

# PSYC\*3410, Course Outline: Winter 2026

## General Information

**This course is offered Face-To-Face. The course has a set day, time, and location of class, and students are required to be on campus.** For missed lectures and labs (e.g., due to illness, the requirement to self-isolate, work, etc.), students are expected to take their own steps, such as arranging with other students to catch up on missed materials. A discussion board is available on CourseLink for students to share lecture notes, and specific questions about missed materials can be emailed to the instructor. For missed exams, detailed policies are listed below in the Course Policies section. [Accessibility-related requests](#) for accommodation should follow standard university procedures and all other requests should follow [standard academic consideration policy and procedures](#).

**Course Title:** Behavioural Neuroscience II

### **Course Description:**

This course will broaden your view and knowledge of the neurobiology of behaviour, building on basics of brain structure and function covered in PSYC\*2410 and NEUR\*2000. We will cover such topics as neuroanatomy, learning and memory, the regulation of feeding, sleep, stress and emotions, the hormonal regulation of behaviour as well as the neurobiology of brain damage and psychiatric disorders. Throughout, we will emphasize the behavioural relevance of the biological and physiological mechanisms under discussion. As a complement to in-class lectures, the lab will allow a thorough analysis of the anatomy of the brain. You will work in groups of about 4-5 students, and each of these groups will have several brains to dissect.

**Credit Weight:** 0.50

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

**Semester Offering:** Winter 2026

### **Class Schedule and Location:**

Lectures: M/W: 5:30-6:50PM, [ROZH 103](#)

Labs:

Section	Time	TA	TA email
01	Monday, 7:00-8:50PM		
02	Wednesday, 9:30-11:20AM		
03	Friday, 9:30-11:20AM		
04	Friday, 3:30-5:20PM		
05	Monday, 3:30-5:20PM		
06	Friday, 11:30AM-1:20PM		
07	Friday, 1:30-3:20PM		
08	Wednesday, 3:30-5:20PM		

**Due to room capacity, you must attend the lab section for which you are scheduled.**

All lab sessions are held in the [Summerlee Science Complex \(SSC\)](#), Room 2307. If you have questions regarding the lab material or your lab session, please email the TA that teaches your specific section.

### **Instructor Information**

Instructor Name: Dr. Kelsy Ervin

Instructor Email: [kervin@uoguelph.ca](mailto:kervin@uoguelph.ca)

**Office location and office hours:** Mackinnon Extension [MCKX 4022](#); Thursdays 9:30-11:30AM

e-mail M-F 9:30AM-4:30PM

### **GTA Information**

#### **GTA Names:**

Katherine Andrews

Hadiza Azizi Zawar

Ella Claridge

Rita El Azali

Jaime Lamont

Charlotte LaRochelle-Compton

**GTA office location and office hours:** e-mail M-F 9:30AM-4:30PM

## **Course Content**

### **Specific Learning Outcomes**

#### **Critical and Creative Thinking**

1. Depth and Breadth of Knowledge (Master)  
Demonstrates detailed knowledge of neuroscience and neuroanatomy as it relates to human and animal behaviour
2. Inquiry and Analysis (Reinforce)  
Asks detailed and relevant questions and seeks evidence to inform conclusions

#### **Literacy**

3. Information Literacy (Master):  
Identify and critically evaluate the academic literature and use this information to develop questions
4. Methodological Literacy (Reinforce)  
Understand, evaluate, and apply appropriate research methodologies in the pursuit of rigorous and ethical neuroscience

#### **Global Understanding**

5. Sense of Historical Development (Introduce):  
Understand the origin of the current understanding of behavioural neuroscience and its limitations

#### **Communication**

6. Written Communication (Master):  
Use discipline-specific vocabulary to clearly express ideas in writing
7. Reading Comprehension (Master):  
Understand and extract information from the textbook and scientific literature; independently seek out resources to support comprehension

#### **Professional and Ethical Behaviour**

8. Teamwork (Reinforce):  
Work with a group in the practical labs with respectful collaboration
9. Personal Organization/Time Management (Master):  
Demonstrate personal accountability and responsibility in prioritizing and completing tasks

