PSYC* 6790, Course Outline: Winter 2021

General Information

Course Title: Memory & Cognition

Course Description: This course will provide an in-depth examination of research into human memory and how memory-related processes inform other perceptual and cognitive abilities. The first half of the course will address factors that govern how we learn, retrieve, and forget information along with coverage of related mnemonic experiences. The second half of the course will focus on how memory informs other cognitive abilities including perception, attentional selection, cognitive control, and categorization.

Credit Weight: 0.5

Academic Department (or campus): Department of Psychology

Semester Offering: Winter 2021

Class Schedule and Location: Due to the COVID-19 pandemic, this course is offered in an alternative delivery-synchronous (AD-S) format.

Lectures will be held on Fridays from 11:30 am- 2:20 pm.

Lectures will be held virtually using the Zoom software platform for online conferencing. For access to lectures, use the following Zoom link at the scheduled times: https://zoom.us/j/93454830393?pwd=dGs0dXFkeGNXZ3krOEE3U1pTSkU5Zz09 passcode: 065392

Instructor Information

Instructor Name: Chris M. Fiacconi, PhD
Instructor Email: cfiaccon@uoguelph.ca
Office location and office hours: Appointments will be made on an as-needed basis using Zoom software. Links will be provided once each meeting is scheduled.

GTA Information

GTA Name: N/A
GTA Email: N/A
GTA office location and office hours: N/A

Course Content

Specific Learning Outcomes:

Learning Outcome 1: Critical and Creative Thinking
1.1. Inquiry and analysis: is a systematic process of exploring issues, objects and works in cognitive psychology through the collection and analysis of evidence that result in informed conclusions or judgments.

1.2. Problem solving: involves using one's understanding to work through a series of operations to come to a conclusion or implement a solution.

1.3. Creativity: involves the ability to use one's depth and breadth of understanding to adapt to situations of change, to initiate change, and to take intellectual risk.

1.4. Depth and breadth of understanding: demonstrates both broad and in-depth knowledge of concepts in neuroscience and/or applied cognitive science topics.

Learning Outcome 2: Literacy
2.1. Information literacy: is the ability to know when there is a need for information, where to locate it and the ability to identify the value and differences of potential resources in a variety of formats.

2.2. Methodological and technological literacy: is the ability to evaluate, design, and implement appropriate methodologies, and select and use appropriate technologies for rigorous science.

2.3. Quantitative literacy: includes numeracy, and competence in working with numerical data and statistics.

2.4. Visual literacy: is the ability to effectively find, interpret, evaluate, use, and create visual media, and to effectively present information visually.

Learning Outcome 3: Global Understanding
3.1. Sense of historical development: involves a comprehensive understanding of the studies that established the core knowledge in the content area.

Learning Outcome 4: Communication
4.1. Oral communication: includes interpersonal skills, oral speaking and active listening.

4.2. Written communication: is the ability to express one's ideas and summarize theory and research through a variety of writing styles.

4.3. Reading comprehension: is the understanding of theoretical and empirical literature.

4.4. Integrative communication: is the ability to synthesize information from a variety of sources into a communicable form.

Schedule:

Week of: Topic and Readings

Jan. 15   **Overview: Distinction between memory-as-object vs. memory-as-tool**

Core Reading: Jacoby, L.L., & Kelley, C.M. (1987). Unconscious influences of memory for a prior event. *Personality and Social Psychology Bulletin, 13,* 314-336.

Jan. 22   **Memory As Object I: Automatic/Controlled Forms of Memory & Process Impurity**

Core Reading: Toth, J.P., Lindsay, D.S., & Jacoby, L.L. (1992). Awareness, automaticity, & memory dissociations. In L.L. Squire & N. Butters (Eds.), *Neuropsychology of Memory (2nd ed.).* New York: Guildford Press.

Presentation Papers:
1. Jacoby, L.L., Woloshyn, V., & Kelley, C.M. (1989). Becoming famous without being recognized: unconscious influences of memory produced by dividing attention. *Journal of Experimental Psychology: General, 118,* 115-125.

