



Psychology 398 Research in Memory Spring 2012



Class Time: Tuesdays & Thursdays 10:30am-12:20pm

Location: PAS 3026 (lectures) PAS 1237 (labs)

Instructor: Dr. Myra Fernandes

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Office Hours: Thursdays 12:30-1:30pm

Office: PAS 4054

Teaching Assistant: Olivia Lin

y39lin@uwaterloo.ca

Office Hours: Wednesdays 1pm-2pm

Office: PAS 4043

Required Course Text

Baddeley, A., Eysenck, M.W., & Anderson, M.C. (2009). *Memory*. New York, NY, Psychology Press

Course Description

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

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.

Course Structure and Requirements

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, the variables that can be manipulated, and hopefully get you to understand just how flexible experiments can be with the right programming tools. Attendance at lectures and in labs is strongly encouraged. Group presentations are designed to promote discussion of relevant concepts. The poster session is designed to introduce you to how research results are communicated at scientific conferences and meetings.

Overview of Evaluation

Mid-term Test	Thursday June 21st	35%
Lab worksheets and activities	9 X 3% each =	27%
Group Presentation		20%
Participation in Panel Discussions		8%
Poster	Tuesday July 24th	10%

Details on each Evaluation

Mid-term Test

The test is worth **35% of your grade**, and will consist of multiple choice, short answer questions, and longer essay questions based on material covered in lectures, and in the relevant chapters in your course textbook. The test will be 1 hour and 30 minutes in length.

Group Presentations

You will be placed in groups of 2 students. You can work together to share ideas, **but work is completed, and graded, independently**. Presentations consist of two parts:

Task A

Read the relevant chapter/reading. **Each student** must prepare a 15-minute presentation using slides (Power Point). Each student will review the key points, and methods, presented in their section of the assigned chapter/reading, and then will select 1 related study from recently published journal articles, and will highlight the conclusions and take-home message of this additional study. Also, please note real world examples of the phenomenon. This presentation will be graded, and is worth **15% of your grade**.

A copy of your presentation slides must be emailed to the TA and Dr. Fernandes **by 4pm on the day before your presentation**, so that it can be brought to class and loaded on the computer prior to the beginning of class the next day.

Task B

Following your group's presentations, you will lead a Panel Discussion for 15 minutes. During this time your group must pose 2-4 Questions to your classmates (could be 1-2 from each presenter, or "group" questions relating to the overall theme). Your classmates will attempt to answer the questions. Your **job during the Panel Discussion is to guide students, bring up relevant experiments, and jump in with an expert's opinion on the topic**. You can bring in extra materials (newspaper clippings) or prepare 'demos' related to your prepared Questions. These will help engage your classmates in the Panel Discussion. Your Questions/Answers, and ability to lead the Panel Discussion will form **5% of your grade**.

Hint 1: make your "Panel Questions" provocative, to invite discussion from your classmates, or come prepared to defend your particular Answers to your Questions, if many different Answers are possible.

Hint 2: the class will be more fun if you find a way of engaging your fellow classmates in the Discussion (e.g. frame your questions such that students have to pick one side of a debate, and defend it, or have students provide examples from everyday life to support their answers)

Participation in Panel Discussion

During each of the Panel Discussions (except your own), you will be expected to 1) participate by providing oral "Responses to Presentation Questions" to the class, and 2) providing written feedback to the Group Presenters. Participation is worth **8% of your grade**. You can earn 2% per Panel Discussion session (up to max. of 8%).

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 to be completed during the scheduled lab time, and are worth 3% each (9 labs X 3% = **27% of your grade**). A copy of the “Lab Course notes” is available at the UW Bookstore. **NOTE that all labs take place on the dates indicated in the syllabus (in bold), in PAS 1237.**

Poster Assignment

You will prepare a scientific poster of a study that you yourself have conceived, and designed, showing hypotheses and predicted results, along with a discussion 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 and answers that were investigated. A sample poster, in Power Point format, can be found on the course website on *Desire2Learn*. You should use this sample as a template for your own poster.

Please print a copy of your poster on a plain white sheet of paper (8 ½ X 11), to hand in to Dr. Fernandes. On the last day of class, **Tuesday July 24th** we will have a **POSTER DAY**, during which each person in the class can tell us about their poster **in 4 minutes**. Please email your Poster to Dr. Fernandes **by 4pm July 23rd** so it can be brought to class and loaded on the computer prior to the beginning of class the next day. Be sure to acknowledge all sources of information, and avoid plagiarism (see note below). You will be marked on the written clarity of the content of your poster text, your graphs and/or tables, and your ability to communicate the results and their implications or contribution to the study of memory (**worth 10% of your grade**).

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

See your teaching assistant, if you have questions about material covered in the textbook or in the labs. See DR. FERNANDES for questions about material covered in the lectures.

Course Web page / What is Desire2Learn?

Desire2Learn is a web-based course management system that enables instructors to manage course materials and interact easily and efficiently with their students. Here, **I will post lecture notes online**, along with the course syllabus. Course announcements, and answers to Frequently Asked Questions will also be posted. Here I will also post marks to the grade-book, and track student progress. Log on using your Quest/UWdir userid and password.

Policy for missed test/ assignment/ poster:

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

- seek medical treatment as soon as possible and obtain a completed UW Verification of Illness Form: http://www.healthservices.uwaterbo.ca/Health_Services/verification.htm
- submit that form to the instructor within 48 hours.
- (preferably) 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 final exam, the instructor and student will negotiate an extension for the final exam which will typically be written as soon as possible, but no later than the next offering of the course.

