# PSYC*3270, Course Outline: Fall 2020

## General Information

**Due to the COVID-19 pandemic, this course is offered in an alternative format:**
Alternative Delivery Synchronous – AD-S Virtual

**Course Title:** Cognitive Neuroscience

**Course Description:** This course will focus heavily on reviewing and discussing primary research, with the goal of revealing the types of methods that cognitive neuroscientists use, and types of questions that they ask, as they try to understand the relationship between our minds and brains.

**Credit Weight:** 0.5 credits

**Academic Department (or campus):** Psychology

**Semester Offering:** Fall 2020

**Class Schedule and Location:** Tuesdays and Thursdays, 11:30am – 12:50pm. The first lecture (Thursday, September 10th) will be held using Zoom. Meeting ID: 988 6469 1334, passcode: 3270.

## Instructor Information

**Instructor Name:** Lindsay Plater

**Instructor Email:** lplater@uoguelph.ca
(NOTE: please read the section on contacting the instructor / TAs in the Course Policies section)

**Office location and office hours:** Office hours will be held virtually using Zoom Tuesdays and Thursdays, 11:30 am – 12:30 pm. Meeting ID: 958 8426 9054, passcode: 3270. Note that there are NO office hours on the first day of class, on quiz days, or on days where there is no class scheduled (see Lecture Content section). The last office hour will be held on Tuesday December 1st.

## GTA Information

**GTA Name:** TBD

**GTA Email:** TBD

**GTA office location and office hours:** Virtually, TBD

## Course Content

**Specific Learning Outcomes:**

By the end of this course, students should be able to:

1. Recall the major discoveries in the field of cognitive neuroscience, and explain how these discoveries inform our current understanding of the mind and brain.
2. Explain the questions that researchers posed to make these discoveries, and how the questions were eventually answered using cognitive neuroscience paradigms.
3. Predict, based on past research, the results of hypothetical experiments.
4. Find research articles reporting cognitive neuroscience discoveries, and assess the quality of the contribution made by a given article.
5. Understand and evaluate the methodologies employed by cognitive neuroscientists.
6. Describe how the data reported by cognitive neuroscientists relates to the conclusions they made about the mind and brain.
7. Provide accurate written descriptions summarizing cognitive neuroscience research.
8. Independently read and understand cognitive neuroscience literature.
9. Differentiate between researchers' (and university instructors') claims that are well founded on scientific research from those that are not (even if they sound plausible).
10. Appreciate the ethical decisions involved in cognitive neuroscience research, and why different people come to different conclusions.

**Lecture Content:**

The first lecture (Thursday, September 10th) will be held using Zoom. Meeting ID: 988 6469 1334, passcode: 3270.

Other lectures will be recorded in advance, and posted on CourseLink. This format has a few advantages, namely: 1) the lecture content will be accessible for the entire semester, and 2) we can use the designated class time for office hours, when all students should be available. Note that there are NO office hours on the first day of class, on quiz days, or on days where there is no class scheduled. The last office hour will be held on Tuesday December 1st.

| Lecture # | Date | Topics (may change) and other important dates |
|---|---|---|
| 1 | Thurs. Sept. 10 | Introduction |
| 2 | Tues. Sept. 15 | Overview of the brain |
| 3 | Thurs. Sept. 17 | Methods: Imaging (focus on fMRI) |
| 4 | Tues. Sept. 22 | Methods: Electrophysiology (focus on EEG/ERP) |
| 5 | Thurs. Sept. 24 | Methods: Stimulation (focus on TMS) |
| | **Tues. Sept. 29** | **Quiz 1** |
| 6 | Thurs. Oct. 1 | Perception: Low-level vision |
| 7 | Tues. Oct. 6 | Perception: High-level vision |
| 8 | Thurs. Oct. 8 | Attention: Spatial |
| | Tues. Oct. 13 | **Fall Study Break, no class** |

