



PSYD50: Current Topics in Memory and Cognition

University of Toronto, Scarborough, Winter 2024

Instructor: Prof. Adrian Nestor
Email: adrian.nestor@utoronto.ca

Office Hours: Please see “Announcements” on Quercus for this information.

Prior to contacting the instructor please note that: **I will not respond to Quercus messages; the email subject should include the course name and nature of the inquiry** (i.e., “PSYD50: prosopagnosia”) and **emails should be sent from your UofT email account** – for more details please read the e-mail policy (p. 3).

I. Your instructor



Dr. Nestor is an Associate Professor of Cognitive Neuroscience. He received his Ph.D. in Cognitive Science from Brown University and completed his postdoctoral training at Carnegie Mellon University. His research and teaching interests revolve around the neuroscience of visual cognition, computational modeling, neuroimaging methodology and neurotechnology.

II. Course description, pre-requisites and learning goals

Recognizing an object, reading a word or identifying a face are highly complex perceptual processes, which we seem to master with relatively little effort. Hence, the neural mechanisms supporting such abilities have been the target of considerable research efforts within the cognitive psychology and neuroscience community. This course will introduce students to seminal theories, results and research methods in the study of these abilities and of their neural basis.

Much of the research discussed in this course relies on two brain-imaging modalities, functional magnetic resonance imaging (fMRI) and electroencephalography (EEG), both because of their wide applicability and because of their current prominence in cognitive neuroscience. However, additional methods pertaining to the study of visual impairments, computational modeling, neurophysiology etc. will provide critical evidence to the theories discussed.

The broad goals of the course [along with their main methods of assessment] consist in:

- Extending breadth of knowledge in cognitive psychology/neuroscience, including theoretical perspectives, research findings, and applications [assessed through writing assignments, term test and discussions]
- Fostering familiarity with diverse research paradigms [assessed through writing assignments, term test and discussions].
- Engendering the ability to assess and critique research articles/presentations [assessed through writing assignments, oral presentations, term test and discussions].
- Improve skill in oral and written presentation [through writing assignments, oral presentations and discussions].



- Fostering critical thinking and creativity [assessed through writing assignments, term test, oral presentations and discussions].

Discussions and presentations of research in these areas will be guided by general issues such as:

- a) What is the research hypothesis/goal of a given study?
- b) What is the significance/relevance of a particular hypothesis/theory within a broader research context (i.e., why does it matter?)
- c) What empirical/computational methods are critical to each study?
- d) What are the main strengths and weaknesses of a given study?
- e) How well are the conclusions of a study justified by its findings?
- f) What potential findings would confirm or disprove a given conclusion (i.e., how would you redesign or follow up on a particular study?)

Of note, cognitive neuroscience/psychology is a rapidly evolving scientific discipline. The wealth and the constant influx of novel empirical findings is a challenge for any attempts at a comprehensive theoretical account. In addition, the research process is prone to bias, misconception and, occasionally, to error. Approaching this research with a critical mind, with logical rigor and with justified skepticism is key to understanding the value, the significance and the future promise of this discipline.

Prerequisites: [PSYB55H3 or PSYB57H3] and [(PSYB01H3) or (PSYB04H3) or PSYB70H3] and [PSYB07H3 or STAB22H3 or STAB23H3] and [0.5 credit at the C-level in PSY courses]

Exclusions: PSY470H, PSY471H

III. Course resources

Course readings: research/review articles in the field (no textbook will be required)

Online resources: Quercus

IV. Course grading

Writing assignments (15%)

Assignments consist of 2-to-4 short-answer questions that are assigned multiple times throughout the term as a way for you to demonstrate your knowledge of course content. This component of the grade will be based on the best 3 out of 4 assignments (based on lectures 2-5). [If you only submit 3 assignments, the grade will be the average of those 3 assignments.] The assignments will target lecture slides and research articles assigned with specific lectures (usually one article per lecture) – readings will be available as downloadable files through the U of T library (current links to the readings will be provided with the lecture on Quercus).