In the case of a missed assignment deadline or midterm test, the instructor will either: waive the course component and re-weight remaining term work goals of the course, or 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.

Policy for late lab assignments, and late posters

*It is the student's responsibility to hand in late assignments or posters directly to the course T.A. or instructor **in person**, or via **email**. These will be subject to a **late penalty of -5% of the assigned grade, per day**, including weekends.*

The 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.

Accommodations for Students with Disabilities The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, 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 OPD at the beginning of each academic term.

Concerns About the Course or Instructor (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 (Dr. Colin Ellard) is available for consultation and to mediate a resolution between the student and instructor. Dr. Ellard's contact information is as follows:

Email: cellard@uwaterloo.ca Ph 519 -888- 4567 ext 36852

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. See Policy 70 and 71 below for further details.

Academic Integrity, Academic Offenses, Grievance, and Appeals

To protect course integrity, as well as to provide appropriate guidance to students, course outlines in the Faculty of Arts must include the following note on avoidance of academic offenses:

Academic Integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. [Check <http://www.uwaterloo.ca/academicintegrity/> for more information.]

Discipline: A student is expected to know what constitutes academic integrity [check <http://www.uwaterloo.ca/academicintegrity/>], to avoid committing academic offenses, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about 'rules' for group work/collaboration should seek guidance from the course instructor, academic advisor, or the Undergraduate Associate Dean. For information on categories of offenses and types of penalties, students

should refer to [Policy 71 - Student Discipline](#), <http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm> For typical penalties check Guidelines for the Assessment of Penalties <http://www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm>

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, <http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm> When in doubt please be certain to contact the department's administrative assistant who will provide further assistance.

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 that he/she has a ground for an appeal should refer to [Policy 72](#) (Student Appeals)

<http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm> (Include also the following paragraph if you will be using Turnitin*):

SCREEN ASSIGNMENTS IN THIS COURSE. THIS IS BEING DONE TO VERIFY THAT USE OF ALL MATERIAL AND SOURCES IN ASSIGNMENTS IS DOCUMENTED. IN THE FIRST LECTURE OF THE TERM, DETAILS WILL BE PROVIDED ABOUT THE ARRANGEMENTS FOR THE USE OF TURNITIN IN THIS COURSE.

Academic Integrity website (Arts): http://arts.uwaterloo.ca/arts/ugrad/academic_responsibility.html

Academic Integrity Office (UW): <http://uwaterloo.ca/academicintegrity/>

About Your Instructor

In my research I aim to understand the processes involved in higher cognitive functions such as memory, attention and language. I use a combination of behavioural tests and neuro-imaging to identify the brain basis of these functions. In addition I study how the normal aging process affects cognition, particularly one's ability to carry out memory tasks concurrently with other tasks (dual-tasking). This work is used to test and refine current models of how memory encoding and retrieval operate.

The following pages contain the Tentative Schedule for classes:

Topic	Readings and Assignments	Dates
Syllabus UW-ACE Introduction to Memory Research	Organize for “Group Presentations”	Tuesday May 1 st
Methods of studying the brain	Baddeley et al., Chapter 1	Thursday May 3 rd
Perceiving and Remembering	Baddeley et al., Chapter 2	Tuesday May 8 th
Lab 1 - Introduction to E-Prime	Lab 1 course notes	Thursday May 10th
Kinds of memory	Baddeley et al., Chapter 2	Tuesday May 15 th
Lab 2 – Sample Experiment	Lab 2 course notes	Thursday May 17th
	<i>Class cancelled by University due to Congress</i>	<i>Tuesday May 22nd</i>
Working Memory	Baddeley et al., Chapter 3	Thursday May 24 th
Neuroimaging of working memory / Learning	Baddeley et al., Chapter 4	Tuesday May 29 th
Lab 3 – creating a free recall experiment	Lab 3 course notes	Thursday May 31st
Learning / Organization	Baddeley et al., Chapter 5	Tuesday June 5 th
Lab 4 – creating a recognition experiment	Lab 4 course notes	Thursday June 7th

Topics	Readings and Assignments	Dates
Retrieval / Context effects	Baddeley et al., Chapter 8	Tuesday June 12 th
Lab 5 – making modifications to an experiment	Lab 5 course notes	Thursday June 14th
Memory, Aging, & Dementia	Baddeley et al., Chapter 10	Tuesday June 19 th
Mid-Term Test	Mid-Term Test	Thursday June 21st
Lab 6 – fixing errors in a recall experiment	Lab 6 course notes	Tuesday June 26th
Lab 7 – fixing errors in a recognition experiment	Lab 7 course notes	Thursday June 28th
Lab 8 – run classmates through your experiment	Lab 8 course notes	Tuesday July 3rd
Lab 9 – E-data-aid	Lab 9 course notes	Thursday July 5th
Group 1: Semantic memory Group 2: Autobiographical memory	Baddeley et al., Chapter 6 Baddeley et al., Chapter 7	Tuesday July 10 th

Topics	Readings and Assignments	Dates
Group 3: Forgetting Group 4: Amnesia	Baddeley et al., Chapter 9 and 10 Baddeley et al., Chapter 11	Thursday July 12 th
Group 5: Memory in Childhood Group 6: Eyewitness testimony	Baddeley et al., Chapter 12 Baddeley et al., Chapter 14	Tuesday July 17 th
Group 7: Prospective Memory Group 8: Improving your Memory	Baddeley et al., Chapter 15 Baddeley et al., Chapter 16	Thursday July 19 th
<p style="text-align: center;">Poster Day</p>	<p style="text-align: center;">Present your research proposal, results, discussion poster to the class!</p>	<p style="text-align: center;">Tuesday July 24th</p>