

PSYC*3270, Course Outline: Fall 2025

General Information

Some courses are offered virtually and some face to face. **This course is offered using the Face-to-Face format. The course has set day, time, and location of class.**

Course Title: Cognitive Neuroscience

Course Description: This course provides an overview of the neural mechanisms that support cognitive abilities such as perception, attention, memory, emotion, and reasoning. An emphasis is placed on primary research with the goal of revealing the types of methods that cognitive neuroscientists use, and the types of questions they ask, as they try to understand the relationship between our brains and our minds.

Credit Weight: 0.50

Academic Department (or campus): Department of Psychology

Semester Offering: Fall 2025

Class Schedule and Location: Tu/Th 1:00 PM - 2:20 PM, ALEX 100

Instructor Information

Instructor Name: Dr. Mark Fenske

Instructor Email: mfenske@uoguelph.ca

Expectations about Email Communication: I do my best to answer emails within 2 business days. I do not check or answer emails on Saturdays or Sundays. I prefer that you ask your questions during class so that everyone can benefit from the discussion. Only questions that can be answered simply (e.g., “yes” or “no”, or with a short sentence) will be answered by email. Questions requiring longer answers will result in a request for you to talk with me directly. If the matter is private, please attend office hours to discuss.

Office hours: Tuesdays from 3:30 - 4:30 PM via Zoom.

Go to https://calendly.com/mark_fenske/office-hour-10-min-slot? to book a time.

GTA Information

GTA Name: Kelsy Ervin

GTA Email: kervin@uoguelph.ca

GTA office location and office hours: TBA

GTA Name: Jaime Lamont

GTA Email: jlamon03@uoguelph.ca

GTA office location and office hours: TBA

Course Content

Specific Learning Outcomes:

Critical & Creative Thinking:

- Depth & Breadth of Understanding (Reinforce)
- Inquiry & Analysis (Reinforce)
- Problem Solving (Master)

Literacy:

- Information (Reinforce)
- Methodological (Master)
- Technological (Introduce)

Professional and Ethical Behaviour:

- Ethical issues in research (Reinforce)

Communication:

- Written (Master)
- Reading (Reinforce)
- Integrative (Master)

These Learning Outcomes will be achieved through the successful completion of the following Objectives. By the end of this course, you should have:

- 1) gained an understanding of the major methods used in cognitive neuroscience, and the major advances that have been made in providing brain-based accounts of human thought, feelings and behaviour.
- 2) gained an ability to critically assess the usefulness of research methods and experimental designs for investigating links between the brain and mind.
- 3) realized the value of using multiple converging approaches to examine links between neural and cognitive mechanisms.
- 4) gained an ability to identify and critically evaluate the relevance and potential usefulness of cognitive-neuroscience findings to real-world situations.
- 5) expanded your communication skills to be able to describe how cognitive-neuroscience findings can be applied to promote successful outcomes in day-to-day activities.

Lecture Content:

A list of topics and readings is indicated below for specific dates. This represents a tentative course schedule that is subject to change throughout the semester.

Date	Topic	Readings
Sep. 04	Introduction & Overview of the brain	Ch. 1, 2
Sep. 09	Methods: Electrophysiology (intracranial, EEG/ERP & MEG)	Ch. 3
Sep. 11	Methods: Functional imaging (PET & MRI/fMRI)	Ch. 4
Sep. 16	Methods: Stimulation (TMS, tDCS, tACS)	Ch. 5
Sep. 18	Methods: Advanced topics	TBA
Sep. 23	Discuss newspaper assignment	
Sep. 25	Midterm Exam I	
Sep. 30	Early visual cortex	Ch. 7
Oct. 02	Ventral & Dorsal visual streams	TBA
Oct. 07	Hearing, music and the brain	Ch. 8 + TBA
Oct. 09	Attention	Ch. 9 + K&U
Oct. 14	Holiday: No class	
Oct. 16	No class (work on your newspaper assignment)	
Oct. 21-23	Attention (continued)	
Oct. 28	Midterm Exam II	
Oct. 30	Movement/Action	Ch. 10
Nov. 04-11	Working & Long-term Memory	Ch. 11
Nov. 13	Executive Functions (newspaper due Nov. 13)	Ch. 14
Nov. 18	Default-mode Network	Ch. 15
Nov. 20	Cognition-emotion interactions	Ch. 16 + TBA
Nov. 25	Emotion regulation	TBA
Nov. 27	Social neuroscience	TBA
Dec. 8	Final Exam: 8:30-10:30am	