| Lecture # | Date | Topics (may change) and other important dates |
|---|---|---|
| 9 | Thurs. Oct. 15 | Attention: Feature/object |
| 10 | Tues. Oct. 20 | Attention: Bottom-up |
| | **Thurs. Oct. 22** | **Quiz 2** |
| 11 | Tues. Oct. 27 | Working Memory |
| 12 | Thurs. Oct. 29 | Executive Function |
| 13 | Tues. Nov. 3 | Analysis: Connectivity |
| 14 | Thurs. Nov. 5 | Long-term Memory |
| | **Tues. Nov. 10** | **Quiz 3** |
| 15 | Thurs. Nov. 12 | Analysis: Classification |
| 16 | Tues. Nov. 17 | Emotion |
| | Thurs. Nov. 19 | **No class today** |
| 17 | Tues. Nov. 24 | Consciousness |
| 18 | Thurs. Nov. 26 | Analysis: Intra-individual Variability |
| 19 | Tues. Dec. 1 | Interactions Across Cognition |
| | **Thurs. Dec. 3** (make-up day for Tues. Oct. 13) | **Quiz 4** |
| | **Tues. Dec. 8** | **Final Paper due before 11:59 pm** |

**Labs:** Not applicable

**Seminars:** Not applicable

**Course Assignments and Tests:**

| Quiz or Paper | Due Date | Contribution to Final Mark (%) | Learning Outcomes Assessed |
|---|---|---|---|
| Practice Quiz | Tues. Sept. 22 | Up to 2% BONUS | |
| Quiz 1 | "In-class", Tues. Sept. 29 | 25% (best 3 of 4) | 1-3, 5-10 |
| Quiz 2 | "In-class", Thurs. Oct. 22 | 25% (best 3 of 4) | 1-3, 5-10 |
| Quiz 3 | "In-class", Tues. Nov. 10 | 25% (best 3 of 4) | 1-3, 5-10 |
| Quiz 4 | "In-class", Thurs. Dec. 3 | 25% (best 3 of 4) | 1-3, 5-10 |
| Final Paper | Online, Tues. Dec. 8, 11:59pm | 25% | 1, 2, 4-9 |

**Additional Notes (if required):**

**"In-class" quizzes:** The objective of the quizzes is to allow you to demonstrate that you have gained the relevant knowledge about the function of our minds and brains, and that you can synthesize this knowledge to make predictions about unanswered questions in cognitive neuroscience. The quizzes will contain both multiple-choice and written-answer questions. Quiz questions will cover lecture material **and** assigned readings and videos. Quizzes are **not cumulative**. Your final grade for the quiz component of the course is based on the average of your best three quizzes. For greater clarity, if you miss a quiz, that quiz will be counted as your worst grade (and will be dropped); if you write all four quizzes, the quiz with the lowest grade

will be dropped. Please see notes about missed quizzes and the use of Respondus LockDown Browser below.

**Final Paper:** It is highly recommended that you start your final paper early in the semester; this paper should not be left to the last minute. The final paper will consist of: (a) a review of one current (2014 to present) research article in cognitive neuroscience (broadly defined, but **not** from the lectures or course readings), and (b) a proposal for an additional experiment. The review should include the basic research question, methodology, results, and conclusions from the reviewed paper. The proposal should consist of a clearly defined experimental question, the theoretical underpinnings of the question, the method for examining the research question, and predicted results. In addition to a cover page and a reference page, the text of the paper is strictly limited to 6 pages (double-spaced, not less than 12 point font, not less than 1 inch margins). Additional guidance on the paper will be given at the end of class on Thursday October 29th. The grading rubric is available on CourseLink.

The paper must be submitted to the **Final Paper Dropbox** available through CourseLink by **11:59pm on Tuesday December 8th**. To ensure that the instructor and TA(s) can read your document, the **only acceptable file formats are Microsoft Word (i.e., .doc or .docx) and PDF**. Please see note about late papers below.

When you submit your final paper through CourseLink, your document will automatically be processed by **Turnitin software**. This software will produce an "Originality Report" for your work. This report is a useful tool for you in assessing potential instances of plagiarism, and you should definitely make use of it. Two important notes:

1) A Turnitin Student Guide is available in the Content Section on CourseLink that describes how to make the best use of this software.
2) You can resubmit your assignment as many times as you want (only the most recent version will be kept / graded). Please note, however, that it can take up to 24 hours to generate an Originality Report for resubmissions, so plan accordingly.

