

# Brain & Behaviour I

## PSYC 271

### Fall 2019

**Instructor:** Dr. Tyson W. Baker  
**Contact:** Tyson.Baker@Queensu.ca  
**Lectures in Dunning Auditorium:** Tuesday 4:00pm-5:20pm  
Thursday 2:30pm-3:50pm  
**Office Hours in Humphrey 235:** Thursday 12:30pm-2:30pm

**Teaching Assistants (TA):** Lindsey Yessick & Yun Lu  
**Contact:** [Lindsey.Yessick@Queensu.ca](mailto:Lindsey.Yessick@Queensu.ca) & [Y.Lu@Queensu.ca](mailto:Y.Lu@Queensu.ca)  
**Office Hours:** See OnQ news and by appointment

#### Course Site

Course material, announcements, and students' grades will be available on [OnQ](#). OnQ will be used to communicate with the class regarding any cancellations, so please be sure to turn on news announcements and check in regularly. I highly-encourage using the discussion board for class-related content. Quizzes and uploading assignments will be through OnQ.

Revel is the electronic textbook *Biopsychology* that comes with practice quizzes. Detailed login instructions are posted on OnQ. If you have any technical problems, [take a screenshot](#) and check the help menu. If that doesn't work, then email the screenshot and a detailed description of the problem to me and your TA.

#### Course Description

An introduction to behavioural neuroscience. The course primarily focuses on the basics of neuronal operation, functional neuroanatomy, neuropharmacology, and behavioral neuroscience methods. This will be followed by an examination of input (sensory) and output (motor) systems of the brain. Finally, topics relevant to lateralization of function and language will be covered.

#### 3 credit hours

#### Pre-requisites: PSYC 100

**Textbook:** John P.J. Pinel & Steven J. Barnes. *Biopsychology*. 10th Edition. Pearson.  
- Revel is the online e-text with practice quizzes and other study aids  
- Available in the [bookstore](#)  
- Hardcopies are only available by ordering through Revel  
- 8<sup>th</sup> or 9<sup>th</sup> editions are acceptable.  
- Also used for Psyc 370

## Course Content

*This schedule is subject to change and is a rough guideline for content. Chapters don't fit perfectly into 80-min lectures, so when we complete one chapter, then we will begin the subsequent chapter in the same lecture. You can see the same date for 2 chapters below for when this is planned.*

*This year, I will incorporate as much of Chapter 5 (Research Methods) into other sections as I can. This will place the methods in better context and lighten the research methods chapter.*

<b>Date</b>	<b>Topic</b>	<b>Relevant Readings</b>
Sept 5	General Course Introduction	This syllabus
Sept 10, 12	Introduction to Biopsychology	Chapter 1
Sept 12, 17, 19	Evolution, Genetics, & Experience	Chapter 2
Sept 19, 24	Anatomy of the Nervous System	Chapter 3
<b>Sept 26</b>	<b>Midterm Exam 1 (20%)</b>	<b>Chapters 1-3</b>
Oct 1, 3, 8	Neural Conduction and Synaptic Transmission	Chapter 4
Oct 8, 10, 15, 17	The Research Methods of Biopsychology	Chapter 5
<b>Oct 17</b>	<b>Assignment 1 Due 11:55pm</b>	
Oct 17, 22	Perception: The Visual System	Chapter 6
<i>Oct 24</i>	<i>Fall Break: No Classes</i>	---
Oct 29	Perception: The Visual System	Chapter 6
<b>Oct 31</b>	<b>Midterm Exam 2 (30%)</b>	<b>Chapters 4-6</b>
Oct 29, Nov 5, 7, 12	Perception: Hearing, Touch, Smell, Taste, Attention	Chapter 7
Nov 12, 14, 19	The Sensorimotor System	Chapter 8
<b>Nov 19</b>	<b>Assignment 2 Due 11:55pm</b>	
Nov 21, 26	Learning, Memory, and Amnesia	Chapter 11
Nov 28	Leftovers & Review	All
<b>Dec 4-19</b>	<b>Final Exam (35%) to be scheduled by the Examinations Office</b>	<b>All, with an emphasis on 7,8, 11</b>

Please note that the final exam could be scheduled late in the exam period (I have no control over this) and **you are responsible for being available to write the exam at any point in the exam period.** Thus, I STRONGLY advise you to NOT book flights until the exam schedule becomes available!