Course Assignments and Tests:

Assignment or Test	Due Date	Contribution to Final Mark (%)	Objectives Assessed
Midterm Exam I	Sep. 25	25	1, 2, 4, 5
Midterm Exam II	Oct. 28	25	1, 2, 4, 5
Newspaper Column	Nov. 13	20	1, 2, 3, 4, 5

Midterm and Final Exams: Exams will be designed to assess students' understanding of all material covered in readings and in-class lectures. The exams are not cumulative in nature, and the format of each exam will be a mixture of multiple-choice and short written-answer questions. Exam content will cover both readings and lectures.

Assignment – Newspaper Column: Each student will be required to translate and make accessible to the public-at-large a set of key cognitive-neuroscience findings on a topic of their choice. The resulting written overview will take the form of a newspaper column. This project is designed to provide you with experience in the art of knowledge translation by requiring that you conduct a literature search, then read and summarize journal articles in a way that could be understood (and that would be of interest!) if read by a general audience without a background in psychology or neuroscience. The column must be typed and must not exceed 750 words.

Final examination date and time: Dec. 8, 8:30 AM – 10:30 AM

Final exam weighting: 30% of final mark

Course Resources

Required Texts:

Ward, J. (2025). *Student's Guide to Cognitive Neuroscience (5th Edition)*. London: Routledge. (Available through Course Reserve at McLaughlin Library).

Cost of Texts:

The cost of the required text for this course, *Student's Guide to Cognitive Neuroscience*, is \$106.95 at the campus bookstore. Students are welcome to use second-hand copies of the textbook or purchase the textbook from alternate locations. The prices in other locations may differ from that at the bookstore and prices at the bookstore are subject to change.

Other Resources:

Additional readings will be announced and made accessible through CourseLink.

Course Policies

Grading Policies

Completed assignments must be submitted to the corresponding Dropbox folder on the CourseLink website before the deadline on the due date indicated above. Early submissions are welcome. Late submissions will not be accepted. **Failure to submit an assignment on time will result in a grade of zero for that assignment.**

Additional grade-related information can be found in the calendar under [Undergraduate Grading Procedures](#)

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

Disclaimer:

Please note that a revision of the format of course offerings, changes in classroom protocols, and academic schedules is occasionally required. Any such changes will be announced via CourseLink and/or class email. This includes on-campus scheduling during the semester, mid-terms and final examination schedules.

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](#)

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 Undergraduate Calendar:

[Academic Misconduct Policy](#)

Illness

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g., final exam or major assignment).

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 [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](#)

Student Feedback Questionnaire

These questionnaires (formerly course evaluations) will be available to students during the last 2 weeks of the semester. Students will receive an email directly from the Student Feedback Administration system which will include a direct link to the questionnaire for this course. During this time, when a student goes to login to Courselink, a reminder will pop-up when a task is available to complete.

[Student Feedback Questionnaire](#)

Drop date

The last date to drop one-semester courses, without academic penalty, is Friday November 28, 2025. For regulations and procedures for Dropping Courses, see the [Schedule of Dates in the Academic Calendar](#).

Instructors must provide [meaningful and constructive feedback, at minimum 20% of the final course grade, prior to the 40th class day](#). For courses which are of shorter duration, 20% of the final grade must be provided two-thirds of the way through the course.

[Current Undergraduate 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. 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.

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.