Psychology
UNIVERSITY OF TORONTO

PSY493 Cognitive Neuroscience

Fall 2021

Contact Information

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

Contact: taryn.grieder@utoronto.ca
Office hours: By appointment – video conference or phone appointments available

Teaching Assistant:
Shireen Parimoo: shireen.parimoo@mail.utoronto.ca

Course information: This is an in-person course. When lectures are held virtually (for example, during the first two weeks of classes), video lectures will be posted to youtube and discussion/participation will be completed on Quercus. Students will have the opportunity for 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 most 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% - November 17th
Term Test I - 20% - October 6th
Term Test II - 20% - November 3rd
Applied Learning Activity - 15% - December 8th
Final Assessment - 20% - TBA (December 10th – 21st)

Lectures: PowerPoint and PDF slides will be posted before class 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 lecture recordings are only for the exclusive use of enrolled students, for their personal learning. Lecture recordings are not to be shared in any way beyond enrolled students.

Participation: There will be short reflection quizzes given for each class to be completed online. 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).

Tests: 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 original research article (aka experimental study) of the student's choice that examines an issue related to the course (ie. is an experiment that produced new research in 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 TAs) 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 as soon as possible to the instructor. The absence self-declaration tool is available on ACORN and applies for both medical and non-medical circumstances.
I will also accept other supporting documentation, including the previously utilized Verification of Illness (VOI) form.

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 request for special consideration, described above, was successful. Any term work that will be handed in **after** the final assessment period 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 essays for 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 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 commentary assignment. You have the option to opt out of using this service. If you wish to do so, please email me.

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 in these unprecedented times. If so, students will be advised and alterations announced on Quercus prior to implementation.

Date	Topic	Related Textbook Chapter
Sept 15	Introduction/Overview Methods of Cognitive Neuroscience	Chapter 1 Chapter 2
Sept 22	Sensory Systems and Perception: Vision	Chapter 3
Sept 29	Sensory Systems and Perception: Auditory, Mechanical, & Chemical Senses	Chapter 4
Oct 6	**Term Test 1**	
Oct 13	Motor Systems	Chapter 5
Oct 20	Attention	Chapters 6 & 7

Oct 27	Memory	Chapters 8 & 9
Nov 3	**Term Test 2**	
Nov 10	Study Break – No Classes	
Nov 17	Emotion, Language & Social Cognition **Commentary Assignment Due**	Chapters 10-12
Nov 24	Executive Functions	Chapter 13
Dec 1	Decision-Making	Chapter 14
Dec 8	**Applied Learning Activity**	
Dec 10-21	**Final Exam**	