University of Waterloo
Department of Psychology
Psych 390/398 Section 001
Research in Memory
Spring 2019
10:00-11:20 TTH, PAS 1237

Instructor and T.A. Information

Instructor: Evan F. Risko
Office: PAS 4010
Office Phone: (519) 888-4567 ext 38135
Office Hours: 12:00PM-2:00PM Wednesday (or by appointment)
Email: efrisko@uwaterloo.ca
Please contact the instructor and TA using the email address provided. If we need to contact you, then we will do so using your official uWaterloo address. Students are responsible for all e-mail that is sent to the official uWaterloo email address. Check e-mail regularly for important and time sensitive messages.

T.A.	Hanbin Go
Email	hanbin.go@uwaterloo.ca
Office	PAS 2261
Office Hours	Monday, 12:00PM-1:00PM (or by appointment)

Course Description

The goal of the course is to introduce students to the theoretical and practical aspects of memory research. Readings will focus on important topics in memory research with an emphasis on the wide variety of methods being applied in the search for a deeper understanding of human memory and on learning how to generate and critically evaluate research.

Course Goals and Learning Outcomes

Upon completion of this course, students should be able to:

A. Demonstrate knowledge of major concepts, theories, and empirical findings in memory research
B. Demonstrate the ability to comprehend primary source articles in memory research. This will involve the ability to understand research methods, interpret statistics, and understand experimental logic
C. Demonstrate the ability to understand basic and applied research and how research in memory contributes to both of these scientific enterprises
D. Demonstrate the ability to think critically and communicate effectively about research in memory

Required Text

- There is no textbook for this course

Readings Available on LEARN

- Readings for the course will consist of primary source material (i.e., journal articles). While the number of pages of text required each week may not be high, reading primary source material is typically much more challenging than textbooks so you should be prepared to read papers more than once. All readings are available on LEARN.

Course Requirements and Assessment

Assessment	Date of Evaluation (if known)	Weighting
Quizzes	see below	50%
Article Presentation		10%
Written Assignment	August 9th	20%
Poster Presentations	May 29th	10%
Participation		10%
Total		100%

Quizzes (50%)

There will be 10 quizzes in the course. These quizzes will correspond to the topics for the previous 2 weeks. This includes readings, material presented in student presentations, and material covered in assignments. Each quiz is worth an equal portion of your grade. Your worst quiz will not contribute to your grade. Quizzes will be multiple-choice and short answer. The quizzes are timed, with only 15 minutes available for each. The quizzes will be taken in class and tentative quiz dates are listed below. When completing multiple-choice questions you must choose the best answer for each question, even though the other answers may have some qualities of a correct answer. The quiz dates are tentative:

Quiz 1: 21-May
Quiz 2: 28-May
Quiz 3: 04-June
Quiz 4: 11-June
Quiz 5: 18-June
Quiz 6: 25-June
Quiz 7: 09-July
Quiz 8: 16-July
Quiz 9: 23-July
Quiz 10: 30-July

Article Presentation (10%)

The article presentation component of the course will consist of an approximately 25 minute PowerPoint presentation of a research paper in class. Much of the course centers on student presentations of articles and associated discussion thus it is critical that you prepare your presentation with great care.

There should be enough detail that your audience can understand:

(1) the motivation for the investigation described in the article (i.e., why did they do it?)
(2) the nature of the experiments discussed/reported and their relation to the motivation for the research presented in the article (i.e., why did they do it the way they did it?)
(3) the predictions (if available)
(4) the results, including relevant information about the statistics provided (if available please SHOW us the data in the presentation; what did they find?)
(5) how the authors interpreted their results and the general conclusions that they drew

Furthermore, students will be expected to go beyond the paper in some meaningful respect in order to aid students in understanding their article (e.g., showing data from a related study, showing a video to help illustrate a concept or tool etc.). Think of your presentation as "teaching" the class about the topic

of your article (not just the article). The student presenter will be considered the "expert" on the article and as such should be able to answer questions from other students and the instructor during their presentation. If you are unclear on any aspect of the article you have been assigned, then you need to discuss it with the TA or instructor BEFORE class. Your presentation slides are due 1 week before your presentation for review by the instructor. Please hand in slides via the instructor's email. Provided the latter, you will be given feedback about your presentation and expected to integrate that feedback prior to your presentation. Handing in your presentation on time and integrating feedback will be a part of your grade. A copy of your slides will be provided to other students. Please be sure to hand in the final, presented version of your slides to the instructor via email before or on the day of the presentation.