## Grading Scheme and Grading Method

Both midterms will occur during normal class time. Grades will be posted on OnQ. You can meet with your TA to view your exams; details will be posted on OnQ once grading is complete.

Component	Weight %	Comments
Midterm Exam 1 Midterm Exam 2	20% 30%	Midterm exams are designed to evaluate understanding of the material presented. Students are responsible for all textbook readings and lecture material. There will be 2 75-minute midterm exams during class time. Midterm exams are <b>NOT</b> cumulative and will consist of multiple choice (bring pencils!) and short-answer questions.
Final Exam	35%	The final exam <b>IS</b> cumulative, but the emphasis will be on material not covered on previous tests. Students are responsible for all textbook readings and lecture material. The final exam will consist of multiple choice (bring pencils!) and short-answer questions. This exam will be scheduled during the formal examination period.
Quizzes	5% (5x1%)	Each chapter (excluding chapter 1) will have a quiz in OnQ that will close before we begin that chapter in lecture. These quizzes are for mastery: they are open-book, unlimited time, unlimited attempts, and only perfect attempts (10/10) will earn 1%. Imperfect attempts or no attempt will earn 0%. The best 5 of 8 quizzes for each student will be used, so there will be no quiz extensions. Questions are based on the textbook readings. Although quizzes are open-book, you must complete them independently.
Assignments	10% (2x5%)	Short written assignments will require students to explain concepts from class as they apply them. Possible assignments include explaining how a specific drug works, proposing biopsychological research, or summarizing content from class then extending that content to new questions. Assignments are to be uploaded to OnQ. Detailed instructions will be posted to OnQ.

All components of this course will receive numerical marks that will be summed to produce your course total. Only your course total will be rounded according to mathematical convention. Your rounded course total will be converted to a letter grade according to Queen's Official Grade Conversion Scale:

### Bonus Marks

Students may earn up to 3% in bonus marks. See the end of the syllabus for details; it is a long standard statement that doesn't fit well right here.

Grade	Numerical Course Average (Range)
A+	90-100
A	85-89
A-	80-84
B+	77-79
B	73-76
B-	70-72
C+	67-69
C	63-66
C-	60-62
D+	57-59
D	53-56
D-	50-52
F	49 and below

## **Tips for Success!**

Ask questions during lectures! If something is unclear to you or you have another question, chances are there are other students thinking the same thing. It makes lectures so much more enjoyable and allows everyone to benefit from your questions.

Study as frequently as possible; there is a massive amount of literature demonstrating that frequent studying is far superior to infrequent studying even when total study time is the same. **The most efficient minutes to study are right before lecture** because you can review the material from the last lecture that often continues into the oncoming lecture. An added bonus is that I'm right here if you have any questions. Incorporating tests into the same amount of study time increases learning, so use Revel practice quizzes as a study aid. In the "General Introduction" I will go through some methods to increase study efficiency; it's worth using them! If you think reading is studying, check out those methods.

**Please make use of the discussion board on OnQ for course-related content.** Email your TA and myself (on the same email) if you have any questions unsuitable for the discussion board (e.g. personal information). Some concepts are best explained in-person, so just drop in to my office hours (you don't need an appointment; I'll be there). If you would like to meet but cannot make it to my office hours, email me with the reason you cannot attend my office hours and your available times for the next 5-7 days and I'll reply with the first time our schedules match.

## **Location and Timing of Final Examinations**

The exam dates for each Term are listed on the Faculty of Arts and Science webpage under "[Important Dates](#)." Student exam schedules for the Fall Term are posted via SOLUS immediately prior to the Thanksgiving holiday; for the Winter Term they are posted on the Friday before Reading Week, and for the Summer Term they are individually noted on the Arts and Science Online syllabi. **Students should delay finalizing any travel plans until after the examination schedule has been posted. Exams will not be moved or deferred to accommodate employment, travel/holiday plans or flight reservations.** Also, as indicated in Academic Regulation 8.3, students must write all final examinations in all on-campus courses on the Kingston campus.