2. Jennings, J.M., & Jacoby, L.L. (1997). An opposition procedure for detecting age-related deficits in recollection: telling effects of repetition. *Psychology and Aging, 12,* 352-361.

Jan. 29   **Memory As Object II – The Importance of Context**

Core Reading: Smith, S.M. (2014). Effects of environmental context on human memory. In T.J. Perfect & D.S. Lindsay (Eds.),*The SAGE Handbook of Applied Memory* (pp. 162-182). Thousand Oaks: SAGE.

Presentation Papers:
1. Smith, S. M., Handy, J. D., Hernandez, A., & Jacoby, L. L. (2018). Context specificity of automatic influences of memory. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 44*(10), 1501.

2. Uitvlugt, M.G., & Healey, M.K. (2018). Temporal proximity links unrelated news events in memory. *Psychological Science,* 1-13

Week of:	Topic and Readings

Feb. 5   **Memory As Object III – Encoding/Retrieval Interactions**

Core Reading: Roediger, H.L. III, & Butler, A.C. (2011). The critical role of retrieval practice in long-term retention. *Trends in Cognitive Science, 15,* 20-27.

Presentation Papers:

1. Jacoby, L.L., Shimizu, Y., Velanova, K., & Rhodes, M.G. (2005). Age differences in depth of retrieval: memory for foils. *Journal of Memory & Language, 52,* 493-504.

2. Walheim, C.N., & Jacoby, L.L. (2013). Remembering change: the critical role of recursive remindings in proactive effects of memory. *Memory & Cognition, 41,* 1-15.

Feb. 12   **Memory As Object IV – Forgetting**

Core Reading: Kelley, C.M. (2014). Forgetting. In T.J. Perfect & D.S. Lindsay (Eds.),*The SAGE Handbook of Applied Memory* (pp. 127-144). Thousand Oaks: SAGE.

Presentation Papers:
1. Sahakyan, L. & Kelley, C.M. (2002). A contextual change account of the directed forgetting effect. *Journal of Experimental Psychology: Learning, Memory, & Cognition, 28,* 1064-1072.

2. Perfect, T.J., Stark, L.J., Tree, J.J., Moulin, C.J.A., Ahmed, L., & Hutter, R. (2004). Transfer-appropriate forgetting: the cue-dependent nature of retrieval-induced forgetting. *Journal of Memory & Language, 51,* 399-417.

Feb. 19   Reading Week (No Class)

Feb. 26   **Memory As Object V – Subjective Experience**

Core Reading: Jacoby, L. L., Kelley, C. M., & Dywan, J. (1989). Memory attributions. In H. L. Roediger III & F. I. M. Craik (Eds.), *Varieties of memory and consciousness: Essays in honour of Endel Tulving* (pp. 391-422). Hillsdale, NJ, US: Lawrence Erlbaum Associates, Inc.

Presentation Papers:
1. Bodner, G.E., & Lindsay, D.S. (2003). Remembering and knowing in context. *Journal of Memory & Language, 48,* 563-580.

Week of:	Topic and Readings

2. Kelley, C.M., & Lindsay, D.S. (1993). Remembering mistaken for knowing: ease of retrieval as a basis for confidence in answers to general knowledge questions. *Journal of Memory & Language, 32,* 1-24.

Mar. 5 **Memory As Tool I – Perception As Memory**

Core Reading: Jacoby, L. L. (1983). Perceptual enhancement: Persistent effects of an experience. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *9*(1), 21.

Presentation Papers:
1a. Hussain, Z. Sekuler, A.B., Bennett, P.J. (2011). Superior identification of familiar visual patterns a year after learning. *Psychological Science, 22,* 724-730.

1b. Kolers, P.A. (1976). Reading a year later. *Journal of Experimental Psychology: Human Learning and Memory, 2,* 554-565.