Written Assignment (20%)

The goal of this assignment is for you to write a research proposal. The in-class assignments will focus on skill development relevant to this goal. You will propose a novel experiment to test a hypothesis you have generated to explain one of a set of phenomena provided by the instructor (during the course). Please mind the dictum "Keep it simple." This should be a behavioural experiment, using a ready at hand sample (e.g., not requiring neurological patients), with a simple design (e.g., one manipulation with two levels), and requiring straightforward statistical tests (e.g., t-tests). Proposing tractable studies is an important and overlooked skill.

Your research proposal should include:
(a) a brief review of the relevant literature (minimum 3 double spaced pages and 5 unique references each in journals with impact factors greater than 2 and cited at least 10 times). In addition, please locate and list 10 additional references that you thought would be relevant to your research proposal but are not reviewed in the final document. Place these on a separate page at the end of your document (does not count against maximum number of pages).
(b) a clear description of the research question and the hypothesis to be tested including a clear IF…THEN statement
(c) the proposed methods including the number and type of participants with associated justification for the sample size (using a power analysis), the design, the stimuli to be used (include exact stimuli or examples in an appendix), and a description of the procedure
(d) a working program to administer the proposed task
(e) a description of the statistical tests to be used to test your hypothesis
(f) a figure that clearly depicts (i) results that would support your hypothesis and (ii) results that would not (or that would support an alternative hypothesis).
(g) a complete AsPredicted.org style pre-registration for your proposed experiment (does not count against maximum number of pages)

Technical Requirements
The paper must be at least 8 pages and no longer than 10 pages including references
You must use 12 point Times New Roman font, double spaced, 2.5 cm margins
Use APA.
Please submit to the electronic drop box on LEARN on or before midnight on the due date.
You are responsible for keeping a copy of the final version of your paper.

Poster Presentations (10%)

The poster presentation component of the course will consist of the presentation of a research paper in the form of a poster. Poster presentations constitute an important avenue for the communication of research. The paper you present will be chosen during an in-class assignment. You will be marked both on the content and your presentation. If you are not presenting, then you are expected to attend the poster session and to visit your classmates' posters (this will be part of your participation grade). All posters are due May 29th and should be submitted to the appropriate Learn dropbox. Students will present their posters in one of two poster sessions. Your presentation date will be assigned to you. Further information about how to prepare a poster will be provided in class.

Participation and In-Class Activities (10%)

This class is based on an open exchange of ideas. It is absolutely essential that you come prepared to discuss the readings. Your participation mark will be determined by the quantity and quality of your contributions to the class. This will include, but is not limited to, asking questions, answering questions, participating in discussion, attending class, attending poster sessions, and paying attention to your classmate's presentations. This mark will also include completion of in-class activities. The latter will be handed in at the end of each respective class to the appropriate drop-box on LEARN.

