

**PSYCH 398: Research Methods in Memory
Winter 2009**

Time: T, Th: 10:30 – 12:20
Room: HH 334
Course Website: UW-ACE

Instructor: Erin Skinner
Office: PAS 4227
Office hours: Th 12:30-2:00, and by appointment.
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Teaching Assistant: Shahnaz Koji
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Office: PAS 4267
Office Hours: T 12:30-1:30

Required Text:

Radvansky, G. (2006). *Human memory*. Boston: Pearson/Allyn & Bacon.

Course Description: Several major themes in human memory will be explored. Historically influential ideas, methods of memory research, current theories and debates, and the application of cognitive, social, and neuropsychological approaches to memory are reviewed and discussed. Emphasis will be placed on methods and theories.

The major goals of this course are to introduce you to research in memory, improve your ability to interpret, criticize, and design research in memory, and to develop your technical writing and oral presentation skills.

Contact: It is best to contact me through email at eiskinne@watarts.uwaterloo.ca, or visit me during my office hours. **Please label all emails with PSYCH 398 in the subject heading.** The phone number listed is a shared phone line and I may not receive messages immediately. If you can't make the scheduled office hours, I am happy to arrange an alternative meeting time in person or by phone via email.

Course Website: All lecture slides are downloadable in PDF format on UW-ACE.

It is your responsibility to check e-mail regularly for important and time sensitive messages. You should use your UW account for all e-mail correspondence to UW personnel for reasons such as identification, reliability, and security. Note that higher priority may be given to e-mail received from UW accounts versus other accounts such as hotmail, yahoo, etc. See "Official Student Email Address" for further details: <http://www.adm.uwaterloo.ca/infocist/emailuse.html>

Course Evaluation: There are 5 components to the grading in the course

- Test on Lecture/Text Material (30%) **Thursday March 5th**
- Assignment on Research Methods (10%), due on **Tuesday March 17th**
- Research Presentation (20%), presentation dates **March 17th – 31st**
- Research Paper (30%), due on **Friday April 3rd, 5:00pm**
- Participation in Class (10%)

1. **Test on lecture/text material:** In the first 7 weeks we will discuss the basics of human memory. This is meant to give you a thorough understanding of what we know about

memory so far and to give you the knowledge you need to critically think about memory research (which will be tested in the other grading components). You are responsible for everything in the lectures and in the complementary text readings.

Date of the Test: **Thursday March 5th** (in class), worth 30%

I will give you more details on what to expect for the test closer to the date.

- 2. Assignment on Research Methods:** In two lectures, we will discuss some methodological issues in memory research. You will do a small assignment (worth 10%) that will allow you to apply the principles discussed in class to a research problem.

Due date: **March 17th, 2009**, at the beginning of class, worth 10%

Please bring in a hard copy of your work. No title page is necessary (put your name and student number in the header). If possible, print double-sided. Assignments will be handed back to you in class.

- 3. Research Presentation:** During the last three weeks of class, you will present a journal article to the class from the list attached to this syllabus (first-come first-serve, with random assignment after January 14). Read the article and become familiar with it. In the last three weeks of class, you will do a presentation on the article. For the first part of your presentation (**10 minutes**), you will present the theory, method, results, and interpretation. You should use Microsoft PowerPoint or Open Office Impress to construct your presentation. The challenge of this assignment is to judge which aspects of the paper are most important to present. Since this is a research methods course, you should make it clear that you understand the methodology and explain to the class why the researchers chose the particular paradigm. Be prepared to critique the paper where necessary. After your presentation, for the **next 8-10 minutes**, you should be prepared to facilitate a **discussion** on your presentation. This will include any questions the audience has for you but, in the absence of questions, will require you to start an engaging discussion on your paper. Five students will present each day between **March 17 – 31** (see schedule attached). I will be handing out more detail regarding the requirements and marking scheme before presentations begin. If there is a paper not listed that you are particularly interested in presenting, please consult with me.

Presentation dates: **March 17, 19, 24, 26, and 31, 2009**, worth 20%. **You MUST email me your presentation by 5:00pm the day BEFORE your presentation.**

- 4. Research Paper:** In the second week, you will be assigned a journal article to write a research paper on. The papers are listed on the last page of the syllabus. Six people will be assigned to each topic; please let me know if you have a preference (articles will be distributed on a first-come first-serve basis and after January 14th will be randomly assigned). You will be able to access the PDFs of the journal articles on UW-ACE. Read the article and become familiar with its content. Then you will write a research paper based on the article.

