textbook for this course is:
Purves D., et al. (2013). *Principles of Cognitive Neuroscience* (2nd Ed.). Sunderland, MA: Sinauer Associates, Inc.

Course Evaluation/Marking Scheme

Participation - 5% - ongoing

Commentary Assignment - 20% - March 28th

Term Test I - 20% - February 7th

Term Test II - 20% - March 14th

Applied Learning Activity - 15% - April 4th

Final Assessment - 20% - TBA (April 11-28th)

Lectures: PowerPoint and PDF slides will be posted before lecture on the date stated in the course schedule (found below). These slides should be downloaded and/or printed to facilitate with note taking. Please note that if you do not understand a particular concept as it is presented, please ask questions! It is your responsibility to let me know if you do not understand a particular concept or idea.

Any posted slides and lecture recordings are only for the exclusive use of enrolled students, for their personal learning. Lecture recordings and slides are not to be shared in any way beyond enrolled students.

Participation: There will be short reflection assignments given in each lecture to be completed online using Quercus quizzes. Students will reflect on a topic covered in class, applying the course material to their response. Students will have at least 24 hours to respond to these discussion questions on Quercus (see the course schedule, below).

Online Assessments: The term tests will be timed, non-cumulative tests consisting of multiple-choice questions, explanation of diagrams, and written response questions (with a strict word limit). Students will access the test through Quercus at any time on the test day and will have at least 3 hours to complete the test, individually, using their own lecture slides and notes only. Students will not need to provide citations and should not be using any outside sources. It is expected that students will use their notes from lecture to assist in their writing the tests, which will be more about one's ability to *apply* their knowledge than rote memorization.

Commentary Assignment: The research commentary assignment is a commentary on a recent primary research article of the student's choice that examines an issue related to the course (ie. is research that produced new knowledge/understanding of cognitive neuroscience). Please see the commentary assignment outline for further details, which is available for download on Quercus.

Applied Learning Activity: Students will apply concepts from the course material to a case study and/or research article they are presented with. Further information will be posted and discussed on Quercus.

Course Webpage/Quercus

This course uses the University's learning management system, Quercus, to post information about the course. This includes posting readings and other materials required to complete class activities and course assignments, as well as sharing important announcements and updates. The site is dynamic and new information and resources will be posted regularly as we move through the term, so please make it a habit to log in to the site on a regular basis.

The website associated with this course is accessible via <http://q.utoronto.ca>

SPECIAL NOTE ABOUT GRADES POSTED ONLINE: Please also note that any grades posted are for your information only, so you can view and track your progress through the course. No grades are considered official, including any posted in Quercus at any point in the term, until they have been formally approved and posted on ACORN at the end of the course. Please contact the instructor (and TA) as soon as possible if you think there is an error in any grade posted on Quercus.

Course Policies

Missed Assessments/Medical Documentation/ACORN Self-Declaration Tool

If you are unable to complete a test or assignment, you should submit an absence self-declaration within one week to the instructor. The absence self-declaration tool is available on ACORN and applies for both medical and non-medical circumstances.

Religious Accommodations

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 cultural and religious traditions. 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 missing a major course activity (such as an assessment) due to a religious observance, please let me know as soon as possible so that we can work together to make alternate arrangements.

Penalties for Lateness

A penalty of 10% per calendar day, up to and including the last day of classes, will be applied for late assignments. After the last day of classes, the penalty of 10% per calendar day will be applied by the Undergraduate Counselor on behalf of the Department. No penalty will be assigned if a request for special consideration was successful. Any term work that will be handed in after the final day of the term is subject to a petition for extension of term work. This petition should be filed with the student's College Registrar's Office.

Ouriginal

Normally, students will be required to submit their course assignments for review of textual similarity and detection of possible plagiarism. In doing so, students will allow their assignments to be included as source documents in the Ouriginal reference database, where they will be used solely for the purpose of detecting plagiarism.

We will be using Ouriginal in this course for submission of your assignments and applied learning activities. You have the option to opt out of using this service. If you wish to do so, please email me.

Contact

All communication should be sent via University of Toronto email addresses only. Please include "PSY493" in the subject line, and do not send messages through Quercus/Canvas (as they often get filtered as spam/junk). The University requires that all students have a U of T email address and check it regularly; it is the only address to which official university communications will be sent. If you are unable to attend office hours or would like to discuss matters concerning the course directly, please email us to schedule an appointment.

Requesting a Regrade

If you think an assessment has been incorrectly marked, you can request a regrade. In this

case, you must first review your assessment with the TA. Following review with the TA, if you wish to have your assessment reviewed by the instructor, please submit a request by email within 2 weeks of the grade return date.

Academic Resources

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 produce well-written assignments. The university provides its students with multiple 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:

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/>

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>)

Course Outline/Schedule

Every effort will be made to manage the course as stated. However, adjustments may be necessary (e.g. inclement weather!). If so, students will be advised and alterations announced on Quercus prior to implementation.

Date	Topic	Related Textbook Chapter
Jan 10	Introduction/Overview	Chapter 1
Jan 17	Methods of Cognitive Neuroscience	Chapter 2
Jan 24	Sensory Systems and Perception: Vision	Chapter 3
Jan 31	Sensory Systems and Perception: Auditory, Mechanical, & Chemical Senses	Chapter 4
Feb 7	Term Test 1	
Feb 14	Motor Systems	Chapter 5
Feb 28	Attention	Chapters 6 & 7
Mar 7	Memory	Chapters 8 & 9
Mar 14	Term Test 2	
Mar 21	Emotion, Language & Social Cognition	Chapters 10-12
Mar 28	Executive Functions Decision-Making Commentary Assignment Due	Chapter 13 Chapter 14
Apr 4	Applied Learning Activity	
April 11-28	Final Exam	