## **Academic Considerations for Students in Extenuating Circumstances**

Queen's University is committed to providing academic consideration to students experiencing extenuating circumstances that are beyond their control and are interfering with their ability to complete academic requirements related to a course for a short period of time, not to exceed three months. Students receiving academic consideration must meet all essential requirements of a course. The Senate Policy on Academic Consideration for Students in Extenuating Circumstances was approved at Senate in April, 2017.

Each Faculty has developed a protocol to provide a consistent and equitable approach in dealing with requests for academic consideration for students facing extenuating circumstances. Arts and Science undergraduate students can find the Faculty of Arts and Science protocol and the portal where a request can be submitted here. Students in other Faculties and Schools who are enrolled in this course should refer to the protocol for their home Faculty.

If you need to request academic consideration for this course, you will be required to provide the name and email address of the instructor/coordinator. Please use the following:

<https://www.queensu.ca/artsci/undergrad-students/academic-consideration-for-students>

Instructor/Coordinator Name: Tyson Baker

Instructor/Coordinator email address:Tyson.Baker@Queensu.ca

For **midterm exams** missed due to extenuating circumstances, students will write an alternate midterm exam in the last few weeks of the course. If students miss the alternate midterm exam due to extenuating circumstances, I will prorate the exam with the final exam grade. For midterm exams missed NOT due to extenuating circumstances, I will prorate the exam as half the final exam grade.

For **final exams** missed due to documented extenuating circumstances, we follow departmental policies: <http://www.queensu.ca/psychology/undergraduate/current-students/departmental-policies>

Students who cannot write an exam during the December or April exam period due to a serious, extenuating circumstance (illness, death in the family) must follow the steps below to be eligible to write a deferred exam during the PSYC department's *Make up Exam period* in January, April/May, and September.

1. Apply for academic consideration using the Faculty of Arts and Science Portal: <http://www.queensu.ca/artsci/accommodations>
2. As soon as possible, follow up with your instructor(s) either by email or in-person to discuss your academic consideration request
3. If your request for a deferred exam is approved, be available to write the makeup exam the PSYC department's *Make up Exam period* in January, April/May or September, or receive '0' on the exam.
4. Complete and return the instructor-signed [Permission for an Incomplete Grade](#) (PDF, 256 KB) form available on the Arts and Science website, and return to the Undergraduate Office.

NOTE: Students who do not write the makeup exam are advised to drop the course. If a student cannot write the makeup exam due to a serious extenuating circumstance for which they can provide new documentation, they will either be granted a second deferral by their instructor or be supported in their appeal to drop the course after the deadline though this decision rests with the Associate Dean (Studies).

For **quizzes** missed, the grade will be zero. No extensions will be granted on quizzes, even in the case of extenuating circumstances. We only count the top 5 of 8 quizzes to account for extenuating circumstances.

For **assignments** that are late due to extenuating circumstances, an extension will be given matching the duration that of the extenuating circumstances.

- If extenuating circumstances are 72 hrs, then a 72-hr extension will be granted.
- If extenuating circumstances last 7 days, then a 7-day extension will be granted, and so on.
- For assignments that are late NOT due to extenuating circumstances, 10% will be subtracted daily from the assignment and no assignments later than 10 days will be accepted. Thus, an assignment that would have earned 3.2/5 but was 2 days late (-20%) would earn 2.2/5. Late penalties are applied daily, starting at the due time. Note that the due time is the cut-off, not the time you ought to submit at.

If a student has completed <50% of the course by the end of the scheduled final exam due to extenuating circumstances, then they will be advised to drop the class after the deadline as per academic regulation 10.3.4.

### **Accessibility**

Queen's is committed to an inclusive campus community with accessible goods, services, and facilities that respect the dignity and independence of persons with disabilities. PSYC 271 is available in an accessible format or with appropriate communication supports upon request. Please contact me for support.

### **Accommodations for Disabilities**

**Students with accommodations must upload their accommodations form as an "assignment" in OnQ.** [Lindsey.Yessick@Queensu.ca](mailto:Lindsey.Yessick@Queensu.ca) will coordinate Psyc 271 accommodations.