Presentations (30%)

You will be required to give one presentation using presentation software like PowerPoint or Keynote. This presentation should summarize and evaluate a research article relevant for the current topic of discussion. Your presentation should cover the most important points in the article along with your critical assessment of the article. Each presentation should be ~14-16 minutes in length followed by ~5min discussion.

You are required to obtain the instructor's approval for your selected article at least 4 days in advance. This can be done by emailing the instructor with a link to your article, or by emailing the article



as a .PDF attachment.

On the second week of class I will solicit volunteers for presentations for each research topic. If we cannot fill all of the available slots, I will randomly assign students to present on a particular research topic. Once you have selected your research topic, you will need to conduct a literature search to find an original research article (i.e., not one of the articles paired with each lecture) to present.

The day before your presentation you are required to submit by email a complete draft of your slides.

More information about the format of the presentation will be made available during the second week of classes along with suggestions & recommendations about effective presentations.

Midterm exam (32%)

The Midterm Examination will cover materials from weeks 1-6 (see course schedule on the last page of this syllabus). The exam will include several multiple-choice questions as well as short-answer questions similar to those from assignments.

Final assignment (15%)

The final assignment will consist of several short-answer questions targeting lecture slides and research articles from lectures 6-7 and will be due on the last day of classes.

Participation to class discussion (8%)

You are expected to participate actively in class (e.g., by contributing new ideas, by asking questions, by answering questions). There will be multiple opportunities to participate to lectures and to discussions following student presentations.

V. Department of Psychology Missed Term Work Policy

For missed term work (assignments and term tests) due to illness, emergency, or other mitigating circumstances, please follow the procedure outlined below.

Procedure:

1. Complete the [Request for Missed Term Work Accommodations Form](#) ("MTW Form").
2. Email **BOTH** your MTW Form and Supporting Documentation to adrian.nestor@utoronto.ca according to the instructions specified below.

Supporting Documentation Requirements and Deadlines:

Reason for Missed Work	Documentation required for a first absence in the term	Documentation required for subsequent absences in the term	Deadline for submitting MTW form and supporting documentation
Illness or Injury	ACORN Absence Declaration	UofT Verification of Illness Form	WITHIN 2 BUSINESS DAYS of the missed work
Bereavement	ACORN Absence Declaration	A death certificate or funeral announcement	WITHIN 2 BUSINESS DAYS of the missed work



University-sponsored athletic or artistic obligation at the varsity/provincial/national level	ACORN Absence Declaration	A note from a university staff member (advisor, coach, residence staff, etc.) who can substantiate the obligation, sent directly to the course email	<u>10 BUSINESS DAYS IN ADVANCE</u> of the missed deadline
Disability-related reasons for students registered with AccessAbility Services	For missed TERM TESTS , - Contact your AccessAbility consultant and have them write to the course email detailing the accommodations needed. For missed ASSIGNMENTS , - If your desired accommodation is within the scope of your Accommodation Letter (e.g. your letter includes “extensions of up to 7 days” and you need 3 days), send your Accommodation Letter to the course email and specify how many days extension you are requesting. - If your desired accommodation is outside the scope of your Accommodation Letter (e.g. your letter includes “extensions of up to 7 days” but you need more time than that), contact your AccessAbility consultant and have them write to the course email detailing the accommodations needed.	<u>PREFERABLY IN ADVANCE OF THE MISSED WORK, OR AS SOON AS POSSIBLE</u>	
Academic Conflict (e.g. two midterms at the same time)	Screenshot from Quercus demonstrating the conflict.	<u>10 BUSINESS DAYS IN ADVANCE</u> of the missed work	
Religious Conflict	None required	missed work	

Notes:

- The following reasons are not considered sufficient for missed term work: social activities, recreational travel, technological issues, avoidance of assessments or deadlines, work commitments
- [Missed Final Exams](#) are handled by the Registrar’s Office and should be declared on eService.
- For ACORN absence declarations, the date you declare the absence is required to fall within the seven-day declaration period (i.e.) the absence cannot be submitted proactively or retroactively.
- Instructors cannot accept term work any later than five business days after the last day of class. Beyond this date, accommodations are only possible via the Registrar’s Office [petition process](#).
- If you are unable to submit your request within the specified number of business days, you must still email your instructor within that window to explain the nature of the delay. Exceptions to the deadlines are made only under exceptional circumstances.



- Multiple assignments due on the same day are not considered academic conflicts. Students are expected to manage their time effectively to meet assignment deadlines.
- Back-to-back tests/quizzes are not considered academic conflicts. Only overlapping activities are conflicts.
- Students are responsible for keeping their course timetables conflict-free. Students who register in two courses with overlapping lecture/tutorial/lab schedules will not be accommodated.

Next Steps:

After submitting your documentation, you will receive a response from your instructor or TA. The course instructor reserves the right to decide what accommodations will be made. Failure to adhere to any aspect of this policy may result in a denial of your request. **You are responsible for checking your official U of T email and Quercus course announcements daily**, as accommodations may be time-critical.

For missed assignments, **do not wait for the instructor's response to resume work on your assignment.** Extensions may be as short as one business day, depending on the nature of the illness/emergency. Complete your assignment as soon as you're able, and email it to your instructor.

If an accommodation is granted but a continued illness/emergency prevents you from meeting its requirements, you must repeat the missed term work procedure to request additional accommodations.

Please make it clear in your subject line that you are requesting a second accommodation. Examples:

If you were granted an extension for a paper but are still unable to meet the new deadline, or if you miss a make-up term test, you must submit *another* MTW form and supply documentation according to the "subsequent absences" column in the chart above. *Note: In the case of a missed make-up test, an opportunity to write a second make-up test may not necessarily be provided.

VI. Other course policies

Lecture slides & notice of course material sharing

For your convenience, lecture slides and associated materials will be posted at each week (i.e., before the lecture). You should know that lecture slides are not a suitable substitute for attending and understanding lectures. Lecture slides are not exhaustive and we will regularly cover important material that extends beyond them during lecture. You are responsible for this material with respect to testing.

Recording or photographing any aspect of a university course - lectures, presentations, discussions etc. – without prior approval of all involved and without written approval from the instructor is not permitted. Instructional materials are only for the purpose of learning in this course and must not be distributed or used for any other reason whatsoever.

Course 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 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.**



Late assignments

A penalty of 10% will be deducted for each 24-hour period that an assignment is late.

Extensions will only be granted with proper documentation (see Missed term work above). Please note that Instructors cannot accept term work any later than five business days after the last day of class.

E-mail policy

The email subject should include the course name and nature of the inquiry (i.e., “PSYD50: Question about prosopagnosia”). **Emails should be sent from your UofT email account.** The start of your email should include your full name and student ID number so that we know who you are. An email should contain no more than one question and you should try to explain your current understanding of the concept in the email (which will be affirmed or corrected).

In most cases, e-mails will be answered within 2 business days.

If you are not used to writing emails in an academic context, I encourage you to review this online resource so that you adopt proper email etiquette now and in the future: <<https://tinyurl.com/kysxwtx>>

Office hours

You should consider visiting Prof. Nestor’s office hours if you would like to (1) discuss course content, (2) if you have an issue with course performance or progress, (3) contest a question on a midterm, or (4) you would like to discuss the field of psychology/neuroscience and how to get more involved. With respect to Point 3, contesting a question must occur within two weeks of releasing the exam marks or it will not be considered.

Contesting a grade

All requests for a re-grade must be submitted in writing within two weeks of the day that the grade is posted. Only requests based on adequate written justification regarding an error in the original grading will be considered. Arbitrary requests for grade increases (e.g., ‘I need to get into grad school’) will be dismissed.