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

- A. Describe principles of neurobiology and neuroanatomy (Learning Outcomes 1, 3, 6, 7)
- B. Identify and remember appropriate terminology (1, 3, 4, 6, 7, 8)
- C. Understand how these principles have been revealed by key experimental studies (1, 2, 3, 4, 6, 7)
- D. Apply these principles to analyze animal behaviour (1, 2, 3, 4, 6)
- E. Apply these principles to analyze normal and abnormal human behaviour (1, 2, 3, 4, 5, 6)

To achieve course-specific learning outcomes, successful students will:

- A. Attend lectures and actively engage with peers, Instructor, and Teaching Assistants (2, 9)
- B. Engage in interactive study groups to complete the Neuroanatomy Laboratory (2, 8, 9)
- C. Engage in independent and peer-facilitated studying activity (2, 8, 9)

### Lecture Content

The following is an outline of how the course will proceed. However, if necessary, I reserve the right to progress more slowly than indicated. **Students are expected to have read the relevant chapters of the required textbook before the corresponding lectures.**

Date	Readings	Topic
Jan 5	Ch. 9	Course Overview - Neurodevelopment
Jan 7	Ch. 9	Neurodevelopment
Jan 12	Ch. 9	Neurodevelopment
Jan 14	Ch. 9	Brain Damage and Neuroplasticity
Jan 19	Ch. 10	Brain Damage and Neuroplasticity
Jan 21	Ch. 10	Brain Damage and Neuroplasticity
<b>Jan 26</b>	<b>N/A</b>	<b>First midterm exam</b>
Jan 28	N/A	Guest speaker
Feb 2	Ch. 12	Hunger, Eating, and Health
Feb 4	Ch. 12	Hunger, Eating, and Health
Feb 9	Ch. 12	Hunger, Eating, and Health
Feb 11	Ch. 12	Hunger, Eating, and Health
<b>Feb 16-20</b>	<b>N/A</b>	<b>No classes – Winter break</b>
Feb 23	Ch. 13	Hormones and Sex
Feb 25	Ch. 13	Hormones and Sex
Mar 2	Ch. 13	Hormones and Sex

Mar 4	Ch. 13	Hormones and Sex
<b>Mar 9</b>	N/A	<b>Second midterm exam</b>
Mar 11	Ch. 17	Biopsychology of Emotions, Stress, and Health
Mar 16	Ch. 17	Biopsychology of Emotions, Stress, and Health
Mar 18	Ch. 17	Biopsychology of Emotions, Stress, and Health
Mar 23	Ch. 14	Sleep, Dreaming, and Circadian Rhythms
Mar 25	Ch. 14	Sleep, Dreaming, and Circadian Rhythms
Mar 30	Ch. 18	Biopsychology of Psychiatric Disorders
Apr 1	Ch. 18	Biopsychology of Psychiatric Disorders

### Labs

Lab sessions will proceed as follows.

Date	Topics
Jan 12-16	Orientation – Safety Outside view, with dura mater
Jan 19-23	Outside view, including membranes and cranial nerves <b>Lab Safety Quiz</b>
Jan 26-30	Sagittal cut <b>Lab Quiz #1</b>
Feb 2-6	Coronal cut <b>Lab Quiz #2</b>
Feb 9-13	Horizontal cut <b>Lab Quiz #3</b>
<b>Feb 16-20</b>	<b>No class – Winter break</b>
Feb 23-27	Hippocampal dissection <b>Lab Quiz #4</b>
Mar 2-6	Cerebellum <b>Lab Quiz #5</b>
Mar 9-13	Review <b>Lab Quiz #6</b>
Mar 16-20	Practice Bell Ringer Exam ( <b>open lab</b> )
<b>Mar 23-27</b>	<b>Lab Exam</b>

If you have a valid reason for missing your normally scheduled lab on any week, please contact your lab TA to arrange to attend a different lab section that week. If there is a valid reason for missing the Bell Ringer Exam during your regular section the week of **March 23-27**, please contact your TA and the course instructor to arrange to attend another session that week.

