Psychology
UNIVERSITY OF TORONTO

PSY372H1F: Human Memory

0.5 credits

University of Toronto
Fall 2024

Section	Day & Time	Delivery Mode & Location
LEC5101	Tuesday, 6:00 PM - 9:00 PM	In Person: HS 108

Refer to ACORN for the most up-to-date information about the location of the course meetings.

Office Hours: Wednesday, 12-1 PM, over Zoom (**https://utoronto.zoom.us/j/87982668929)**

Instructor: Moaz Shoura (call me Moaz…until I get my PhD at least)
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TA: Aarthi Ravi
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I.   Your instructor

Moaz Shoura: I am a graduate student in the Department of Psychology at UTSC under the supervision of Dr. Adrian Nestor. My main research interests are the other-race effect, and how race is represented in neural network models, as well as humans (i.e., using Electroencephalography (EEG) to understand race perception). I have taught 3 courses in the past (PSYC70: Advanced Research Methods, PSYC50: Higher-Level Cognition, PSY203: Psychological Research) and have guest lectured for plenty of courses. Other teaching interests include statistics and machine learning.

II.   Course description, pre-requisites and learning goals

PSY372H, Human Memory, aims to provide a comprehensive research-oriented overview of the history, methodology, theories, and contentious issues in the study of human memory. The course draws on a core textbook, scientific articles, lectures, interactive discussions (i.e., group presentations), and student writing to discuss and critique current research related to the investigation of human memory.

Prerequisite

Corequisite

PSY201H1/ ECO220Y1/ EEB225H1/ GGR270H1/ IRW220H1/ POL222H1/ SOC202H1/ STA220H1/ STA238H1/ STA248H1/ STA288H1/ ECO220Y5/PSY201H5/ STA215H5/ STA220H5/ PSYB07H3/ STAB22H3/ STAB23H3/ STAB57H3, **_and one of_** PSY260H1/ PSYB38H3 **_or_** PSY270H1/ PSY270H5/ PSYB57H3/ COG250Y1

Exclusion

PSY372H5/ PSYC53H3

After successful completion of this course, you will have demonstrated an improved ability to:

1. **Gain** new knowledge about the scientific study of human memory, from both historical and current perspectives.

2. **Become** an informed consumer of research in psychological science by learning to translate between data and theory while considering the inherent limitations of any approach.

3. **Practice** your critical thinking, writing, and presentation skills. This includes doing literature searches, writing a proposal, and group presentations.

III.   Course readings

This course will <u>not</u> use a textbook. This course will prioritize strengthening your ability to become competent in consuming and evaluating primary literature and as such, will rely on such articles. Other than articles provided, the lectures will provide you with all the information you need to succeed in this course.

IV.   Lecture structure

The lectures will be structured into 2 "sections":
1. Content lecture (typically the first 2 hours)
2. Analysis of primary research article (typically 30-60 minutes)

V.   Course webpage

Please visit Quercus (https://q.utoronto.ca/) and sign in with your UTORid credentials to access our course webpage. This webpage will house all course-related materials, including announcements, discussion boards, lecture and related learning materials, assessments, and marks. You should expect to visit this webpage a few times per week to ensure you are up-to-date on any new happenings in the course throughout the term.

VI.   Course requirements and grading

Assessment category	
Term test	25%
Final Exam	35%
Group project (details below)	40%

Term test (25% of course grade)
The goal of the term test is to test your ability to think about human memory in conceptual, experimental and applied manners. The term test will include material from the first 5 lectures only.

The term test will consist of both multiple choice (MC) and short answer (SA) questions and will be 2.5 hours in length.

The term test will take place in-class during lecture 6.

Non-cumulative, but comprehensive final exam (35% of course grade)
The final exam will focus on the last 5 content lectures of the course **BUT** will be comprehensive in nature. Concepts from lectures 1-5 will naturally link to those discussed in the final 5 lectures, reflecting the interconnected nature of topics in human memory. The format of the final exam will be similar to the term test.

Importantly, the date of the final is not announced by the University until the middle of the term. You should NOT make travel plans until you learn the date of your final exams. You CANNOT take the final at a different date/time unless you have a verifiable medical reason and will need to petition for a deferred exam with your College Registrar's Office.

