



Psychology 390 – section 041 - Research in Memory - Winter 2021

*online delivery via MS Teams due to COVID19

Twice Weekly video lectures/meetings

Lectures/Labs/Oral Presentations: Mondays and Tuesdays 10am to 11am

Instructor: Dr. Myra Fernandes

mafernan@uwaterloo.ca

Office Hours: Wednesdays 10am-11am on MS Teams

Office: PAS 4054

Teaching Assistants, email and office hours:

Yadurshana Sivashankar ysivasha@uwaterloo.ca Mondays noon-1pm

Craig Zhou y358zhou@uwaterloo.ca Tuesdays noon-1pm

Ryan Yeung rcyeung@uwaterloo.ca Wednesdays noon-1pm

Required Course Text

Baddeley, A., Eysenck, M.W., & Anderson, M.C. (2020). Memory. 3rd edition. New York, NY, Psychology Press

Course Description

Several major themes in the area of memory research are explored in this course. Historically influential ideas, current theoretical debates, and the application of cognitive, social, neuro-imaging, and neuropsychological approaches to the study of memory are reviewed and discussed. Questions to be addressed include: How is information encoded and retrieved? What types of memory exist? How can we measure these? Why does forgetting occur? What biological changes accompany memory loss? Can memory impairments be rehabilitated?

There is a lab component to this course. The goal is to introduce students to *E-Prime software*, which is often used to collect data for research studies. These labs will give you a “hands-on” approach to understanding the methods currently in use for much of the current research in memory.

Course Structure and Outcomes

By the end of the course, you will have a detailed knowledge of a wide range of memory phenomena and a solid foundation from which to pursue more advanced study. The introduction to *E-Prime* will familiarize you with how experiments are set up, and the variables that can be manipulated. Attendance at lectures and in labs is essential (by either attending MS Teams meeting or watching recorded lectures, and completing labs). Oral presentations are designed to showcase your ability to communicate science to an audience in a video format. The proposal for research will allow you to apply your knowledge and outline an avenue for future investigation.

*This PSYCH 390 undergraduate course will be delivered by Dr. Myra Fernandes, remotely due to COVID-related restrictions. There will be Twice Weekly video lectures/meetings. via Microsoft Teams. **These lectures will be recorded, and posted on LEARN within 24 hours, for access by those students who could not attend the lecture. All labs are to be completed using the eprime demo software, downloaded to students' PC computer.** All assignments and tests must be submitted via the LEARN platform, by the dates listed in this Syllabus.

Overview of Evaluation

Written assignment: Mid-term review Q & A (DUE by Feb. 23rd)	10%
Lab worksheets and activities: 6 X 4% and 1 X 6% =	30%
Mid-term Test: take-home (DUE March 8 th)	25%
Oral presentation: Choice of topics	12%
Participation in Oral presentation Discussions	3%
Research extension (DUE April 20 th)	20%

Details on each Evaluation

Written assignment: Mid-term review Q&A

In order to help you and your classmates prepare for the upcoming mid-term test, you will prepare 5 short answer questions and the correct responses, based on a concept, definition, methodology, or experiment, discussed in Chapters 1, 2, 3, 4, 5, 6, 8, or 15. Each Q&A should be approximately ½ page in length, double-spaced, in 12-point font, with 2 cm margins all around. You should include Q&As that cover material from at least 3 chapters. Please label your submission with your last name and chapter coverage (e.g. FernandesChapter2and3and6).

Please submit your assignment anytime before **February 23rd by 11:59pm via the LEARN Dropbox. This assignment is worth 10% of your grade.** These files will each be posted on LEARN, and will serve as a study guide for you and your classmates.

Lab Component

The goal of the lab component is to introduce you to E-Prime software, which is often used to collect data for research studies. All lab activities and worksheets are posted on LEARN. On scheduled lab dates there is no lecture, but Dr. Fernandes and a TA will be logged in for the scheduled meeting on MS Teams. Students can join the MS Teams meeting to ask any questions while completing the scheduled lab for that date. Students can work ahead, or can work on their own to complete the lab. All worksheets must be handed in via the LEARN Dropbox, by 11:59pm on the assigned lab date. The first six labs are worth 4% each, and the last one is worth 6% (**total = 30% of your grade**).