Queen's University is committed to achieving full accessibility for people with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. The Senate Policy for Accommodations for Students with Disabilities was approved at Senate in November 2016 (see <https://www.queensu.ca/secretariat/sites/webpublish.queensu.ca.uslclwww/files/files/policies/senateandtrustees/ACADACCOMMPOLICY2016.pdf>). If you are a student with a disability and think you may need academic accommodations, you are strongly encouraged to contact the Queen's Student Accessibility Services (QSAS) and register as early as possible. For more information, including important deadlines, please visit the QSAS website at: <http://www.queensu.ca/studentwellness/accessibility-services/>

### **Technology in our Classroom**

Use of electronic devices within the classroom must be class-relevant and sound/vibration must be turned off. Contact me before class if you require special consideration.

### **Intended Student Learning Outcomes**

By Midterm Exam 1, students are expected to be able to compare and contrast the subdisciplines of biopsychology and identify their role in converging operations, describe how research on evolution of the human brain has changed over time, define epigenetics, and explain how it is transforming our understanding of genetics, identify and draw parts of the brain and brain cells.

By Midterm Exam 2, students are expected to be able to understand how neurons fire action potentials and communicate with one another and some mechanisms of drug action on these processes, compare and contrast brain imaging techniques, psychophysiological measures of brain activity, psychological and physiological brain measurement and forms of brain manipulation, identify the processes that our visual system uses to turn our physical environment into neural signals and how these neural signals operate.

By the Final Exam, students are expected to be able to identify the processes that our other (non-visual) senses turn our physical environment into neural signals and how these neural signals operate, explain what is meant by a hierarchy of central sensorimotor programs, and explain the importance of this

arrangement or sensorimotor functioning (in other words, how we produce behaviours), how the brain acquires, maintains, and loses knowledge

By the end of the course, a student may be able to understand how our biological machinery allows us to convert physical input into sensory experiences, thoughts, and behaviour. At all points, students will be expected to be able to apply knowledge to new real or hypothetical scenarios.

### **Academic Integrity**

Queen's students, faculty, administrators and staff all have responsibilities for supporting and upholding the fundamental values of academic integrity. Academic integrity is constituted by the five core fundamental values of honesty, trust, fairness, respect and responsibility (see [www.academicintegrity.org](http://www.academicintegrity.org)) and by the quality of courage. These values and qualities are central to the building, nurturing and sustaining of an academic community in which all members of the community will thrive. Adherence to the values expressed through academic integrity forms a foundation for the "freedom of inquiry and exchange of ideas" essential to the intellectual life of the University (see the Senate Report on Principles and Priorities <https://www.queensu.ca/secretariat/policies/senate/report-principles-and-priorities>).

Students are responsible for familiarizing themselves with the regulations concerning academic integrity and for ensuring that their assignments and their behaviour conform to the principles of academic integrity. Information on academic integrity is available in the Arts and Science Calendar (see Academic Regulation 1 <http://www.queensu.ca/artsci/academic-calendars/regulations/academic-regulations/regulation-1>), on the Arts and Science website (see <https://www.queensu.ca/artsci/students-at-queens/academic-integrity>), and from the instructor of this course. Departures from academic integrity include plagiarism, use of unauthorized materials, facilitation, forgery and falsification, and are antithetical to the development of an academic community at Queen's. Given the seriousness of these matters, actions which contravene the regulation on academic integrity carry sanctions that can range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university.

### **Copyright**

This material is copyrighted and is for the sole use of students registered in the PSYC 271 course. This material shall not be distributed or disseminated to anyone other than students registered in the PSYC 271 course. Failure to abide by these conditions is a breach of copyright, and may also constitute a breach of academic integrity under the University Senate's Academic Integrity Policy Statement.

### **Turnitin Statement**

This course makes use of Turnitin, a third-party application that helps maintain standards of excellence in academic integrity. Normally, students will be required to submit their course assignments to through onQ to Turnitin. In doing so, students' work will be included as source documents in the Turnitin reference database, where they will be used solely for the purpose of detecting plagiarism.

Turnitin is a suite of tools that provide instructors with information about the authenticity of submitted work and facilitates the process of grading. Turnitin compares submitted files against its extensive database of content, and produces a similarity report and a similarity score for each assignment. A similarity score is the percentage of a document that is similar to content held within the database.

