

# **PSYC\*6790, Course Outline: Winter 2017**

## **General Information**

Course Title: Memory & Cognition

Course Description:

This course involves a broad coverage of topics in memory and cognition including attention, working memory, social cognition, and false memories.

Credit Weight: 0.5

Academic Department (or campus): Psychology

Semester Offering: Winter 2017

**Class Schedule and Location:** Tuesdays 8:30-11:20am in GRHM 2302

## **Instructor Information**

Instructor Name: Jillian O'Connor

Instructor Email: joconn03@uoguelph.ca

Office location and office hours: MacKinnon 545. Office hours available by appointment.

## **GTA Information**

GTA Name: N/A

GTA Email: N/A

GTA office location and office hours: N/A

## **Course Content**

### **Specific Learning Outcomes:**

1. Critical and Creative Thinking: Depth and breadth of understanding
2. Critical and Creative Thinking: Independent Inquiry and Analysis
3. Literacy: Information literacy
4. Communicating: oral communication
5. Communicating: written communication
6. Communicating: Integrative communication
7. Professional and Ethical Behaviour: leadership
8. Professional and Ethical Behaviour: Intellectual Independence
9. Professional and Ethical Behaviour: Personal Organization & Time Management

**Lecture Content: Classes will be comprised of student-lead seminars on selected research within the assigned topic area.**

Class	Date	Topic
1	January 10	Introduction to the course
2	January 17	Reasoning and decision making
3	January 24	Attention
4	January 31	Working memory
5	February 7	Implicit social cognition
6	February 14	Mirror Neurons and social cognition
	February 21	WINTER BREAK - NO CLASS
7	February 28	Executive function
8	March 7	Memory
9	March 14	Forgetting
10	March 21	False memory
11	March 28	Adaptive memory
12	April 4	Dyslexia

**Labs: N/A**

**Seminars: See information under lecture content.**

**Course Assignments and Tests:**

Assignment or Test	Due Date	Contribution to Final Mark (%)	Learning Outcomes Assessed
Weekly Question submission	9:00am Monday	10	1, 2, 3
Peer evaluation of presentations	At the end of each class	10	2, 5, 8
Discussion participation	In each class	10	2, 4, 6, 7, 8
Seminar topic Presentation and leadership x 2	During class time on topic week	20 each x 2 seminars = 40	1, 2, 3, 4, 6, 7, 8, 9
Final paper	April 11 <sup>th</sup>	30	1, 2, 3, 5, 6, 8, 9

**Additional Notes (if required):**

Weekly Question submission – 10%

Each week students are required to submit 2 discussion question per assigned reading (marked with \*). Deadline for submission is 9:00am Monday prior to each class.

Peer evaluation of presentations – 10%

Students are required to complete and submit peer evaluations for each presentation, due at the end of each class.

Discussion participation – 10%

Students are expected to contribute to class discussion in a meaningful way.

Seminar topic Presentation and leadership – (20% x 2) 40%

Seminar discussions will be led by each seminar leader who will develop and expand upon the topic for the seminar by giving a presentation on the research covered in the reading(s) labeled with a number. Presentations will be limited to 20 minutes, and are to be followed by a 30 minute discussion period lead by the presenter. The presenter is responsible for preparing 5 questions for class discussion. Each member of the seminar will be required to present two seminars. Presenters must submit their power point and discussion questions by 5pm on the day of presentation.

The presentation of the research will be in depth (i.e., theoretical rationale, methods, results, interpretations, implications of research studies) and involve one or more of the studies cited in the readings and/or involve a description of theoretical positions. Each seminar leader will also be responsible for integrating his or her reading(s) with the readings assigned to the whole class. Seminar leaders will serve as “experts” on the research that is reported in their presentations. In order to provide structure for the seminar discussions, as well as to encourage critical and thoughtful evaluation of the material, each member of the class (except those leading the seminar) will be required to generate two written question about the readings assigned to everyone in the seminar (indicated by an \*).

Final Paper – 30%

Students will be responsible for a final paper (8 pages maximum, not including references) on an assigned topic area. Broad topic areas will be assigned, and students will select a specific area of research for critical analysis. Sub-topics must be submitted for approval (Feb 21<sup>st</sup>). Topic papers will be due 1 week after the last week of class (April 11<sup>th</sup>).

