Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq. We are all Treaty people.

This course does not allow the use of ChatGPT or the use of any other generative AI tool. All written work submitted for a grade in this course must consist entirely of your own original writing completed for the first time in this course and in this term. All responses to quiz and exam questions must be based on your own knowledge derived from your own head, without the help of any outside sources. Maintaining your registration in this course means that you are are aware of, understand, and will abide by these requirements. Failure to to adhere to these expectations is a violation of academic integrity and will be reported to the Dalhousie Senate Academic Discipline committee.

Psychology/Neuroscience 3133.03

Research Methods in Human Memory: Online

Fall 2023–2024

Pre-requisites: PSYO 2000.03 or NESC 2007.03, and PSYO 2501.03, and PSYO/NESC 2130.03
Exclusions: Psyo/Nesc 3130.06

Professor: Dr. Taylor-Helmick (she/her) **Email:** ttaylor2@dal.ca
Teaching Assistant: Ry Lewis (they/them) **Email:** ry764058@dal.ca
Email is *not* the best way to reach us: for fastest responses, please use the course IM, Discussion boards, or Chat.

Best ways to reach us:

- **Instant Messaging (IM):** This is usually the best way to reach us and will always be faster than email. We will check the Brightspace Instant Messaging at least once every weekday*.
  - **To use IM**: At the top of the Brightspace window is an envelope icon. Click this to access Brightspace Instant Messaging (IM). Use this tool to drop a quick line — and be sure to check regularly for new messages (marked in Brightspace by a red dot on the envelope icon). Within the IM window, click the blue View All link to see multi-part messages and/or to view the conversation thread.
- **Discussion Boards:** Although we will generally use IM rather than Discussion boards, on occasion we might post general advice/feedback or notices of potential interest and will monitor these boards at least once every weekday*.
- **Online Chat:** We will host regular real-time text-based chat, accessible on Brightspace through Content > Communication > Chat
  - **Instructor Chat:** 9:30-10:30AM Atlantic Tuesday & Thursday*, starting Sept 7
  - **TA Chat:** 4:00-5:00PM Atlantic Monday and 12:00-1:00PM Friday*, starting the week of Sept 11

*Neither the course TA nor the instructor will be online or available on the National Truth and Reconciliation, Thanksgiving, or Remembrance Day holidays. Regularly scheduled Chat sessions will therefore be canceled on University Holidays as well as during Reading Week and while exams are open and available. Online availability and chat times are subject to change, with changes noted on the course website

Please note:

- Before sending/posting an inquiry, check the syllabus and the Brightspace announcements and discussions to see if the information you are seeking is already available.
  - We won't respond to requests for information that is already available in course materials.
- Email is *not* the best way to reach us. However, if you must send an email, always include "3133" in the

subject line of your message and your full name and Banner ID in the content of your message.

Response time standard: We will aim to respond to all IM and Brightspace Discussion postings within 24 hours of receipt on weekdays and by no later than end of day Monday if sent/posted on a weekend. We will endeavour to respond to all email messages within 3 working days of receipt. If more than three working days have passed without a response, double-check the content of your message as it is possible the information you are seeking is already available in the course materials.

Time Zone: All times are Atlantic Time (AT) (i.e., local Halifax time) even if when this is not explicitly indicated. All submission deadlines are determined within Brightspace and according to the local Halifax Brightspace system time. Do not assume that your local time is accurate to the minute. Leave yourself cushion for submitting in advance of timed deadlines. Failure to meet a deadline due to late submission will result in a 0 for that submission. Deadlines represent the last possible time to SUBMIT a completed quiz/assignment; any work still in progress at the deadline will result in a score of 0.

Syllabus Outline

Updates to the syllabus after the start of classes will be indicated in red.

Course Description

This course will provide you with background and hands-on experience with experiments on human memory and data derived from such experiments. The emphasis will be on cognitive methods due, in large measure, to their historic importance for the study of human memory and because of their applicability to an undergraduate laboratory. However, in the lectures, we will also touch briefly on some of the cognitive neuroscientific work that has bolstered our understanding of the cognitive mechanisms of memory.