2. Masson, M.E.J. (1986). Identification of typographically transformed words: instance-based skill acquisition. *Journal of Experimental Psychology: Learning, Memory, & Cognition, 12,* 479-488.

Mar. 12 **Memory As Tool II – Memory As A Basis for Attentional Selection**

Core Readings:
1. Chun, M.M., & Jiang, Y. (2003). Implicit, long-term spatial contextual memory. *Journal of Experimental Psychology: Learning, Memory, & Cognition, 29,* 224-234.

Presentation Papers:
1. Chun, M.M., & Phelps, E.A. (1999). Memory deficits for implicit contextual information in amnesic subjects with hippocampal damage. *Nature Neuroscience, 2,* 844-847.

2. Thomson, D.R., & Milliken, B. (2013). Contextual distinctiveness produces long-lasting priming of pop-out. *Journal of Experimental Psychology: Human Perception & Performance, 39,* 202-215.

Mar. 19 **Memory As Tool III – Automatic Control**

Week of:	Topic and Readings

Core Reading: Jacoby, L.L., Lindsay, D.S., & Hessels, S. (2003). Item-specific control of automatic processes: stroop process dissociations. *Psychonomic Bulletin & Review, 10,* 638-644.

Presentation Papers:
1. Crump, M.J.C. & Milliken, B. (2009). The flexibility of context-specific control: evidence for context-driven generalization of item-specific control settings. *Quarterly Journal of Experimental Psychology, 62,* 1523-1532.

2. Brosowsky, N.P., & Crump, M.J.C. (2018). Memory-guided selective attention: single experiences with conflict have long-lasting effects on cognitive control. *Journal of Experimental Psychology: General, 147,* 1134-1153.

Mar. 26   **Memory As Tool IV – Episodic Contributions to Skilled Performance**

Core Reading: Logan, G. D. (1991). Automaticity and memory. *Relating theory and data: Essays on human memory in honor of Bennet B. Murdock*, 347-366.

Presentation Papers:
1. Lassaline, M.E., & Logan, G.D. (1993). Memory-based automaticity in the discrimination of visual numerosity. *Journal of Experimental Psychology: Learning, Memory, & Cognition, 19,* 561-581.

2. Crump, M.J.C., & Logan, G.D. (2010). Episodic contributions to sequential control: learning from a typist's touch. *Journal of Experimental Psychology: Human Perception & Performance, 36,* 662-672.

Apr. 2   Good Friday (No Class)

Apr. 9   **Memory As Tool V – Categorization**

Core Readings:
1. Murphy, G.L. (2004). Theories. In *The Big Book of Concepts* (pp.41-65)*. Cambridge, MA: MIT Press.

2. Murphy, G.L. (2004). Exemplar Effects and Theories. In *The Big Book of Concepts* (pp.73-115)*. Cambridge, MA: MIT Press.

Presentation Papers:

Week of: Topic and Readings

1. Brooks, L.R., Norman, G.R., & Allen, S.W. (1991). Role of specific similarity in a medical diagnostic task. *Journal of Experimental Psychology: General, 120,* 278-287.

2. Allen, S.W., & Brooks, L.R. (1991). Specializing the operation of an explicit rule. *Journal of Experimental Psychology: General, 120,* 3-19.

Course Assignments and Tests:

Assignment or Test	Due Date	Contribution to Final Mark (%)	Learning Outcomes Assessed
1st Presentation	Jan. 15 – Apr.9	10%	1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3, 2.4, 3.1, 4.1, 4.3, 4.4
2nd Presentation	Jan. 15 – Apr. 9	20%	1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3, 2.4, 3.1, 4.1, 4.3, 4.4
3rd Presentation	Jan. 15 – Apr. 9	20%	1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3, 2.4, 3.1, 4.1, 4.3, 4.4
Final Paper (Research Proposal)	Due at the beginning of next class	30%	1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3, 2.4, 3.1, 4.2, 4.3, 4.4
Participation	Every class	20%	1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3, 2.4, 3.1, 4.2, 4.3, 4.4

Additional Notes:

1. Each student will prepare and deliver two oral presentations – one in the first half of the course, and one in the second. Each presentation should be ~1 hour in length. Students are responsible for identifying a minimum of 3 discussion questions that will be discussed by the class following each presentation. Specific guidelines for oral presentations will be provided.