**Final examination date and time: N/A, final paper in lieu of examination**

**Final exam weighting: N/A**

### **Course Resources**

**Required Texts: N/A**

**Recommended Texts: N/A**

**Lab Manual: N/A**

**Other Resources:**

Please check CourseLink for announcements, assignment submission, and other course details.

Readings:

The seminar topic readings are listed below. The readings labeled with a \* are required of everyone in class and are designed to provide an introduction to the topic of the

seminar. The readings labeled with a 1, 2 or 3 are elaborations on the seminar topic and will be presented by the seminar leaders. A seminar leader will present the article or articles with the same numerical value so that all of the 1 article(s) for a topic will be presented by the first seminar leader, all of the 2 article(s) for the topic will be presented by the second seminar leader, and, and all of the 3 article(s) for the topic will be presented by the third seminar leader.

#### January 17: Reasoning and Decision Making

Kahneman, D. (2003). A perspective on judgment and choice: Mapping bounded rationality. *American Psychologist, 58*, 697 – 720. \*

Stanovich, K. E., West, R. F. & Toplak, M. E. (2013). Myside bias, rational thinking, and intelligence. *Current Directions in Psychological Science, 22*, 259 – 265. \*

St. B. T. Evans, J. & Stanovich, K. E. (2013). Dual-process theories of higher cognition: Advancing the debate. *Perspectives on Psychological Science, 8*, 223- 241. \*

#### January 24: Attention

Posner, M. I. & Rothbart, M. K. (2007). Research on attention as a model for the integration of psychological science. *Annual Review of Psychology, 58*, 1-23. \*

Dye, M. W. G., Green, C. S. & Bavelier, D. (2009). Increasing speed of processing with action video games. *Current Directions in Psychological Science, 18*, 321-326 1

Huntsinger, Z. J. R. (2013). Does emotion directly tune the scope of attention? *Current Directions in Psychological Science, 22*, 265 – 270. 2

Todd, R. M., Cunningham, W. A., Anderson, A. K. & Thompson, E. (2012). Affect-biased attention as emotion regulation. *Trends in Cognitive Sciences, 16*, 365 – 372. 3

#### January 31: Working memory

Baddeley, A. D. (2012). Working memory: Theories, models, and controversies. *Annual Review of Psychology, 63*, 1-29.\*

Shipstead, Z., Redick, T. S. & Engle, R. W. (2012). Is working memory training effective? *Psychological Bulletin, 138*, 628-654.\*

Gathercole, S. E., Dunning, D. L. & Holmes, J. (2012). Cogmed training: Let's be realistic about intervention research. *Journal of Applied Research in Memory and Cognition, 1*, 201-203. 1

Klingberg, T. (2010). Training and plasticity of working memory. *Trends in Cognitive Sciences, 14*, 317-324. 2

Anguera, J. J. et al. (2013). Video game training enhances cognitive control in older adults. *Nature, 501*, 97-103. 3

#### February 7: Implicit social cognition

Nosek, B. A, Hawkins, C.B. & Frazier. R. S. (2011). Implicit social cognition: From measures to mechanisms. *Trends in Cognitive Sciences, 15*, 152-159. \*

- Gawronski, B., LeBel, E. P., & Peters, K. R. (2007). What do implicit measures tell us? Scrutinizing the validity of three common assumptions. *Perspectives on Psychological Science*, 2, 181-193. 1
- Nosek, B. A. (2007). Implicit-explicit relations. *Current Directions in Psychological Science*, 16, 65-69. 2
- Bargh, J. A., Schwadwer, K. L., Hailey, S. E., Dyer, R. L. & Boothby, E. J. (2012). Automaticity in social-cognitive processes. *Trends in Cognitive Sciences*, 16, 593- 605. 3

