

# PSYB64: An Introduction to Behavioural Neuroscience

## Course Syllabus

**Course Instructor:** Dr. Stefano Di Domenico

**Email:** [stefanoddmn@gmail.com](mailto:stefanoddmn@gmail.com) Use this email to schedule office-hour appointments.

**Office Hours:** TBA. Office hours are by appointment only. More information about office hour delivery will be announced soon.

**Teaching Assistants:** Cody Cane & Arijit De

**Teaching Assistant Email:** [2020psyb64@gmail.com](mailto:2020psyb64@gmail.com). Use this email for content-related questions.

**Textbook:** *Discovering Behavioral Neuroscience: An Introduction to Biological Psychology 4<sup>th</sup> Edition* by Laura A. Freberg

**Lectures:** Thursdays 6 – 9 pm Online—*Bb Collaborate on Quercus*

We will use *Quercus* for sharing lecture material and making announcements.

### Course Description

This course will introduce students to biological psychology, an interdisciplinary science that seeks to understand the biological substrates of behavior, emotions, and cognition. The course will often focus on the workings of the brain.

### Learning Objectives

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

- Describe the major anatomical sections of the nervous system
- Explain the basic principles of imaging and microscopic research methods
- Explain how neurons generate and propagate action potentials
- Describe the major neurotransmitter, neuromodulator, and neurohormone systems
- Explain the basic principles of drug effects
- Explain the basic principles of genetics, epigenetics, and behavioural genetics
- Describe the prenatal development of the nervous system
- Describe the evolution of the nervous system
- Explain the genetics of sex, describe sex differences in brain structure and behaviour, and describe the biological influences of sexual development and behaviour
- Describe the neural mechanisms and correlates of sleep and waking
- Describe the neural mechanisms and correlates of learning and memory
- Describe different neurocognitive disorders in terms of their genetic and neural substrates

**Notice of Video Recording and Sharing (Download and Re-Use is Prohibited)**

This course, including your participation, will be recorded on video and will be available to students in the course for viewing remotely and after each session.

Course videos and materials belong to your instructor, the University, and/or other sources depending on the specific facts of each situation, and are protected by copyright. Do not download, copy, or share any course or student materials or videos without the explicit permission of the instructor.

For questions about recording and use of videos in which you appear please contact Dr. Di Domenico.

### Tentative Schedule

The following topics will be covered in the course. The weekly schedule is a guideline and some topics will take more or less than a lecture period to complete. Please note the weeks in which the midterm are indicated. The date for final exam will be determined by the registrar. When I have this information it will be posted to Blackboard.

Week	Date	Lecture Topic	Readings
<b>Part 1</b> <i>Parts of the Nervous System</i>			
1	Sept 9	Course introduction	Syllabus + Ch. 1
2	Sept 16	Functional neuroanatomy	Ch. 2
3	Sept 23	Cells of the nervous system	Ch. 3
4	Sept 30	Psychopharmacology	Ch. 4
5	Oct 7	<b>MIDTERM TEST 1 REQUESTED</b>	<b>Covers weeks 1 to 4</b>
<b>Part 2</b> <i>Origins of the Nervous System / Survival and Reproduction</i>			
6	Oct 14	<b>NO LECTURE</b>	<b>READING WEEK!</b>
7	Oct 21	Evolution, genetics, and development	Ch. 5
8	Oct 28	Homeostasis and motivation	Ch. 9
9	Nov 4	Sexual behavior	Ch. 10
10	Nov 11	<b>MIDTERM TEST 2 REQUESTED</b>	<b>Covers weeks 7 to 9</b>
<b>Part 3</b> <i>Basic Topics in Biological Psychology</i>			
11	Nov 18	Sleep and waking	Ch. 11
12	Nov 25	Learning and memory	Ch. 12
13	Dec 2	Neuropsychology	Ch. 15

### Grading Scheme

Of greatest importance to me is the extent to which students can demonstrate their intellectual command of the subject matter of this course *in its entirety* at the end of the term. Consequently, it is essential that the final exam provide a comprehensive (cumulative) assessment of the course. Two midterm tests will provide students an interim assessment of their command of the course material. Both midterm tests will be one hour long and will likely be held during regularly scheduled lecture times. The first midterm test will comprise 20% of your final grade and it will cover Weeks 1 to 4. It will likely be held on October 7, 2021. The second midterm test will also comprise 20% of your final grade and it will cover Weeks 7 to 9. It will likely be held on November 11, 2020. The final exam will comprise 60% of your final grade and it will cover the course in its entirety (Weeks 1 to 13). The final exam will be three hours long. Approximately half of the questions will cover Part 3; the other half of the questions will provide equal coverage of Parts 1 and 2.