2. The final research paper can be written on a topic of your choice so long as it relates to the study of human memory. In this paper, you will identify an outstanding research question, and propose an experiment or series of experiments to address this question. The paper should discuss relevant background literature and provide motivation for the

particular question addressed (i.e., why is this issue interesting/important), include appropriate methodological details, and expected results/hypotheses. The paper should not exceed 12 double-spaced pages, and is due on **Monday, April 12, 2021.**

Final examination date and time: No final exam.
Final exam weighting: No final exam

[**Examination Regulations**](#)

Course Resources

Required Texts: No required textbooks. All readings will consist of book chapters and scholarly journal articles.

Recommended Texts: No recommended texts.

Other Resources: No other resources needed.

Software: Basic software programs including Microsoft PowerPoint and Microsoft Office will be useful in preparing presentations and final research proposal.

Field Trips: No field trips

Additional Costs: No additional costs

Course Policies

Grading Policies: There are no make-up assignments. Late assignments will be subject to a 10% per day grade penalty.

Course Policy on Group Work: No group work

Course Policy regarding use of electronic devices and recording of lectures:

Electronic recording of classes is expressly forbidden without consent of the instructor. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

Student Rights and Responsibilities when Learning Online

Privacy Rights
Lectures held via Zoom may be recorded for the purpose of later dissemination to students. As a student, you have the right to protect your privacy online and may choose to turn off your video and/or audio when in session. In the event that your video and/or audio remain on, please note that you are consenting to your presence in lecture

recordings. Under no circumstances are you permitted to transmit copies of the recordings to others, without the express written consent of the instructor.

Online behaviour

According to the University Secretariat, students have a responsibility to help support community members' access to the tools they need to engage in their learning and development, both in and outside of the classroom. An example of this type of responsibility is the requirement to abide by the following:

Section 4.3.3. Disruption - to not interfere with the normal functioning of the University, nor to intimidate, interfere with, threaten or otherwise obstruct any activity organized by the University, including classes, or to hinder other members of the University community from being able to carry on their legitimate activities, including their ability to speak or associate with others.

As such, appropriate online behaviour will not be tolerated. Examples of inappropriate online behaviour include

- Posting inflammatory messages about your instructor or fellow students
- Using obscene or offensive language online
- Copying or presenting someone else's work as your own
- Adapting information from the Internet without using proper citations or references
- Buying or selling term papers or assignments
- Posting or selling course materials to course notes websites
- Having someone else complete your quiz or completing a quiz for/with another student
- Stating false claims about lost quiz answers or other assignment submissions
- Threatening or harassing a student or instructor online
- Discriminating against fellow students, instructors and/or TAs
- Using the course website to promote profit-driven products or services
- Attempting to compromise the security or functionality of the learning management system
- Sharing your username and password

<u>University Policies</u>

Academic Consideration

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for

Academic Consideration:
[Academic Consideration, Appeals and Petitions](#)

Illness

The University will not normally require verification of illness (doctor's notes) for fall 2020 or winter 2021 semester courses. However, requests for Academic Consideration may still require medical documentation as appropriate.

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in [Graduate Calendar.](#)

Accessibility

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the [Student Accessibility Services](#) as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 54335 or email accessibility@uoguelph.ca or the [Student Accessibility Services Website](#)

Course Evaluation Information

Please refer to the [Course and Instructor Evaluation Website](#) .

Drop date

The last date to drop one-semester courses, without academic penalty, is Monday, April 12, 2021. For regulations and procedures for Dropping Courses, see the [Schedule of Dates in the Graduate Calendar](#).

Additional Course Information

No additional course information.