Literature review group project (multiple parts that constitute a total of 40% of the course grade)
In groups of 3 to 4, you will engage in research to learn more about a topic related to human memory. Your group will research a minimum of nine (9) peer-reviewed, scholarly articles and will detail what you've learned into both a proposal and a scientific poster presentation for a scientific audience. Full details will be posted on Quercus – and are an official extension of this syllabus – but the major pieces are noted below.

Forming your group of three to four (PASS/PENALTY scoring)

You are responsible for forming groups prior to the stated deadline. Please use class time and/or the discussion board in Quercus to connect with fellow classmates so that you may share pertinent information for forming a group.

Topic pitch (5% of course grade)

Prior to fleshing out your topic proposal, you will need to submit a 250 to 500-word pitch to Quercus to clarify what your proposed research will examine, and why it is crucial for others to know about the topic. You will be evaluated on the extent to which your pitch is feasible in the context of this assignment, clearly articulated, and engaging for the reader and proposed audience. There is no need to provide references for the pitch, as it is meant to ensure you are on the right track, rather than a comprehensive, APA-style assignment.

Topic proposal (15% of course grade)

After receiving an approved topic pitch with some feedback, you will then co-develop a proposal (1000-1500 words), in APA style, that offers: (1) your project's title, taking care to represent the breadth of your focus in a concise, engaging way; (2) a section introducing your topic, taking care to contextualize and substantiate your research focus/goal, along with a mini literature review; (3) a section on what you believe the limitations of the topic are, with proposed future directions; (4) a paragraph articulating your proposed division of labor to ensure all group members are contributing fairly and equally; and (5) learning outcomes to specify what your audience should expect to learn from your work.

In addition, you will provide an annotated bibliography, which should first include a full list of properly cited references (APA format), and starting on the following page, a brief paragraph summarizing each article and how you plan to use it in your research. This section is not included in the word limit.

Scientific poster (10% of course grade)

Scientific posters are a critically important medium for conveying scientific knowledge, and this course offers you an ability to practice this process. Your group will assemble a scientific poster to disseminate your findings to others. The research poster will summarize the most important themes from your research paper and present an aesthetically-pleasing and informative review of your background, methods, results, and conclusions (limitations/future directions). We will discuss creating the best poster you can in the lecture.

Scientific poster presentation (10% of course grade)

A major part of being a researcher is presenting your findings in a poster format at large conference. These poster presentations are typically quick and concise. **Your group will deliver a 5 to 6-minute presentation** with time equally split across presenters. A detailed marking rubric prior to your presentation will be provided so that you understand exactly how you will be marked for this assignment. Your poster will be projected on the lecture screen, and **the presentations will take place during the final lecture of the course.**

*Please note that in case we do not get through all presentations in the final lecture of the course, the remaining presentations will occur online.

VII. Course readings and schedule

Readings

Eldridge, L. L., Knowlton, B. J., Furmanski, C. S., Bookheimer, S. Y., & Engel, S. A. (2000). Remembering episodes: a selective role for the hippocampus during retrieval. *Nature neuroscience*, *3*(11), 1149-1152.

Ellenbogen, J. M., Hulbert, J. C., Stickgold, R., Dinges, D. F., & Thompson-Schill, S. L. (2006). Interfering with theories of sleep and memory: sleep, declarative memory, and associative interference. *Current Biology*, *16*(13), 1290-1294.

Elliott, G., Isaac, C. L., & Muhlert, N. (2014). Measuring forgetting: a critical review of accelerated long-term forgetting studies. *Cortex*, *54*, 16-32.

Gross, A. L., Parisi, J. M., Spira, A. P., Kueider, A. M., Ko, J. Y., Saczynski, J. S., ... & Rebok, G. W. (2012). Memory training interventions for older adults: A meta-analysis. *Aging & mental health*, *16*(6), 722-734.

He, J. W., Tu, Z. H., Xiao, L., Su, T., & Tang, Y. X. (2020). Effect of restricting bedtime mobile phone use on sleep, arousal, mood, and working memory: a randomized pilot trial. *PloS one*, *15*(2), e0228756.

Hooyman, A., Lingo VanGilder, J., & Schaefer, S. Y. (2023). Mediation analysis of the effect of visuospatial memory on motor skill learning in older adults. *Journal of motor behavior*, *55*(1), 68-77.