### Summary

The first midterm (20% of final grade) will cover Part 1 (Weeks 1-4).

The second midterm (20% of final grade) will cover Part 2 (Weeks 7-9).

A cumulative final exam (60% of final grade) will cover all Parts (Weeks 1-13)

= 10% [Part 1] + 10% [Part 2] + 40% [Part 3] = 60%.

**Term Test Policies & Procedures.** The Registrar typically finalizes the term test schedule sometime during the first few weeks of class. As soon as we are provided the schedule for the term test dates, times, and locations, we will post this information on the Course Blackboard.

**Final Exam Policies & Procedures.** The scheduling of final exams and the granting of petitions to defer final exams are matters that fall entirely within the jurisdiction of the Registrar's Office. If you have any concerns relating to your final exam attendance, please contact the Registrar.

### ACCESSABILITY SERVICES

The principal function of AccessAbility Services is to ensure that the policies, practices, procedures, and programs at UTSC are inclusive to ensure the equal access to students with disabilities. The office thus provides accommodations to students with a documented learning, physical, sensory, or mental health disability or medical condition. Additional information can be found at

<http://www.utsc.utoronto.ca/~ability/>

**PLEASE REMEMBER TO SUBMIT YOUR ACCESSABILITY ACCOMODATION REQUESTS MyAIMS.**

**If you do not, I will not know that I need to provide you with the appropriate accommodation!**

### ACADEMIC INTEGRITY

#### **University Policy**

The responsibilities of all parties to the integrity of the teaching and learning relationship are defined in the University's Code of Behaviour on Academic Matters (August 1995)

<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>. Here is the preamble of the Code:

The concern of the Code of Behaviour on Academic Matters is with the responsibilities of all parties to the integrity of the teaching and learning relationship. Honesty and fairness must inform this relationship, whose basis remains one of mutual respect for the aims of education and for those ethical principles which must characterize the pursuit and transmission of knowledge in the University.

The current Academic Integrity Officer is Janis Jones, room AA433, <mailto:janis@utsc.utoronto.ca>

What distinguishes the University from other centres of research is the central place which the relationship between teaching and learning holds. It is by virtue of this relationship that the University fulfills an essential part of its traditional mandate from society, and, indeed, from history: to be an expression of, and by so doing to encourage, a habit of mind which is discriminating at the same time as

it remains curious, which is at once equitable and audacious, valuing openness, honesty and courtesy before any private interests.

This mandate is more than a mere pious hope. It represents a condition necessary for free enquiry, which is the University's life blood. Its fulfillment depends upon the well being of that relationship whose parties define one another's roles as teacher and student, based upon differences in expertise, knowledge and experience, though bonded by respect, by a common passion for truth and by mutual responsibility to those principles and ideals that continue to characterize the University.

This Code is concerned, then, with the responsibilities of faculty members and students, not as they belong to administrative or professional or social groups, but as they co-operate in all phases of the teaching and learning relationship.

Such co-operation is threatened when teacher or student forsakes respect for the other--and for others involved in learning--in favour of self-interest, when truth becomes a hostage of expediency. On behalf of teacher and student and in fulfillment of its own principles and ideals, the University has a responsibility to ensure that academic achievement is not obscured or undermined by cheating or misrepresentation, that the evaluative process meets the highest standards of fairness and honesty, and that malevolent or even mischievous disruption is not allowed to threaten the educational process. These are areas in which teacher and student necessarily share a common interest as well as common responsibilities.

## Psychology Department Missed Term Work Policy, FALL 2021

For missed term work (assignments and term tests) due to illness, emergency, or other mitigating circumstances, please follow the procedures outlined below.