The course will explore foundational topics in human memory, including: Sensory memory, short-term memory, working memory, non-declarative memory, episodic memory, forgetting, semantic memory, memory and reality, recognition and metamemory, amnesia.

You will participate in classic experiments in human memory, gain experience analyzing data, and be expected to link theory, design, analysis, and interpretation. Emphasis will be placed on the important skill of scientific writing, which requires expressing findings in a technically accurate, grammatically correct, coherent, scientific way.

Learning Objectives: Students will be able to accurately differentiate between memory systems and functions. They will be able to articulate how these systems and functions are currently conceptualized and the empirical basis of support and challenges to these conceptualizations. Students will be able to use their knowledge about memory systems and functions to make predictions, design hypothetical new experiments, interpret data sets. Students will be able to analyze data from studies of human memory, using both descriptive and inferential statistics. Students will be able to report the results of those analyses in accordance with scientific standards for the field and will provide a cogent discussion that cites the relevant scientific literature.

Job-relevant Skills: In meeting the requirements of this course, students will be given the opportunity to demonstrate and gain additional experience with important job-relevant hard and soft skills including, but not limited to: personal and professional integrity; critical thinking; time management and meeting deadlines; statistical analysis and interpretation; literature review and synthesis; written communication; technical scientific writing; self-motivation and initiative; attention to detail; continuous improvement; accountability.

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Course Structure

The syllabus is designed with the goal of having students complete one topic per week. However, as a fully asynchronous on-line course, there is some flexibility for students to adjust topic coverage to their schedules, to facilitate some approved academic accommodations, and/or to accommodate unexpected short-term absence or illness.

That said, I do recommend that the *order* of activities within each topic be preserved (i.e., complete the lecture, reading, and quiz before participating in the experiment so that you have the background and context for understanding the purpose of the experiment). And please be aware that there are hard deadlines that must be observed. These are described in the Course Schedule.

These deadlines are required for: 1) pedagogical reasons, to help you keep on top of course requirements; 2) pragmatic reasons, to ensure that you have the opportunity to gain feedback on your performance at intervals throughout the term; 3) practical reasons, to help the course run smoothly by spreading grading over the term; and, 4) legislative reasons, obeying union rules that govern the hours that graduate teaching assistants can assist with courses.

For these reasons, **deadlines are absolute and represent the *last* possible time that a task, assignment, or exam can be completed**. You are strongly encouraged to work ahead of these deadlines to stay on track.

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Time Commitment

In general, each topic will require that you:

1. Watch a series of lecture videos
   ~50-100 mins, average: ~90 mins
2. Complete a required reading related to the associated experiment
   ~30-90 mins
3. Take a Quiz that covers the lecture and reading material
   ~12-15 mins
4. Participate in a CogLab Experiment
   ~30-60 mins
5. Upload Your Summary Data to the course website
   ~10 mins
6. Download Group Data from the course website
   ~5 mins
7. Analyze Group Data, with the help of a video tutorial that will walk you through each analysis, step-by-step

~10-30 mins

8. Submit an online Analysis Report that provides a quiz-style prompt of input from the main analysis (e.g., ANOVA results)
   ~10-20 mins
9. Decide whether you want to write-up that data in a Results and Discussion

These times are approximate and subject to change and variability (e.g., students might elect to listen to videos at a faster or slower speed) and do not include an estimate of time needed to review materials, complete written assignments, study and write the exams.

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Brightspace

Brightspace will be used for posting narrated powerpoint presentations; making announcements regarding class; posting grades; administering exams and quizzes; collecting submitted assignments; hosting IM, Discussion boards, and online chats, etc. It is your responsibility to monitor the course website regularly.

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Technical Requirements

Students enrolled in this course must have access to a reliable internet connection and access to a laptop or desktop computer capable of running both CogLab and Jamovi (see Textbook, Software, and Readings). You may find that some Brightspace and Library resources are not downloadable outside of Dalhousie; if this is the case, connect to campus via the Dal VPN client (see https://vpn.its.dal.ca/).

If you encounter technical difficulties, please contact the Dalhousie help desk or ITS, as the course instructor and TA are unable to troubleshoot technical problems from our end.

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