



Psychology 398 Research in Memory Winter 2007, section 002



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

Location: PAS 3026

Instructor: Dr. Myra Fernandes
Office Hours: Mondays 10-11 am

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Office: PAS 4054

Teaching Assistant: Jennifer Tomaszczyk
Office Hours: Wed. 1-2 pm

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Office: PAS 4227

Required Course Text

Baddeley, A. (2002). *Human Memory: Theory and Practice, Revised Edition*. East Sussex, UK: Psychology Press Ltd.

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, neuroimaging, 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 processes 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 you 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 memory research.

Course Structure and Requirements

By the end of the course, students should have 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.

Overview of Evaluation

Mid-term Test		30%
Lab worksheets and activities	9 X 3% each =	27%
Group Presentation		15%
Participation in Panel Discussions		8%
Final paper		20%

Details on each Evaluation

Mid-term Test

The test is worth **30% of your grade**, and will consist of several short answer questions and longer essay questions based on material covered in lectures, and in the relevant chapters in Baddeley. 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 and prepare a 40 minute Power Point presentation (each person will present independently for 20 minutes).

Each student will review background and methods used in at least 2 studies from the chapter, and will highlight the conclusions and take-home message of the studies. Also, please note real world examples of the phenomenon. This presentation will be graded, and is worth **12% of your grade**.

A copy of your Power Point presentation must be emailed to the TA and Instructor **by 4pm on the Monday before your presentation**.

Task B

Following your group's presentations, you will be part of a Panel Discussion for 10 minutes. During this time your group must pose 2 Questions to your classmates (could be 1 from each presenter, or 2 "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 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 **3% 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 every day life to support their answers)

Participation in Panel Discussion

During each of the Group Presentations (except your own), you will be expected to participate in the Panel Discussion by providing some of your "Responses to Presentation Questions" to the class, and/or providing feedback to fellow classmates, and the Group Presenters. Participation is worth 8% of your grade. You can earn 1% per Panel Discussion, up to a maximum of **8% of your grade**.

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 1103.**

Final Paper

You must write a 5 page paper on a topic other than the one on which you presented. In the paper you should review, in 2 pages, the current state of knowledge on the topic (based on chapter reading and Group presentation). Be sure to acknowledge all sources of information, and avoid plagiarism (see note below). You should then choose 2 more recent papers (from 2001 to present) from published journals which address the same topic, and discuss in 3 pages, whether their findings agree or disagree with the work presented in the chapter reading and Group presentation. This paper is worth **20% of your grade**.

Papers should be type-written, double-spaced, in 12 point font, with 2 cm margins all around; your name and ID number should appear in the header; page numbers and the course number should appear in the footer; A title page is not needed.

Note on Late assignments

It is the student's responsibility to hand in late papers directly to the course T.A. or instructor in person, or via email. Papers are subject to a late penalty of -5% per day, including weekends.

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

See your teaching assistant, Jennifer, 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 / Using UWACE

What is UW-ACE?

It 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 on UWACE.

UWACE will also be used to post marks to the grade-book, and track student progress.

How do I log on to UW-ACE?

Type <http://www.uwace.uwaterloo.ca> and log on using your Quest/UWdir userid and password.

What should I do if I can't get logged into UW-ACE?

If you know that you should have access to a course using UW-ACE, but are having trouble logging in, please confirm that your QUEST/UWdir userid and password are correct. You can verify your userid and password by going to <http://ego.uwaterloo.ca/~uwdir/UW-Passwd.html>. Please note that UW-ACE is case sensitive, so you must type your password with the appropriate upper

and lower case letters. If you confirm that your userid and password are correct and still can not log in, please check with your instructor to ensure that you are on the class roster.

If you are on the class roster, you may require upper and lower case letters in your password and not be aware of it. You will need to change your password. Please go to <https://ego.uwaterloo.ca/~uwwdir/Passwd.html> and use the password specifications indicated on this page. In addition, you can reset your account by going to <http://ego.uwaterloo.ca/~uwwdir/UnLock.html> and supplying your faculty e-mail account password. If you are still encountering difficulties, please e-mail uwacehelp@ist.uwaterloo.ca stating your name, UWuserid, student ID number and the course to which you wish access.