Course Outline (tentative)

Week	Date	Topic	Readings Due
1	07-May - Tuesday	Organizational Meeting	None
1	09-May - Thursday	In-Class Assignment	None
2	14-May- Tuesday	Instructor Presentation	Hargis, M. B., McGillivray, S., & Castel, A. D. (2018). Memory for Textbook Covers: When and Why We Remember a Book by Its Cover. Smallwood, J., McSpadden, M., & Schooler, J. W. (2008). When attention matters: The curious incident of the wandering mind. Memory & Cognition.
2	16-May - Thursday	In-Class Assignment	Nairne, J. S., Pandeirada, J. N., & Thompson, S. R. (2008). Adaptive memory: The comparative value of survival processing. Psychological Science.
3	21-May – Tuesday	Student Presentation(s)	Roediger, H. L., & Karpicke, J. D. (2006). Test-enhanced learning: Taking memory tests improves long-term retention. Psychological Science. Presented by: Kapler, I. V., Weston, T., & Wiseheart, M. (2015). Spacing in a simulated undergraduate classroom: Long-term benefits for factual and higher-level learning. Presented by:
3	23-May - Thursday	In-Class Assignment	Kim, K., Johnson, J. D., Rothschild, D. J., & Johnson, M. K. (2018). Merely presenting one's own name along with target items is insufficient to produce a memory advantage for the items: A critical role of relational processing.

Week	Date	Topic	Readings Due
4	28-May – Tuesday	Student Presentation(s)	Roediger, H. L., & McDermott, K. B. (1995). Creating false memories: Remembering words not presented in lists. Journal of experimental psychology: Learning, Memory, and Cognition. Presented by: Loftus, E. F., & Pickrell, J. E. (1995). The formation of false memories. Psychiatric Annals. Wade, K. A., Garry, M., Read, J. D., & Lindsay, D. S. (2002). A picture is worth a thousand lies: Using false photographs to create false childhood memories. Psychonomic bulletin & review. Presented by:
4	30-May - Thursday	Poster Presentations #1	None
5	04-June-Tuesday	Student Presentation(s)	Brown, R., & Kulik, J. (1977). Flashbulb memories. Cognition. Talarico, J.M. & Rubin, D.C. (2003). Confidence, not consistency, characterizes flashbulb memories. Psychological Science. Presented by:
5	06-June – Thursday	Poster Presentations #2	None
6	11-June – Tuesday	Student Presentation(s)	Graham, K. S., Simons, J.S., Pratt, K. H., Patterson, K., & Hodges, J. R. (2000). Insights from semantic dementia on the relationship between episodic and semantic memory. Neuropsychologia. Presented by: Knowlton, B. J., Mangels, J. A., & Squire, L. R. (1996). A neostriatal habit learning system in humans. Science. Presented by:
6	13-June-Thursday	In-Class Assignment	None
7	18-June – Tuesday	Student Presentation(s)	Engle, R. W. (2002). Working memory capacity as executive attention. Current directions in psychological science. Colflesh, G. J., & Conway, A. R. (2007). Individual differences in working memory capacity and divided attention in dichotic listening. Psychonomic Bulletin & Review. Presented by:
7	20- June-Thursday	In-Class Assignment	None

Week	Date	Topic	Readings Due
8	25- June-Tuesday	Student Presentation(s)	Szpunar, K. K., Watson, J. M., & McDermott, K. B. (2007). Neural substrates of envisioning the future. Proceedings of the National Academy of Sciences. Presented by: Busby J, & Suddendorf T (2005) Recalling yesterday and predicting tomorrow. Cognitive Development. Presented by:
8	27-June - Thursday	In-Class Assignment	None
9	02-July-Tuesday	No Class	None
9	04 -July-Thursday	Student Presentation(s)	Nelson, T. O., & Dunlosky, J. (1991). When people's judgments of learning (JOLs) are extremely accurate at predicting subsequent recall: The “delayed-JOL effect”. Psychological Science. Presented by: Metcalfe, J. (1986). Feeling of knowing in memory and problem solving. Journal of Experimental Psychology: Learning, Memory, and Cognition. Presented by:
10	09-July-Tuesday	Student Presentation(s)	Schiller, D., Monfils, M. H., Raio, C. M., Johnson, D. C., LeDoux, J. E., & Phelps, E. A. (2009). Preventing the return of fear in humans using reconsolidation update mechanisms. Nature. Presented by:
10	11-July-Thursday	In-Class Assignment	None
11	16-July-Tuesday	Student Presentation(s)	Henkel, L. A. (2014). Point-and-shoot memories: The influence of taking photos on memory for a museum tour. Psychological Science. Presented by: Storm, B. C., & Stone, S. M. (2015). Saving-enhanced memory the benefits of saving on the learning and remembering of new information. Psychological Science. Presented by:
11	18-July-Thursday	In-Class Assignment	MacLeod, C.M., Gopie, N., Hourihan, K. L., Neary, K. R., & Ozubko, J. D. (2010). The production effect: Delineation of a phenomenon.
12	23-July-Tuesday	Student Presentation(s)	Godden, D. R., & Baddeley, A. D. (1975). Context-dependent memory in two natural environments: On land and underwater. British Journal of Psychology. Presented by:
12	25-July-Thursday	In-Class Assignment	None