The research paper will consist of:

- a. **Summary**
- b. **Extension** (Includes introduction, methods and expected results).

a) *Summary*. Write a summary of your article including: the goal of the research, the design of the experiment(s), the principal results, and how these results were interpreted theoretically. This should be two typed, double-spaced pages. It should be clearly written in normal prose (point form is not acceptable).

b) *Extension*. You will then suggest an experiment in which your research article might be extended in a meaningful way. You will write a small Introduction, Methods and Expected Results section in APA format.

For the *Introduction*, you will explain the rationale of your experiment. This introduction is not meant to be formal, but rather is meant to give me a sense of the rationale for your experiment. It should contain what the question is, the rationale for the study, and the hypotheses of the experiment you are proposing. The introduction should only be 1-2 pages. You are not required to reference any outside work (i.e., any work other than the journal article you are extending, the class text, or your notes).

For the *methods section*, provide sufficient detail for a good understanding of the experiment you propose. You do not need to give precise numbers (of participants, stimulus duration, etc.), but if you choose to do so, simply base them on previous works. For the *expected results section*, you should state expected means. You should have at least one table or graph that indicates the primary measure of your experiment and what you expect the results will be (if you are testing alternative hypotheses, you should do two tables or graphs). A reference page should not be necessary.

The extension should only be as long as is required (be concise!). An important factor in academic work is to convey ideas simply and briefly. You will NOT get extra marks for length! Although there is no page limit, as an estimate the final product should be between six and ten pages. You are most welcome, and in fact I encourage you, to consult with me or the TA about your ideas. I will also discuss the assignment further in class. If there is a paper not listed that you are particularly interested in using for this assignment, please consult with me.

Format for the assignment: 1-inch margins, *double*-spaced, with type font no smaller than 12 Times New Roman. You should not need to use any reference material – you only need the paper I have provided you and your ideas. Please attach a title page (APA format) to your submission.

Due date: Your final paper will be due on **April 3, 2009, 5:00pm**, worth 30%. Please submit your paper in the electronic drop box set up on ACE.

5. **Participation**: My hope is that you will play an active role in this course. That doesn't mean simply attending class; at this level of your education, you should be critically thinking about the material and analyzing it to further your educational process. A part of that process is asking questions and making comments on the material that interests you. I particularly expect your involvement during the discussions of the research

presentations, in which we will get a better chance to sit as a group and analyze research in memory together.

Different people have different learning styles. If you feel that your learning style may hurt your chances at getting participation marks (for example, you prefer quiet contemplation) let me know and we will work something out (for example, one-on-one conversation or thought papers).

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 UW-ACE, the outline on UW-ACE will be deemed the official version. Outlines on UW-ACE may change as instructors develop a course, but they become final as of the first class meeting for the term. **Academic Integrity, Academic**

Offences, Grievance, and Appeals

To protect course integrity, as well as to provide appropriate guidance to students, course outlines in the Faculty of Arts incorporate 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.

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>

Discipline: A student is expected to know what constitutes academic integrity, 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 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,
<http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm>

Appeals: A student may appeal the finding and/or penalty in a decision made under [Policy 70](#) - Student Petitions and Grievances (other than regarding a petition) or [Policy 71](#) - Student Discipline if a ground for an appeal can be established. Read [Policy 72](#) - Student Appeals,
<http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm>

For further advice from the Faculty of Arts on the avoidance of academic offenses, see the following website:

http://arts.uwaterloo.ca/arts/ugrad/academic_responsibility.html

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.

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.