**Final examination date and time:** No final exam

**Final exam weighting:** Not applicable

## Course Resources

**Required Texts:** Not applicable
**Recommended Texts:** Not applicable
**Lab Manual:** Not applicable

**Other Resources:**

**Assigned Readings and Videos**
There is no course textbook. All assigned readings are primary research articles, and are available through CourseLink along with any assigned videos. The assigned readings are designed to help you develop:
- Your ability to process journal articles, which are the most reliable source for staying up-to-date with research.
- Your ability to think independently. Many of the assigned readings will not be discussed in class, but will be tested through the in-class quizzes. Your challenge is to figure out how to make sense of these articles.
- Stuck / confused? Access the Study Guide document in the Assigned Readings and Videos section on CourseLink. I recommend that you use this study guide for both class content AND assigned work in order to effectively summarize content. This will help you learn what content is important, and it also doubles as a really helpful guide to prepare for the quizzes!

**CourseLink**
- "Bare bones" lecture slides and pre-recorded videos will be posted to CourseLink by 7am on the morning of each lecture, at the latest.
- Quizzes will be held on CourseLink during scheduled class time; you will be required to use LockDown Browser and Respondus Monitor (i.e., a webcam) to complete the quizzes.
- Grades for all in class quizzes will be shared through CourseLink. As soon as grades are posted, I will add an announcement to the CourseLink News Feed. It is your responsibility to periodically verify your grades on CourseLink.

**Field Trips:** Not applicable.
**Additional Costs:** Not applicable.

## Course Policies

**Contacting the Instructor or TA**
To help your instructor and TAs stay on top of answering your questions, please use the following procedures when contacting us:
- The fastest way to get a response to simple questions is to check the class discussion board on CourseLink; if the question has not already been asked, post it! Note: by "simple", I mean questions that only require a sentence or two to answer. I check the board every weekday, and you are encouraged to respond to each other's posts.
- Longer questions, and questions of a confidential nature, should be brought to my office hours (Tuesdays and Thursdays 11:30 am – 12:30 pm, excluding the first day of class,

quiz days, and days with no class). I'm happy to have visitors, so take advantage of these office hours!

- Please direct questions about quiz grading to the TA who marked your quiz during their office hours (which will be announced on CourseLink after each Quiz).
- You will note that e-mailing your instructor / TA was not listed here; in order to stay on top of questions and to provide an equitable teaching experience for all students, e-mails are reserved for emergencies only. Non-emergency e-mails will usually be answered within 48 hours during weekdays. In the event that the instructor / TA deems the e-mail to be a non-emergency, a form response (i.e., please refer to the syllabus, please post questions on CourseLink, etc.) may be used. It is possible that some e-mails that are not from a university address may be treated as spam.

**Grading Policies**

[Undergraduate Grading Procedures](#)

*Please note that these policies are binding unless academic consideration is given to an individual student.*

**Re-Grading of Assignments Policy**

Where a student is of the belief that an assignment has not been accurately graded, they can follow the following procedure (in order):

1) as soon as possible, meet with the original TA that graded the assignment. The TA will adjust the grade if a calculation error occurred.
2) contact the instructor (via e-mail) about the complaint.
3) contact the Chair of the Department of Psychology.

Note that the grade given to the re-graded assignment is final, regardless of whether the grade has increased, decreased, or stayed the same.

[Undergraduate Grade Reassessment Procedures](#)

**Missed Quizzes**

This course uses frequent "in-class" quizzes, which affords you the opportunity to drop your worst quiz mark. The tradeoff is that there are **no** make-up quizzes, because make-up quizzes could delay the grading process and prevent the instructor / TA(s) from returning quiz grades in a timely fashion. The first time you miss a quiz, this will be treated as your worst quiz grade that

is dropped; you do NOT need to inform the instructor for the first missed quiz. Additional missed quizzes will be given a grade of 0 and will count toward your final grade unless you contact the instructor (via e-mail) within one week stating illness or compassionate circumstances.

**Late Final Paper**

Papers are graded out of 100 marks, and 10 marks will be subtracted from the assigned grade each day the paper was late, including weekend days. Papers submitted more than 5 days late will receive a grade of 0. Late papers should be submitted through the Final Paper Dropbox on CourseLink.

**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. Similarly, any material created by the course instructor is intended for those enrolled in this course solely. Under no circumstances are you allowed to disseminate course materials to external parties.