Horry, R., Halford, P., Brewer, N., Milne, R., & Bull, R. (2014). Archival analyses of eyewitness identification test outcomes: What can they tell us about eyewitness memory?. *Law and Human Behavior*, *38*(1), 94.

Pathman, T., Coughlin, C., & Ghetti, S. (2018). Space and time in episodic memory: Effects of linearity and directionality on memory for spatial location and temporal order in children and adults. *PLoS One*, *13*(11), e0206999.

van Dongen, E. V., Kersten, I. H., Wagner, I. C., Morris, R. G., & Fernández, G. (2016). Physical exercise performed four hours after learning improves memory retention and increases hippocampal pattern similarity during retrieval. *Current Biology*, *26*(13), 1722-1727.

Schedule

Week	Date	Topic	Readings	Deadlines
1	03-Sep-24	**Introduction, history of memory**		
2	10-Sep-24	**Methods to study memory**	Eldridge et al. (2000)	
3	17-Sep-24	**Sensory, short-term, and working memory**	He et al. (2020)	**Create groups**
4	24-Sep-24	**Declarative memory**	Ellenbogen et al. (2006)	
5	01-Oct-24	**Nondeclarative memory**	Hooyman et al. (2023)	
6	08-Oct-24	**TERM TEST**		
7	15-Oct-24	**Memory for space and time**	Pathman et al. (2018)	**Topic pitch**
8	22-Oct-24	**Memory and development**	Gross et al. (2012)	Topic pitch grades returned
	29-Oct-24	**READING WEEK**		
9	05-Nov-24	**Forgetting, amnesia**	Elliott et al. (2014)	**Proposal**
10	12-Nov-24	**Memory, reality, and the law**	Horry et al. (2014)	Proposal grades returned
11	19-Nov-24	**Metamemory, improving memory**	van Dongen et al. (2016)	
12	26-Nov-24	**POSTER PRESENTATIONS**		**Posters due November 25th, 11:59PM**

VIII. Course policies

Departmental Guidance for Undergraduate Students in Psychology
The Department of Psychology recognizes that, as a student, you may experience disruptions to your learning that are out of your control, and that there may be circumstances when you need extra support. Accordingly, the department has provided a helpful guide to clarify your and your instructor's responsibilities when navigating these situations. This guide consolidates Arts & Science Policies for undergraduate students in one place for your convenience. As an instructor in the department, I will frequently consult with these recommendations when providing you with support, and I recommend that you also consult it to learn more about your rights and responsibilities before reaching out to me.

Late Assessment Submissions Policy
A penalty of 5% per day (starting at 100%) will be deducted for late submissions. The last day that we can accept term work is 5 days after the official last day of classes for the term. Late submissions should be uploaded to Quercus in the normal manner. If a student misses the term test due to illness or any other valid reason, please reach out to me as soon as possible. Students have one week from missing the date of the test to inform the instructor and submit an Absence Declaration on ACORN. Missed tests will be accommodated on a case-by-case basis and may involve make-up assessments, reweighing grades, or alternative assignments.

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 web site (https://uoft.me/pdt-faq).

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 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.

Re-marking Policy
Students who believe their work has been unfairly or incorrectly marked may request a re-evaluation within two weeks of the return of the work. The request should be directed to the individual who marked the work (e.g., the TA). If unsatisfied with the outcome, students may escalate the request to the course instructor. Please note that the re-evaluation may result in the mark increasing, decreasing, or remaining the same, and the revised mark will be final. All requests and communications regarding re-marking must be in writing.

Students with Disabilities or Accommodation Requirements
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 https://studentlife.utoronto.ca/department/accessibility-services/. 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.

Academic Integrity
All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters (https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019). If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, please reach out to me. Note that you are expected to seek out additional information on academic integrity from me or from other institutional resources. For example, 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 A&S Student Academic Integrity (https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity) and the University of Toronto Website on Academic Integrity (https://www.academicintegrity.utoronto.ca).

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. If you cannot submit a VOI due to limits on terms of use, 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 (including dates, academic impact, practitioner's signature, phone and registration number). 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.

Accommodation for Personal Reasons
There may be times when you are unable to complete course work on time due to non-medical reasons. If you have concerns, speak to me or to an advisor in your College Registrar's office; they can help you to decide if you want to request an extension or other forms of academic consideration. They may be able to email your instructors directly to provide a College Registrar's letter of support and connect you with other helpful resources on campus.