Week	Date	Topic	Readings Due
Make Up Day	30-July-Tuesday	In-Class Assignment	None

Late Work

• A late penalty of 5% per day late (24 hours) will be levied against late assignments
• Missed quizzes will not be rescheduled (note that you can drop your worst quiz grade)
• Missing a presentation (in-class, poster) will result in a grade of 0 for the presentation component of that grade

Electronic Device Policy

Please limit the use of electronic devices in class to course related activities (e.g., taking notes).

Attendance Policy

You are expected to attend all classes.

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 Office of 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. Check the Office of Academic Integrity for more information. 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.

Note for Students with Disabilities

The AccessAbility Services office, located on the first floor of the Needles Hall extension (NH 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 for Psychology courses.

Policies of the Psychology department pertaining to course requirements are available on the department website.

Cross-listed course (requirement for all Arts courses)

Please note that a cross-listed course will count in all respective averages no matter under which rubric it has been taken. For example, a PHIL/PSCI cross-list will count in a Philosophy major average, even if the course was taken under the Political Science rubric.

Intellectual Property

Students should be aware that this course contains the intellectual property of their instructor, TA, classmates, and/or the University of Waterloo. Intellectual property includes items such as:

- Lecture content, spoken and written (and any audio/video recording thereof);
- Lecture handouts, presentations, and other materials prepared for the course (e.g., PowerPoint slides);
- Questions or solution sets from various types of assessments (e.g., assignments, quizzes, tests, final exams); and
- Work protected by copyright (e.g., any work authored by the instructor, TA, your classmates, or used by the instructor or TA with permission of the copyright owner).

Course materials and the intellectual property contained therein, are used to enhance a student's educational experience. However, sharing this intellectual property without the intellectual property owner's permission is a violation of intellectual property rights. For this reason, it is necessary to ask the instructor, TA, your classmates and/or the University of Waterloo for permission before uploading and sharing the intellectual property of others online (e.g., to an online repository).

Permission from an instructor, TA, your classmates or the University is also necessary before sharing the intellectual property of others from completed courses with students taking the same/similar courses in subsequent terms/years. In many cases, instructors might be happy to allow distribution of certain materials. However, doing so without expressed permission is considered a violation of intellectual property rights.

Please alert the instructor if you become aware of intellectual property belonging to others (past or present) circulating, either through the student body or online. The intellectual property rights owner deserves to know (and may have already given their consent).

Mental Health Services

Mental Health Services aim is to provide holistic programming and services to help you lead a healthy and balanced life. We strive to provide a secure, supportive environment for students of all orientations and backgrounds.

Students suffering from problems with anxiety, depression, problems with sleep, attention, obsessions or compulsions, relationship difficulties, severe winter blues, etc., may make an appointment by phone or in person. Appointments are usually available within two days of initial contact with one of our medical doctors. All contacts are completely confidential.

Contact Health Services
Health Services Building
Call 519-888-4096 to schedule an appointment
Call 1-866-797-0000 for free 24/7 advice from a health professional
Contact Counselling Services
Needles Hall Addition, NH 2401
Call 519-888-4567 x 32655 to schedule an appointment
counserv@uwaterloo.ca

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 six miles on each side of the Grand River.