Can I forward my UW-ACE e-mail to another account?

Although the facility for forwarding your e-mail account to another account exists within UW-ACE, student accounts are automatically set back to userid@uwaterloo.ca (forwarding is removed) despite any intervention to have e-mail accounts forwarded. You will need to log into UW-ACE to retrieve your course e-mail.

Note 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.

Note on avoidance of academic offences:

All students registered in the courses of the Faculty of Arts are expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for their actions. When the commission of an offence is established, disciplinary penalties will be imposed in accord with Policy #71 (Student Academic Discipline). For information on categories of offences and types of penalties, students are directed to consult the summary of Policy #71 which is supplied in the Undergraduate Calendar (section 1; on the Web at www.adm.uwaterloo.ca/infousec/Policies/policy71.htm). If you need help in learning what constitutes an academic offence; how to avoid offences such as plagiarism, cheating, and double submission; how to follow appropriate rules with respect to "group work" and collaboration; or if you need clarification of aspects of the discipline policy, ask your TA and/or your course instructor for guidance (see also Arts Faculty Web page http://arts.uwaterloo.ca/arts/ugrad/academic_responsibility.html). Other resources regarding the discipline policy are your academic advisor and the Undergraduate Associate Dean. Students who believe that they have been wrongfully or unjustly penalized have the right to grieve; refer to Policy #70, Student Grievance, <http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm>.

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 & Methods of studying the brain	Organize for “Group Presentations”	Thurs. Jan 4 th
Perceiving and Remembering	Baddeley Chapter 2	Tuesday Jan 9 th
Kinds of memory	Baddeley Chapter 3	Thurs. Jan 11 th
Working Memory	Baddeley Chapter 4/5	Tuesday Jan 16 th
Lab 1 - Introduction to E-Prime	Lab 1 course notes	Thurs. Jan 18th
Control of Attention	Baddeley Chapter 6/7	Tuesday Jan 23 rd
Lab 2 – Sample Experiment	Lab 2 course notes	Thurs. Jan 25th
Organization & Learning	Baddeley Chapter 8	Tuesday Jan 30 th
Lab 3 – creating a free recall experiment	Lab 3 course notes	Thurs. Feb. 1st
Retrieval	Baddeley Chapter 11	Tuesday Feb. 6 th
Lab 4 – creating a recognition experiment	Lab 4 course notes	Thurs. Feb. 8th

Topics	Readings and Assignments	Dates
Memory, Aging, Dementia & Treatments	Baddeley Chapter 17	Tuesday Feb. 13 th
Lab 5 – making modifications to an experiment	Lab 5 course notes	Thurs. Feb. 15th
No Class	Reading Week	Tuesday Feb. 20th
No Class	Reading Week	Thurs. Feb 22nd
Mid-term test	Mid-term test	Tuesday Feb. 27th
Lab 6 – fixing errors in a recall experiment	Lab 6 course notes	Thurs. March 1st
Group 1 : acquiring habits Group 2 : forgetting	Baddeley Chapter 9 / 10	Tuesday March 6 th
Lab 7 – fixing errors in a recognition experiment Group 3 : autobiographical memory (person 1 of 3)	Lab 7 course notes Baddeley Chapter 12	Thurs. March 8th
Group 3 : autobiographical memory Group 4 : semantic memory	Baddeley Chapter 12 / 13	Tuesday March 13 th

Topics	Readings and Assignments	Dates
Lab 8 – run a classmate through an experiment	Lab 8 course notes	Thurs. March 15th
Group 5 : connectionist models Group 6 : emotional memory	Baddeley Chapter 14 / 15	Tuesday March 20 th
Lab 9 – E-merge & E-data-aid	Lab 9 course notes	Thurs. March 22nd
Group 7 : amnesia Group 8 : neurotransmitters	Baddeley Chapter 16 Reading will be handed out in early March	Tuesday March 27 th
Group 9 : consciousness Group 10 : implicit memory	Baddeley Chapter 18 / 19	Thurs. March 29 th
Group 11 : recollections & implicit memory Group 12 : history & models of memory Final Paper DUE	Baddeley Chapter 20 / 1 Final Paper DUE	Tuesday April 3rd