Please note that a legitimate request will entail a re-grading of the entire assignment. Hence, your grade may be raised, lowered or left intact.

Syllabus changes

There may be minor changes to the syllabus during the term. You will be notified of these changes ASAP and no changes will be instituted that dramatically affect your ability to properly prepare for an examination (e.g., reading an extra chapter the week before the midterm).

Accommodations

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the AccessAbility Services Office as soon as possible.



AccessAbility Services staff (located in Rm AA142, Arts and Administration Building) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations 416-287-7560 or email ability.utsc@utoronto.ca. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

Use of Generative Artificial Intelligence Tools

Students may use artificial intelligence tools, including generative AI, in this course as learning aids or to help produce assignments. However, students are ultimately accountable for the work they submit. Students may not use artificial intelligence tools for taking tests, writing research papers, creating computer code, or completing major course assignments. However, these tools may be useful when gathering information from across sources and assimilating it for understanding.

The known use of generative artificial intelligence tools, including ChatGPT and other AI writing and coding assistants, for the completion of, or to support the completion of, an examination, term test, assignment, or any other form of academic assessment, may be considered an academic offense in this course.

University's Plagiarism Detection Tool

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 website (<https://uoft.me/pdt-faq>).

Academic Integrity

The University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters (<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences.

Potential offences in papers and assignments include using someone else's ideas or words without appropriate acknowledgement, submitting your own work in more than one course without the permission of the instructor, making up sources or facts, obtaining or providing unauthorized assistance on any assignment.

On tests and exams, cheating includes using or possessing unauthorized aids, looking at someone else's answers during an exam or test, misrepresenting your identity, or falsifying or altering any documentation required by the University.

Equity, Diversity, Inclusion

The University of Toronto is committed to equity, human rights and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.



The University of Toronto is a richly diverse community and as such is committed to providing an environment free of any form of harassment, misconduct, or discrimination. In this course, I seek to foster a civil, respectful, and open-minded climate in which we can all work together to develop a better understanding of key questions and debates through meaningful dialogue. As such, I expect all involved with this course to refrain from actions or behaviours that intimidate, humiliate, or demean persons or groups or that undermine their security or self-esteem based on traits related to race, religion, ancestry, place of origin, colour, ethnic origin, citizenship, creed, sex, sexual orientation, gender identity, gender expression, age, marital status, family status, disability, receipt of public assistance or record of offences.

University Land Acknowledgement

I wish to acknowledge this land on which the University of Toronto operates. For thousands of years, it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.

Note about Quercus

This course uses the University's learning management system, Quercus, to post information about the course. This includes posting 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 PSYD50, Current Topics in Memory and Cognition. You may need to scroll through other cards to find this. Click on the PSYD50, Current Topics in Memory and Cognition 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.



PSYD50: Course Schedule

May be subject to minor revisions with advance notice from the instructor

- Week 1 (Jan 9):** Introduction to the course; Introduction to brain anatomy and research methods (neuroimaging, neurophysiology etc.) (lecture)
- Week 2 (Jan 16)** Object perception 1 (lecture)
- Week 3 (Jan 23):** Object perception 2 (presentations)
- Week 4 (Jan 30):** Face recognition 1 (lecture)
- Week 5 (Feb 6):** Face recognition 2 (presentations)
- Week 6 (Feb 13):** Visual word processing 1 (lecture)
- **Feb 20:** NO CLASS (Reading week)
- Week 7 (Feb 27):** Midterm exam
- Week 8 (Mar 5):** Scene perception 1 (lecture)
- Week 9 (Mar 12):** Scene perception 2 (presentations)
- Week 10 (Mar 19):** Visual cortical organization (lecture)
- Week 11 (Mar 26):** Imagery (lecture)
- Week 12 (Apr 2):** Imagery 2 (presentations)