#### February 14: Mirror Neurons and Social Cognition

- Rizzolatti, G & Sinigaglia, C. (2010). The functional role of the parieto-frontal mirror circuit: Interpretations and misinterpretations. *Nature Reviews Neuroscience*, 11, 264 -274. \*
- Hickok, G. (2008). Eight problems for the mirror neuron theory of action understanding in monkeys and humans. *Journal of Cognitive Neuroscience*, 21, 1229-1243. 1
- Bach, P. & Tipper, S. P. (2006). Bend it like Beckham: Embodying the motor skills of famous athletes. *Quarterly Journal of Experimental Psychology*, 59, 2033-2039. 2
- Oosterhof, N. N., Tipper, S. P. & Downing, P. E. (2013). Crossmodal and action specific: Neuroimaging and the human mirror neuron system. *Trends in Cognitive Sciences*, 17, 311 -318. 2
- Oberman, L. M. & Ramachandran, V. S. (2007). The simulating social mind: The role of the mirror neuron system and simulation in the communicative deficits of autistic spectrum disorders. *Psychological Bulletin*, 133, 310 -327. 3

#### February 28: Executive Function: Cognition, Emotion, and Self-Regulation

- Ochsner, K. N. & Gross, J. J. (2008). Cognitive emotion regulation: Insights from cognitive and affective neuroscience. *Current Directions in Psychological Science*, 17, 153 -158. \*
- Wegner, D. M. (2011). Setting free the bears: Escape from thought suppression. *American Psychologist*, 66, 669-680.\*
- Schooler, J. W. et al. (2011). Meta-awareness, perceptual decoupling, and the wandering mind. *Trends in Cognitive Sciences*, 15, 319-326. 1
- Lutz, A., Slagter, H. A., Dunne, J. D., & Davidson, R. J. (2008). Attention regulation and monitoring in meditation. *Trends in Cognitive Sciences*, 12, 163-169. 2
- Teper, R., Segal, Z. V. & Inzlicht, M. (2013). Inside the mindful mind: How mindfulness enhances emotion regulation through improvements in executive control. *Current Directions in Psychological Science*, 22, 449-454. 3

#### March 7: Memory

- Rosenbaum, R. S., Kohler, S., Schacter, D. L., Moscovitch, M., Westmacott, R., Black, S. E., Gao, F., & Tulving, E. (2005). The case of K.C.: Contributions of a memory impaired person to memory theory. *Neuropsychologia*, 43, 989-1021.\*
- Rosenbaum, R. S., Stuss, D. T. Levine, B. & Tulving, E. (2007). Theory of mind is independent of episodic memory. *Science*, 318, 1257. \*
- Sparrow, B, Liu, J. & Wegner, D. M. (2011). Google effects on memory: Cognitive consequences of having information at our finger tips. *Science*, 333, 776 – 778. 1
- Dalgleish, T., Hauer, B. & Kuyken, W. (2008). The mental regulation of autobiographical recollection in the aftermath of trauma. *Current Directions in Psychological Science*, 17, 259-263. 2

Roediger III, H. L. & Butler, A. C. (2011). The critical role of retrieval practice in long-term retention. *Trends in Cognitive Sciences*, 15, 20-27. 3

#### March 14: Forgetting

Wixted, J.T. (2004). The psychology and neuroscience of forgetting. *Annual Review of Psychology*, 55, 235-269\*

Anderson, M.C., Bjork, R.A., & Bjork, E.L. (1994). Remembering can cause forgetting: retrieval dynamics in long-term memory. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 20, 1063–1087. 1

Sahakyan, L. (2004). Destructive effects of “forget” instructions. *Psychonomic Bulletin & Review*, 11, 555-559. 2

Barnier, A. J. et al. (2007). Directed forgetting of recently recalled autobiographical memories. *Journal of Experimental Psychology: General*, 136, 301-322.3

#### March 21: False memory

Loftus, E. L. & Davis, D. (2006). Recovered memories. *Annual Review of Clinical Psychology*, 2, 469-498.\*

Costandi, M. (2013). Corrupted memories. *Nature*, 500, 268 – 270.\*

Roediger, H. L. & McDermott, K. (2000). Tricks of memory. *Current Directions in Psychological Science*, 9, 123-127. 1

Anderson, M. C. & Levy, B. J. (2009). Suppressing unwanted memories. *Current Directions in Psychological Science*, 18, 189-194. 2