Mid-term Test

The test is worth **25% of your grade**, and will consist of multiple choice, short answer questions, and longer essay questions based on material covered in lectures, and in Chapters 1, 2, 3, 4, 5, 6, 8, and 15 of your course textbook. This is a take-home test, to be completed alone, and is **DUE March 8th by 11:59pm via the LEARN Dropbox**

Oral presentation: Choice of Topics

In April, groups of students will be presenting each week. For each of the listed Topics/Date, groups (of 2 students each) will prepare 16-minute Power Point presentations. **Each student will be responsible for 8-minutes of the content.** Each student must prepare their OWN 8-minute presentation, and communicate it 'live' to the class **during our Monday or Tuesday timeslot via MS Teams.** Alternatively, instead of a live presentation, a student can choose to submit a 'voice-over' Power Point presentation (instructions will be posted on LEARN), via the DROPBOX on LEARN, by 9am on the date of the scheduled presentation. Dr. Fernandes will make the file available for the class to hear, by posting it on LEARN.

*Following each topic presentation, classmates can make suggestions for extensions to research on the topic, OR note future real-world applications, OR offer presentation feedback, via the

Discussion Board on LEARN. You will earn **1% per contribution** (each contribution should be a minimum of 3 sentences). You can complete 3 of these for a **maximum total of 3%**.

Specific requirements for the Oral presentation are as follows:

Read the relevant chapter. Each student should present on a separate Sub-Section (set of pages) within the assigned chapter. Each student must prepare their own 8-minute presentation using slides (e.g. Power Point). Presentations should a) review 2 concepts and associated methods of assessment/measurement, contained within their assigned chapter, and then b) review and explain how a related study, from recently published journal articles (published from 2015-present), extends the topic. Finally you must c) review the conclusions and take-home message of this area of memory and suggest an extension, either in terms of a future psychology experiment OR an application of a related concept to address a real-world issue.

This presentation is worth **12% of your grade in the course**.

Research extension

Part 1: Poster (10%): You will prepare a scientific poster of a study that you yourself have conceived, and designed, showing hypotheses and your predicted results, along with point form highlights of implications. A poster is a 1-page summary of the Background, Methods, Results, and Conclusions. This is the format used to communicate research findings at scientific conferences and meetings. A poster serves as an “Executive Summary” of a study, allowing others to quickly understand the research question that was investigated, and the answers. A few sample posters, in Power Point format, can be found on the course website. You should use these as templates for your own poster.

You will be marked on a) the clarity of your key research question and b) communication of its relevance & importance to the field, as well as c) the appropriateness of your graphs and/or tables, to illustrate your predicted results visually and d) description of the implications & contribution of your proposed study to the field of memory.

Part 2: Written Introduction (10%): Prepare a detailed written Introduction to your Poster Idea. You will be marked based on a) your communication and accuracy of the current state of knowledge relating to your topic, and b) your ability to clearly explain the relevance of past research to the rationale for your research idea. You are also required to c) highlight a possible brain basis of for your proposed memory concept/effect, based on past published research. Introductions must be 3-pages, plus a reference page(s), double-spaced, in 12-point font, with 2 cm margins all around.

Part 1 and Part 2 are DUE April 20th by 11:59pm via the LEARN Dropbox.

Who can I see if I have questions about the course material?

See your teaching assistants during their office hours, if you have questions about material covered in the textbook or in the labs. See Dr. Fernandes, during office hours or by appointment, for questions about material covered in the lectures.

Course Web page on LEARN

Learn is a web-based course management system that enables instructors to manage course materials and interact with students. Here, **I will post Announcements, Lecture slides, MS Teams videos of lectures, the Course Syllabus, and Lab Materials**. Log on using your Quest userid and password.