Course Schedule

Date	Topic Tuesday	Topic Thursday	Reading
January 6 & 8	Introduction/A Brief History of Memory	Research Methods in Memory	Chapters 1 & 3
January 13 & 15	Research Methods in Memory	Sensory & Short-Term Memory	Chapters 2 (pp. 33-42) & 4
January 20 & 22	Working Memory	Non-declarative Memory	Chapters 5 & 6 (pp. 120-131)
January 27 & 29	Semantic Memory	Episodic Memory	Chapters 9 & 7
February 3 & 5	Episodic Memory	Autobiographical Memory	Chapter 11
February 10 & 12	Memory & Reality	Metamemory	Chapters 12 & 14
February 17 & 19	NO CLASS	NO CLASS	No readings
February 24 & 26	Amnesia	Aging & Memory	Chapters 16 & 15 (pp. 328-337)
March 3 & 5	Just In Case Day & Questions	**Test**	No readings
March 10 & 12	Research Methods: Practical Aspects	Research Methods: Practical Aspects	No readings
March 17 & 19	Presentations	Presentations	No readings
March 24 & 26	Presentations	Presentations	No readings
March 31 & April 2	Presentations	Final discussions on memory	No readings

Presentation Topics
(Choose before Jan 14th or be assigned a topic randomly)

<p align="center">March 17</p> <ol style="list-style-type: none"> 1. Cocktail Party Phenomenon and Working Memory Capacity: Conway et al., PBR, 2001. 2. Implicit Memory & Process Dissociation: Destrebecqz & Cleermans, PBR, 2001. 3. Mechanisms of Implicit Priming: Mitchell, PS, 2006 4. Prospective Memory: Cohen et al., M&C, 2008. 5. Semantic Memory and MCI: Dudas et al., Neuropsychologia, 2005. 	<p align="center">March 19</p> <ol style="list-style-type: none"> 1. Judgments of Recency and Memory Strength: Hintzman, PBR, 2005. 2. Retrieval-Induced Forgetting: Storm et al., PBR, 2006. 3. Autobiographical Odor Memory: Willander & Larsson, PBR, 2006. 4. Emotion & Flashbulb Memory: Bohn & Bernsten, M&C, 2007 5. Optimal Study Schedules, Pyc & Rawson, M&C, 2007.
<p align="center">March 24</p> <ol style="list-style-type: none"> 1. Sleep & Emotional Memory: Hu et al, PS, 2006. 2. Emotion & Distinctiveness: Schmidt & Saari, M&C, 2007. 3. The Isolation Effect: Hunt & Lamb, JEP:LMC, 2001. 4. Depression & Forgetting: Hertel & Gerstle, PS, 2003. 5. Vantage Point & Traumatic Memories: McIsaac & Eich, PS, 2004. 	<p align="center">March 26</p> <ol style="list-style-type: none"> 1. fMRI: Short- v. Long-term Memory: Talmi et al., PS, 2005. 2. fMRI & Episodic/Semantic Memory: Prince et al., PS, 2007. 3. Temporary Amnesia & Context: Reder et al., PS, 2006. 4. Levels of Recollection: Wais et al., JOCN, 2008. 5. MTL Lesions and Recollection & Familiarity: Bowles et al., PNAS, 2007.
<p align="center">March 31</p> <ol style="list-style-type: none"> 1. Memory Binding: Starns & Hicks, PBR, 2008. 2. Aging and Event Details: Koutstaal, PS, 2003. 3. False Memory & Child Development, PS, 2007. 4. Content Borrowing in False Memories, Lampinen et al., JEP:LMC, 2005. 5. Eyewitness Suggestibility: Lane & Zargoza, M&C, 2007. 	

Research Paper Topics
(Choose before Jan 14th or be assigned a topic randomly)

1. What Happens During Episodic Memory Retrieval?

Jacoby, L. L., Shimizu, Y., Daniels, K. A., & Rhodes, M. G. (2005). Models of cognitive control in recognition and source memory: Depth of retrieval. Psychonomic Bulletin & Review, 12, 852-857.

2. Memory and Imagining the Future:

Addis, D. R., Wong, A. T., & Schacter, D. L. (2008). Age-related changes in the episodic simulation of future events. Psychological Science, 19, 33-41.

3. Memory and Survival Value:

Nairne, J. S., Pandeirada, J. N. S., & Tompson, S. R. (2008). Adaptive memory: The comparative value of survival processing. Psychological Science, 19, 176-180.

4. Specific- and Partial-Source Memory:

Simons, J. S., Dodson, C. S., Bell, D., & Schacter, D. L. (2004). Specific- and partial-source memory: Effects of aging. Psychology & Aging, 19, 689-694.