Schacter, D. L., Guerin, S. A. & St. Jacques, P. L. (2011). Memory distortions: An adaptive perspective. *Trends in Cognitive Sciences*, 15, 467 - 474. 3

#### March 28: Adaptive memory

Nairne, J. S., & Pandeirada, J. N. S. (in press). Adaptive Memory: The Evolutionary Significance of Survival Processing. *Perspectives on Psychological Science*.\*

Nairne, J. S., Thompson, S. R., & Pandeirada, J. N. S. (2007). Adaptive memory: Survival processing enhances retention. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 33, 263-273. 1

Weinstein, Y., Bugg, J.M., & Roediger III, H.L., (2008). Can the survival recall advantage be explained by basic memory processes? *Memory & Cognition*, 36, 913–919. 2

Smeets, T., et al. (2012). Survival processing in times of stress. *Psychonomic Bulletin & Review*, 19, 113-118. 3

#### April 4: Dyslexia

Ziegler, J. C. & Goswami, U. (2005). Reading acquisition, developmental dyslexia, and skilled reading across languages: A psycholinguistic grain-size theory. *Psychological Bulletin*, 131, 3 - 29.\*

Goswami, U. (2011). A temporal sampling framework for developmental dyslexia. *Trends in Cognitive Sciences*, 15, 3 - 10. 1

- Paulesu, E., Demonet, J-F., Fazio, F., McCory, E., Chanoine, V, Brunswik, N. Cappa, S. F., Cossu, G., Habib, M., Frith, C. D. & Frith, U. (2001). Dyslexia: Cultural diversity and biological unity. *Science*, 291, 2165-2167. 2
- Siok, W. T., Perfetti, C. A., Jin, Z. & Tan, L. H. (2004). Biological abnormality of impaired reading is constrained by culture. *Nature*, 431, 71-76. 2
- Siok, W. T., Niu, Z., Jin, Z., Perfetti, C. A., & Tan, L. H. (2008). A structural-functional basis for dyslexia in the cortex of Chinese readers. *Proceedings of the National Academy of Science*, 105, 5561-5566. 2
- Vidyasagar, T. R. & Pammer, K. (2009). Dyslexia: A deficit in visual-spatial attention, not phonological processing. *Trends in Cognitive Sciences*, 14, 57 -63. 3

## **Course Policies**

### **Grading Policies**

Grades will be calculated according to the University of Guelph Graduate calendar Grades Schedule.

Weekly question submission, final papers, seminar presentations and discussion question questions are to be submitted via CourseLink according to the above deadlines. Peer evaluations of presentations are due at the end of each class in hardcopy format.

Late submission policies

Late submissions of weekly questions and peer evaluation of presentations will not be accepted and will receive a grade of 0. Late submission of final papers and seminar presentation materials will be penalized by 10% each day.

### **Graduate Grade interpretation**

### **Course Policy on Group Work:**

Assignments are the responsibility of each individual student, and group work will not be permitted.

### **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.

## **University Policies**

### **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

### **Grounds for Academic Consideration**

### **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 the [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 [csdexams@uoguelph.ca](mailto:csdexams@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 March 10 2017. For regulations and procedures for Dropping Courses, see the [Schedule of Dates in the Academic Calendar](#).

[Current Graduate Calendar](#)

## **Additional Course Information**

Course instructors are allowed to use software to help in detecting plagiarism or unauthorized copying of student assignments. Plagiarism is one of the most common types of academic misconduct on our campus. Plagiarism involves students using the work, ideas and/or the exact wording of other people or sources without giving proper credit to others for the work, ideas and/or words in their papers. Students can unintentionally commit misconduct because they do not know how to reference outside sources properly or because they don't check their work carefully enough before handing it in. As the 2014/15 Undergraduate Calendar states: "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" (p. 31).

In this course, your instructor will be using Turnitin.com to detect possible plagiarism, unauthorized collaboration or copying as part of the ongoing efforts to prevent plagiarism in the College of Social and Applied Human Sciences.

A major benefit of using Turnitin is that students will be able to educate and empower themselves in preventing misconduct. In this course, you may screen your own assignments through Turnitin as many times as you wish before the due date. You will be able to see and print reports that show you exactly where you have properly and improperly referenced the outside sources and materials in your assignment.