**Student Rights and Responsibilities when Learning Online**

*Privacy Rights*
Lectures held via Zoom may be recorded for the purpose of uploading to CourseLink. Office hours held via Zoom may be recorded for the purpose of ensuring appropriate online behaviour. 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 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, inappropriate 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
- Copying or presenting someone else's work as your own
- Adapting information from the Internet without using proper citations or references
- Buying or selling quiz banks, term papers, or assignments
- Posting or selling course materials to other students or course notes websites
- Having someone else complete your quiz
- Completing a quiz for/with another student
- Stating false claims about lost quiz answers or other assignment submissions
- Threatening or harassing a student, instructor, and/or TA
- 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

## University Policies

**Disclaimer**

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings and academic schedules. Any such changes will be announced via CourseLink and/or class email. All University-wide decisions will be posted on the COVID-19 website and circulated by email.

**Illness**

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

**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](#)

**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](#)

**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 Dec. 04, 2020 . For regulations and procedures for Dropping Courses, see the [Schedule of Dates in the Academic](#)

[Calendar](). Instructors must still [provide meaningful and constructive feedback to students prior to the 40th class]() day.

[Current Undergraduate Calendar]()

## **Additional Course Information**

**Respondus LockDown Browser**

This course requires the use of LockDown Browser and Respondus Monitor (webcam) for online quizzes within CourseLink. Use of Lockdown Browser with a webcam has been implemented to maintain the academic integrity of the quizzes. You must [download and install LockDown Browser and Monitor]() to complete the practice quiz and "in-class" quizzes. While writing the practice quiz and the "in-class" quizzes, you must show your university issued identification card during the Respondus Startup Sequence. Watch the short video posted on CourseLink (Content > Respondus LockDown Browser > Getting started with LockDown Browser) to get a basic understanding of LockDown Browser and the Respondus Monitor webcam feature.

Quizzes include multiple choice and short-answer format. The questions are from the lecture material and the assigned readings and videos.

Similar to a sit-down test / exam where you must arrive prior to the start of the test / exam, it is highly recommended that you enter the online quiz environment in Respondus at least 20-30 minutes before the end of the available window (i.e., before the start of the quiz) to allow enough time for you to complete the Respondus Startup Sequence and ensure that you have the full time to complete the quiz.

To take an online test, start LockDown Browser and navigate to the quiz. You will not be able to access the quiz with a standard web browser. For additional details on using LockDown Browser and Respondus Monitor, review the Quick Start Guide for Students (on CourseLink).

**Important Note**: There is a mandatory practice quiz (worth up to 2% bonus towards your final grade) that you are required to take before you complete Quiz 1. The purpose of the practice quiz is to ensure that Respondus LockDown Browser and Monitor is set up properly and that you are comfortable using the software. The deadline for this quiz is Tuesday September 22.

Finally, when taking an online quiz, follow these guidelines:
- Select a location so that you are alone and will not be interrupted; ensure that those who live with you know that you are taking a quiz and must be alone
- Before starting the quiz, know when the quiz begins and how much time is available
- Turn off your phone and ensure it is not within reach
- Clear your area of all external materials (i.e., books, papers, other computers / devices)
- Have your student identification with you so that you can show it to the camera at the start of the quiz
- Remain at your desk or workstation for the duration of the quiz
- To produce a good webcam video, please do the following:

- o Avoid wearing baseball caps, hats with brims, or hooded sweatshirts
- o Ensure your computer or tablet is on a firm surface (a desk or table). Do not have the computer on your lap, a bed, or other surface where you or the device are likely to move
- o If using a built-in webcam, avoid tilting the screen after the webcam setup is complete
- o Take the quiz in a well-lit room and avoid sitting with your back to a window
- LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the quiz until all questions are completed and submitted

If you have any questions regarding the use of Respondus LockDown Browser and Monitor, or if you encounter any technical issues during the practice quiz or the in-class quizzes, please contact CourseLink Support at courselink@uoguelph.ca or 519-824-4120 ext. 56939.

http://www.respondus.com/lockdown/download.php?id=273932365
https://webadvisor.uoguelph.ca
http://opened.uoguelph.ca/student-resources/Open-Learning-Program-Final-Exam-Schedule

**Turnitin**

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.