Policy for late lab assignments, and late posters

*It is the student's responsibility to hand in late assignments, tests or papers directly to Dr. Fernandes via **email**. These will be subject to a **late penalty of –5% of the assigned grade, per day**, including weekends.*

Academic Integrity

Academic Integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo are expected to promote honesty, trust, fairness, respect and responsibility. See the [UWaterloo Academic Integrity webpage](#) and the [Arts Academic Integrity webpage](#) for more information.

Discipline: A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to [Policy 71 - Student Discipline](#). For typical penalties check [Guidelines for the Assessment of Penalties](#).

Concerns About a Course Policy or Decision

Informal Stage. We in the Psychology Department take great pride in the high quality of our program and our instructors. Though infrequent, we know that students occasionally find themselves in situations of conflict with their instructors over course policies or grade assessments. If such a conflict arises, the Associate Chair for Undergraduate Affairs (Richard Eibach) is available for consultation and to mediate a resolution between the student and instructor: Email: reibach@uwaterloo.ca; Ph 519-888-4567 ext. 38790

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read [Policy 70 - Student Petitions and Grievances](#), Section 4. When in doubt, please be certain to contact Richard Eibach, the Associate Chair for Undergraduate Affairs who will provide further assistance; reibach@uwaterloo.ca.

Appeals: A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 - Student Discipline may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to [Policy 72 - Student Appeals](#).

Accommodation for Students with Disabilities

Note for students with disabilities: The [AccessAbility Services](#) office, located on the first floor of the Needles Hall extension (1401), collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the AS office at the beginning of each academic term.

Accommodation for course requirements

Students requesting accommodation for course requirements (assignments, midterm tests, final exams, etc.) due to illness should do the following:

- Consult the University's [examination regulations](#) for information about procedures and policies for requesting accommodations
- seek medical treatment as soon as possible
- obtain documentation of the illness with a completed uWaterloo [Verification of Illness Form](#)
- submit that form to the instructor within 48 hours. Students in Centre for Extended Learning (CEL) courses must submit their confirmation of the illness to CEL.
- (if possible) inform the instructor by the due date for the course requirement that you will be unable to meet the deadline and that documentation will be forthcoming.

- In the case of a missed assignment deadline, midterm test, or quiz, the instructor will either:
 - waive the course component and re-weight remaining term work as he/she deems fit according to circumstances and the goals of the course, or

- provide an extension.
- In the case of bereavement, the instructor will provide similar accommodations to those for illness. Appropriate documentation to support the request will be required.
- Students who are experiencing extenuating circumstances should also inform their academic advisors regarding their personal difficulties.
- Elective arrangements such as travel plans are not acceptable grounds for granting accommodations to course requirements per the uWaterloo Examination Regulations and Related Matters.

Mental Health Support

All of us need a support system. The faculty and staff at University of Waterloo encourage students to seek out mental health support if they are needed.

On Campus

Due to COVID-19 and campus closures, services are available only online or by phone.

- ✓ Counselling Services: counselling.services@uwaterloo.ca / 519-888-4567 ext. 32655
- ✓ **MATES**: one-to-one peer support program offered by the Waterloo Undergraduate Student Association (WUSA) and Counselling Services

Off campus, 24/7

- ✓ **Good2Talk**: Free confidential help line for post-secondary students. Phone: 1-866-925-5454
- ✓ Grand River Hospital: Emergency care for mental health crisis. Phone: 519-749-4300 ext. 6880
- ✓ **Here 24/7**: Mental Health and Crisis Service Team. Phone: 1-844-437-3247
- ✓ **OK2BME**: set of support services for lesbian, gay, bisexual, transgender or questioning teens in Waterloo. Phone: 519-884-0000 extension 213

Full details can be found online on the Faculty of Arts [website](#)

Download [UWaterloo and regional mental health resources \(PDF\)](#)

Download the [WatSafe app](#) to your phone to quickly access mental health support information.