**Seminars:** N/A

## Course Assignments and Tests

Assignment or Test	Due Date	Contribution to Final Mark (%)	Learning Outcomes Assessed
Lab Safety Quiz (CourseLink)	Friday, Jan 23 by 11:59pm	3%	1, 7, 9
<b>BONUS</b> Course Outline Quiz (CourseLink)	Friday, Jan 23 by 11:59pm	2%	7, 9
Lab Review Quizzes (CourseLink)	#1 Outside View: Jan 30 #2 Sagittal Cut: Feb 6 #3 Coronal Cut: Feb 13 #4: Horizontal Cut: Feb 27 #5: Hippocampus: Mar 6 #6: Cerebellum: Mar 13 Complete by 11:59pm	Each worth 2%	1, 2, 3, 9
1 <sup>st</sup> Midterm	Monday, Jan 26, in class	20%	1, 3, 4, 6, 7, 9
2 <sup>nd</sup> Midterm (not cumulative)	Monday, Mar 9, in class	20%	1, 3, 4, 6, 7, 9
Lab Exam	Mar 23-27, during scheduled lab	15%	1, 2, 3, 9
Final Exam (cumulative)	Saturday, Apr 11, 2:30-4:30pm	30%	1, 3, 4, 6, 7, 9
Optional written assignment	Monday, April 6 by 11:59pm; upload to CourseLink Dropbox	Potential to replace weight of MT1 or MT2 (20%)	1, 2, 3, 4, 6, 7, 9

## Additional Notes

The written exams may include:

- Multiple choice questions
- Short answer questions
- Questions relating to diagrams (e.g., label the diagram; explain the diagram)
- Fill in the blank questions

The lab safety quiz is an online quiz that will be available on CourseLink from Monday, January 5 at 5:00pm through Friday, January 23 at 11:59pm. You may attempt the quiz twice, and the highest of your scores will be your grade on the quiz, worth 3% of your final grade.

The lab review quizzes are online quizzes that will be available on CourseLink for two weeks from Monday at 5:00pm through Friday at 11:59pm. These quizzes are timed (10 minutes) and

will cover lab material only. These will mimic the lab exam questions, in which you will identify brain structures and specify their main functions. You may attempt each quiz twice, and the highest of your scores will be your grade on the quiz, worth 2% of your final grade.

The lab exam will be a “bell ringer” style exam. There will be several stations, each containing brain sections with 3-4 numbered pins. Your task will be to identify the brain structures occupied by the pin and specify their main functions. You will have a set amount of time for each tray, and then you will proceed to the next tray when the bell rings. This is a challenging exam that assesses mastery of the gross anatomy of the brain, but you will be given ample opportunity to study and prepare for the exam, and there are not as many structures as there are pins because, in many cases, the same structure appears in different brain slices.

### **Optional Written Assignment: Critical Review and Reflection**

Students will have the option to write an essay in which they analyze and reflect on an empirical research article related to a topic covered in class.

**\*\*This paper is not mandatory.\*\*** If you choose to complete this assignment and your grade on the paper exceeds the grade on one of your midterms, you will have the option to replace the lower of the two midterm grades.

**\*\*\*Note that all students must still write both midterms;** this optional assignment merely provides the opportunity to replace the lowest of your two midterm grades.

**\*\*\* The final exam or lab exam grades cannot be replaced.**

The paper will focus on one research article chosen from a list that will be provided on CourseLink. The paper should include: (a) an introduction which briefly describes how the article relates to course content, provides necessary background information, and a clear thesis statement, (b) a lay summary of the research article, (c) an analysis of further research that explores the topic of the research article, using three (3) additional peer-reviewed academic sources, (d) a reflection on the article and your analysis of the topic, and (e) a conclusion that summarizes what you’ve learned and the significance of scientific research on this topic. The paper should be 5-7 pages (excluding title page and references), double-spaced, and should adhere to APA-7 guidelines for citations and formatting. A session will be held in class after the second midterm to address student questions regarding this assignment. The grading rubric will be available on CourseLink.

