



PSY493H1F – Cognitive Neuroscience

Thursday 10am-1pm Sidney Smith 1087

Contact Information

Instructor: Alex Barnett alexander.barnett@utoronto.ca	Teaching Assistant(s): Delaram Farzanfar delaram.farzanfar@mail.utoronto.ca
Office Hours: Wednesday 2-3pm 6018A	Office Hours: Thursday 3-4pm https://utoronto.zoom.us/j/9372221117 (Passcode: 498041)

Course Description, Goals, and Prerequisites

This is a survey course in cognitive neuroscience. The course focuses on the neural substrates of mental processes including perception, attention, memory, language, cognitive control, emotion and social cognition. By the end of the course students will have a basic understanding of the neural processes that support human cognition, research methodology, as well as on-going debates within the field.

Prerequisites:

PSY201H1/ECO220Y1/EEB225H1/GGR270H1/POL222H1/SOC202H1/STA220H1/STA238H1/STA248H1/STA288H1/PSY201H5/STA215H5/STA220H5/PSYB07H3/STAB22H3/STAB23H3/S TAB57H3, and PSY260H1/PSYB38H3 or PSY270H1/PSY270H5/PSYB57H3/COG250Y1 or PSY290H1/PSY290H5/PSYB64H3/HMB200H1/PSL300H1. 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.

Reading Material/Textbook(s)

Banich, M. T., & Compton, R. J. (2018). Cognitive Neuroscience (4th ed.): Cambridge University Press. (**suggested, not required**)

Primary research articles and reviews will be assigned for each week.

Course Evaluation/Marking Scheme

Assignment	Weight	Date
Term Test 1	25%	Oct 5
Paper Topic	10%	Oct 19
Paper	35%	Nov 16
Term Test 2	25%	Nov 30
Participation	5%	***

Term Tests

The test material will come primarily from the lectures but will also include material from the assigned readings. Students are responsible for attending lectures and reading the assigned materials, as lectures will not cover all material contained in the readings (and vice versa). These midterm tests are closed book tests.

Paper Outline

Students are responsible for providing an outline for their paper four weeks before the final paper deadline. This is to allow students to plan their paper ahead and make sure their topic is suitable. The TA will provide feedback. Paper outlines will be submitted through Quercus no later than 11:59pm on Oct 19th.

Paper

Students will write a 2000-word paper and follow APA style formatting. Students will write a research proposal in which they will propose a new original study to address a current gap in the literature. Paper topics will be submitted through Quercus no later than 11:59pm on Nov 16th.

Quizzes

Starting Sept 28th, online multiple-choice quizzes through the Quercus course website will be given following some lectures (those in which we do not have another assignment due). Students are responsible for attending each class, reviewing material, and completing the online quizzes.

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, even daily, basis. To access the course website, go to the U of T Quercus log-in page at <https://q.utoronto.ca>. Once you have logged in to Quercus using your UTORid and password, you should see the link or "card" for PSY493. You may need to scroll through other cards to find this. Click on the PSY493H1 F LEC0101 link to open our course area, view the latest announcements and access your course resources. There are Quercus help guides for students that you can access by clicking on the "?" icon in the left side column. **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 me as soon as possible if you think there is an error in any grade posted on Quercus.

You are responsible for announcements posted to Quercus, so check this page regularly for updates.

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 Tests

Missed or unexcused tests will be treated as zeros unless valid documentation is provided. Should term test 1 or term test 2 be missed with valid documentation as described in the **Specific Medical Circumstances**, a make-up test will be arranged. You have a max of one week from the date of missing the test to contact the course instructor and to submit documentation.

Late Assignments

Assignments will be penalized 10% for each day after the deadline, to a maximum of 4 days (40%) after which papers will no longer be accepted. Extensions will only be granted in exceptional circumstances (i.e. illness or family emergency) with valid documentation as described above. If you require an extension, email me as soon as possible when an exceptional circumstance has arisen. There will be a one-time, 15-minute leeway period on final submissions. To use this one-time leeway, email the course instructor once your assignment has been submitted.