Turnitin does not determine if an instance of plagiarism has occurred. Instead, it gives instructors the information they need to determine the authenticity of work as a part of a larger process. Please read Turnitin's Privacy Pledge, Privacy Policy, and Terms of Service, which governs users' relationship with Turnitin. Also, please note that Turnitin uses cookies and other tracking technologies; however, in its service contract with Queen's Turnitin has agreed that neither Turnitin nor its third-party partners will use data collected through cookies or other tracking technologies for marketing or advertising purposes. For further information about how you can exercise control over cookies, see Turnitin's Privacy Policy.

Turnitin may provide other services that are not connected to the purpose for which Queen's University has engaged Turnitin. Your independent use of Turnitin's other services is subject solely to Turnitin's Terms of Service and Privacy Policy, and Queen's University has no liability for any independent interaction you choose to have with Turnitin.

### **Privacy**

This course makes Revel. Be aware that by logging into the site, you will be leaving OnQ, and accessing Pearson's website and Revel. Your independent use of that site, beyond what is required for the course (for example, purchasing the company's products), is subject to Pearson's terms of use and privacy policy. You are encouraged to review these documents before using the site.

<http://www.pearsoncanada.ca/pearson-canada-at-a-glance/legal/privacy-statement>

### **Participant Pool (Volunteer Research Participation)/FAQ**

In this course you can earn bonus points by participating in the Psychology Research Participant Pool. For every half hour of research completed, you can increase your final mark in this course by 0.5% up to a maximum of 3%. If you are enrolled in more than one eligible course, you will select the course toward which your research participation will be credited when you sign up for a study. You can complete studies toward each course. You cannot apply the same study credit to more than one course, and research credit cannot be used to improve a failing mark to a passing mark. The last day to participate in research for bonus credit is the last day of classes. For more details, please see the information posted at the [Psychology Participant Pool page on the Department website](#).

All students will be activated in the participant pool by the 3<sup>rd</sup> week of the term. If you have previously used the participant pool, you will use the same userid and password that you used previously. If you are new to the participant pool, you will receive an email with your login information by the 3<sup>rd</sup> week of class.

During the first week of the semester, you will be emailed a link to an online prescreening questionnaire that will be due by the end of the Add/Drop period (second Friday of the term). If you complete the larger prescreening questionnaire online, you may become eligible for additional studies, and those researchers will contact you directly to find a time to participate.

Participation in research is entirely voluntary. If you want to earn credit but don't want to participate in a particular study, you can complete an alternative assignment instead. For the alternative assignment, researchers either will offer a walk-through of their experiment, or they will have you to read an article or blog post, listen to a short podcast, or watch a short video and then answer questions about it. To complete an alternative assignment, you must contact **the principal investigator** of a particular study



(see the study's contact information on SONA for their email) before the last week of classes for the semester to complete the alternative assignment option. Although the length of studies will vary, all alternative assignments will last approximately 30 minutes, so you will earn 0.5% for each alternative assignment that you complete.

Off-campus students: please note that you can participate in online studies and researchers who offer these studies also offer online alternative assignments.

Please note: we understand that life happens and you may be unable to attend the session you sign up for as a result of extenuating circumstances. If you are unable to attend your scheduled session due to an extenuating circumstance, please contact the researcher directly to reschedule the session and/or receive an "excused no-show" notation. An "excused no-show" is guaranteed if you contact researchers 3 or more hours in advance of your appointment.

Research is an important activity that directly impacts science and society, and that also impacts a larger system (e.g., time in lab space is very limited and can be costly—for example, booking a 1 hour session in the fMRI facility costs \$400). We thank you in advance for ensuring that you attend your scheduled sessions, and that you follow up with the researcher as soon as possible if you miss a session due to extenuating circumstances. However, if you reach 2 *unexcused* no-shows in a given semester, you will not be able to sign up for additional studies/alternative assignments that semester. You will be automatically granted the ability to sign up for studies to earn research credit the following academic semester.

Note that your course instructor is not involved in the administration of studies and alternative assignments. If you have questions about studies, please contact the researchers listed on SONA. Questions about the pool (e.g., credits, prescreening) should be directed to the participant pool coordinator at [participant.pool@queensu.ca](mailto:participant.pool@queensu.ca).