Territorial Acknowledgement

We acknowledge that we are living and working on the traditional territory of the Attawandaron (also known as Neutral), Anishinaabe and Haudenosaunee peoples. The University of Waterloo is situated on the Haldimand Tract, the land promised to the Six Nations that includes ten kilometres on each side of the Grand River.

For more information about the purpose of territorial acknowledgements, please see the [CAUT Guide to Acknowledging Traditional Territory](#).

Official version of the course outline

If there is a discrepancy between the hard copy outline (i.e., if students were provided with a hard copy at the first class) and the outline posted on LEARN, the outline on LEARN will be deemed the official version. Outlines on LEARN may change as instructors develop a course, but they become final as of the first class meeting for the term.

Course Schedule

Below is a tentative schedule of topics. Dates for coverage of topics are subject to minor adjustments. Students are expected to login to check for updates and announcements on LEARN, twice weekly.

Topic	Readings and Assignments	Date
Syllabus Introduction to Memory Research	Syllabus Examples of memory in the real world	January 11 th
Methods of studying the brain	Baddeley et al., Chapters 1	January 12 th
Perceiving	Baddeley et al., Chapter 1	January 18 th
Remembering	Baddeley et al., Chapter 2	January 19 th
Kinds of memory	Baddeley et al., Chapter 3	January 25 th
Lab 1 - E-Prime	Lab 1 Course Notes	January 26th
Working Memory	Baddeley et al., Chapter 4	February 1 st
Working Memory	Baddeley et al., Chapter 4	February 2 nd
Neuroimaging of working memory / Learning	Baddeley et al., Chapter 5	February 8 th
Learning / Organization	Baddeley et al., Chapter 6	February 9 th
No Class	Reading Week	February 15 th
No Class	Reading Week	February 16 th

Topic	Readings and Assignments	Date
Learning / Organization	Baddeley et al., Chapter 6	February 22 nd
Retrieval / Context effects	Baddeley et al., Chapter 8 Mid-term review Q & A DUE DATE by 11:59pm	February 23 rd
Retrieval / Context effects	Baddeley et al., Chapter 8	March 1 st
Memory, Aging, & Dementia	Baddeley et al., Chapter 15 Mid-Term posted on LEARN	March 2 nd
Lab 2 - E-Prime	Lab 2 Course Notes Mid-term test DUE DATE by 11:59pm	March 8 th
Lab 3 - E-Prime	Lab 3 Course Notes	March 9 th
No Class		March 15th
No Class		March 16th
Lab 4 - E-Prime	Lab 4 Course Notes	March 22 nd
Lab 5 - E-Prime (Lab 6 is omitted from course)	Lab 5 Course Notes	March 23 rd

Topics	Readings and Assignments	Dates
Lab 7 – E-Prime	Lab 7 Course Notes	March 29 th
Lab 8 – E-Prime	Lab 8 Course Notes Report DUE April 2nd Tips for Oral Presentations Posted on LEARN	March 30 th
Topic 1: Improving your memory Topic 2: Incidental Forgetting Writing Communication Centre Workshop	Baddeley et al., Chapter 17 Baddeley et al., Chapter 9	April 5 th
Topic 3: Motivated Forgetting Topic 4: Autobiographical memory Topic 5: Eyewitness memory	Baddeley et al., Chapter 10 Baddeley et al., Chapter 11 Baddeley et al., Chapter 12	April 6 th
Topic 6: Prospective Memory Topic 7: Memory in childhood Topic 8: When memory fails	Baddeley et al., Chapter 13 Baddeley et al., Chapter 14 Baddeley et al., Chapter 16	April 12 th
Topic 9: Semantic Memory Topic 10: Current Directions in memory research	Baddeley et al., Chapter 7 Suggested journals: TICS, Nature Neuroscience, Psychological Science Course Perceptions: https://evaluate.uwaterloo.ca/ Research extension assignment: DUE DATE APRIL 20th	April 13 th