The paper must be submitted to the **Optional Written Assignment Dropbox** on CourseLink by **11:59pm on Monday, April 6**. Papers must be submitted in **Microsoft Word (.doc, .docx, .rtf) or PDF** file formats. **LATE PAPERS WILL NOT BE ACCEPTED.**

**Final examination date and time:** Saturday, Apr 11, 2:30-4:30pm

**Location** TBA

**Final exam weighting:** 30%

## **Course Resources**

### **Required Text**

John P. J. Pinel & Steven J. Barnes. Revel Biopsychology, 11<sup>th</sup> Edition. (ISBN: 9780135685341)

[University Bookstore](#): \$89.95

[Campus Co-op Bookstore](#): \$89.95

This is an e-textbook with interactive elements and quizzes that will serve as excellent study tools. Please see the additional attachment posted on CourseLink for instructions on how to register and access Revel ('Revel Registration Instructions'). **The additional 'Revel' package is not required for this course.**

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 those at the bookstore and prices at the bookstore are subject to change.

There is a hard copy of the textbook on reserve at the [Library Reserve Desk](#).

### **Lab Manual**

Peters, M. & Jasper-Fayer F. (2004). A laboratory manual for the dissection of the sheep brain. Manual and supplemental files are available for **free download** on CourseLink.

### **Other Resources:**

Additional readings will be announced and made accessible through CourseLink.

## **Course Policies**

### **Grading Policies**

All examinations are to be taken on the above-indicated dates. Grades may be released up to two weeks after the date of an exam/assignment submission.

**Course Policy on Group Work:** In the sheep brain dissection labs, students will be working in groups of 4-5. You will be expected to work together with your group members throughout the

semester to complete the weekly dissections and identify structures. Working alone on a dissection is not an option for these labs.

### **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.

**NO ELECTRONICS WITH CELLULAR, DATA, OR WI-FI CAPABILITIES ARE PERMITTED** during in-class examinations, including the lab exam. This includes, but is not limited to, cell phones, tablets, and smart watches.

### **Course Policy regarding the use of generative AI**

**Any use of course materials to “train” generative artificial intelligence (AI) technologies to generate text is a violation of copyright and expressly prohibited.**

Students may use generative AI in this course in accordance with the guidelines outlined for each assessment, and so long as the use of generative AI is referenced and cited following citation instructions given in the course outline and/or assignment instructions. Use of generative AI outside assessment guidelines or without citation constitutes academic misconduct. **It is the student’s responsibility to be clear on the limitations for use for each assessment and to be clear on the expectations for citation and reference and to do so appropriately.** Please refer to the University of Guelph-issued [statement on artificial intelligence systems, ChatGPT, and academic integrity](#) from March 2023.

## **University Policies**

### **Disclaimer**

Please note 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. Any University-wide decisions will be posted on the [Healthy Campus website](#) and circulated by email.

### **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](mailto: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. For more information, see: [Student Feedback Questionnaire](#)

## Drop date

The last date to drop one-semester courses, without academic penalty, is **Monday April 6, 2026**. 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](#) (Friday, March 6). 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 Schedule of Dates](#)

## 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.

### **Land Acknowledgement**

The University of Guelph resides on the ancestral lands of the **Anishinaabe, Hodinohso:ni, Lūnaapéewak** and **Wendat** peoples and the treaty lands of the **Mississaugas of the Credit**. I, as your instructor, acknowledge my privilege as a white settler-scholar here at the University of Guelph and encourage you to also consider your positionality as you develop your understanding of behavioural psychology – not only in this class, but in your other and future studies.

The research presented in this course largely employs methods developed from a Eurocentric, patriarchal, colonial perspective that influence our understanding and assumptions about human and animal behaviour. I encourage you to check out this [Indigenous Research Guide](#) from Royal Roads University and these reviews describing how we can incorporate Indigenous Ways of Knowing and research methods into [human](#) and [animal](#) neuropsychological research.