Other

Students are welcome to review their assignments with the course TA. Please note that if you are not satisfied with the way your assignment/midterm exams were graded you should first contact the course TA and discuss with her your concern. You can request a re-grade with specified justification but note that this will require an entire re-grade of the assignment/test and not only the parts where you think you were marked unfairly. As such, your grade could increase, decrease, or remain the same. If you want to request a regrade then you must contact the TA or myself no more than two weeks upon receiving that graded assessment.

Classroom Etiquette

Please treat each other in a respectful manner at all times. All students are expected to uphold the code of student conduct (<https://governingcouncil.utoronto.ca/secretariat/policies/code-student-conduct-december-13-2019>). While you are in class you are expected to be mentally present: PLEASE turn off all non-instructional electronic devices and online distractions. Everyone is entitled to a positive learning environment and your non-learning activities are likely distracting both you and those around you. You are expected to attend classes and take responsibility for learning the material.

Academic Resources

Access & Diversity:

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) at the beginning of the academic year by visiting <http://www.studentlife.utoronto.ca/as/new-registration>. 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 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 needs or condition with

any instructor, and your instructors will not reveal that you are registered with AS.

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 being absent from class or missing a major course activity (such as 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.

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:

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 <http://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 <https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity> and <http://academicintegrity.utoronto.ca>

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources (see <https://www.academicintegrity.utoronto.ca/smart-strategies/>).

Other Resources

Student Life Programs and Services (<http://www.studentlife.utoronto.ca/>)

Academic Success Services (<http://www.asc.utoronto.ca/>)

Counselling and Psychological Services (<http://www.caps.utoronto.ca/main.htm>)

Course Outline/Schedule

Lecture	Date	Topic	Readings	Due
1	Sept 7	Neurophysiology	Ch 1	
2	Sept 14	Neuroanatomy + Methods	Ch 3 + Smith et al 2009 + Logethetis 2008	
3	Sept 21	Vision + Visual Processing	Ch 5 + Haxby 2001	
4	Sept 28	Motor Control + Auditory	Ch 4 + Gordon et al 2023	Quiz 1
5	Oct 5	Term Test 1		
6	Oct 12	Language	Ch 8 + Andrews et al 2022 JNS	Quiz 2
7	Oct 19	Attention	Ch 10 + Peelen & Kastner, 2011	Paper outline due
8	Oct 26	Executive Function/Cognitive Control	Ch 11 Bonnelle et al (2016)	Quiz 3
9	Nov 2	Memory	Audrain et al 2022	Quiz 4
	Nov 9	Reading Week		
10	Nov 16	Brain development and Plasticity	Ch 15	Term Paper due
11	Nov 23	Emotion and the social brain	Ch 12 & Ch 13 + DiNicola & Braga	Quiz 5
12	Nov 30	Term test 2		

Communication

Email will be the primary way of communication between TAs and the instructor. Please send emails from your official utoronto email address. When you e-mail, please include the **course number in the subject heading**, save conceptual questions to office hours. Additionally, I will only respond to e-mails regarding content questions that has been forwarded to me from the class TA, so please send all course-related e-mail to the above address. If you have extended questions it's best to come to office hours or request an appointment.

Please make sure the answer to your questions is not found in this syllabus or in the online resources before emailing the course TA or instructor.

Online Lectures

Notice of video recording and sharing (download and re-use prohibited)

This course, including your participation, will be recorded on video and will be available to students in the course for viewing remotely and after each session.

Course videos and materials belong to your instructor, the University, and/or other sources

depending on the specific facts of each situation and are protected by copyright. In this course, you are permitted to download session videos and materials for your own academic use, but you should not copy, share, or use them for any other purpose without the explicit permission of the instructor.

For questions about the recording and use of videos in which you appear, please contact your instructor.