- The following reasons are not considered sufficient for missed term work: travel for leisure, weddings, personal commitments, work commitments, human error.
- Missed Final Exams are handled by the Registrar's Office and should be declared on eService: <http://www.utsc.utoronto.ca/registrar/missing-examination>
- Instructors cannot accept term work any later than five business days after the last day of class. Beyond this date, you would need to file a petition with the Registrar's Office: <https://www.utsc.utoronto.ca/registrar/term-work>

### Accommodations for Illness or Emergency:

For missed work due to ILLNESS OR EMERGENCY, complete the following **three-step** process:

1. Complete the **Request for Missed Term Work Accommodations Form** (<http://uoft.me/PSY-MTW>)
2. **Declare your absence** on **ACORN** (Profile & Settings > Absence Declaration)
3. **Email both the Request for Missed Term Work Accommodations Form AND a screenshot of your Self-Declared Absence on ACORN** to the email address provided by your instructor on the course syllabus **WITHIN 2 BUSINESS DAYS** of the missed work.

*Note:* If you are unable to submit your documents within 2-business days, **you must still email your instructor within the 2-business day window** to explain the nature of the delay, and when you will be able to provide your documents. Exceptions to the documentation deadline will only be made under **exceptional circumstances**.

*Note:* For this semester, we do not require any additional supporting documentation (e.g. medical notes) to support your missed term work accommodation request.

### Accommodations for Academic Conflicts:

For missed term work due to an ACADEMIC CONFLICT (i.e. two midterms scheduled at the same time), please complete the following process:

1. Complete the **Request for Missed Term Work Accommodations Form** (<http://uoft.me/PSY-MTW>), choosing "Other" and explaining the conflict in the space provided.
2. Take screenshots of your course homepages that demonstrate the conflict.
3. Email the form and screenshots to your course instructor **at least two weeks (10 business days) before the date of the activity**, or as soon as possible if it was not possible to identify the conflict earlier.

*Note:* Multiple assignments due on the same day are not considered conflicts. Accommodations may only be possible in the case of quizzes and tests that are both scheduled during the same discrete period. Back-to-back tests/quizzes are not considered conflicts.

*Note:* Students are responsible for keeping their course timetables conflict-free. Students who choose to register in two synchronous courses with overlapping lecture/tutorial/lab schedules may not necessarily be accommodated.

### Accommodations for Religious Conflicts:

For missed term work due to a RELIGIOUS CONFLICT, please complete the following process:

1. Complete the **Request for Missed Term Work Accommodations Form** (<http://uoft.me/PSY-MTW>), choosing "Other" and noting "Religious conflict" in the space provided.
2. Email the form to your course instructor **at least two weeks (10 business days) before the date of the activity**, or as soon as possible if it was not possible to identify the conflict earlier.

### Accommodations for Time Zone Conflicts:

If you are physically in a different time zone and a quiz or midterm is scheduled outside of 7:00am to midnight in your local time, please complete the following process:

1. Complete the **Time Zone Conflict Form** (<https://uoft.me/PSY-TimeZone>), and
2. Email the form to your course instructor **at least two weeks (10 business days) before the date of the activity**, or as soon as possible, if it was not possible to identify the conflict earlier.

### **Accommodations for Students Registered with AccessAbility Services:**

For missed **TERM TESTS** due to ACCESSABILITY REASONS:

- **Contact your AccessAbility consultant** and have them email your instructor detailing accommodations required.

For missed **ASSIGNMENTS** due to ACCESSABILITY REASONS:

- If your desired accommodation is **within the scope** of your Accommodation Letter (e.g. your letter includes “extensions of up to 7 days” and you need 3 days):
  1. Complete the **Request for Missed Term Work Accommodations Form**.
  2. Email the form and your **Accommodation Letter** to your instructor, specifying how many days extension you are requesting.
- If your desired accommodation is **outside the scope** of your Accommodation Letter (e.g. your letter includes “extensions of up to 7 days” but you need more time than that):
  1. **Contact your AccessAbility consultant** and have them email your instructor detailing the accommodations required.

### **Accommodation Procedure:**

After submitting your documentation, you will receive a response from your instructor or TA. This form does not guarantee that you will be accommodated. The course instructor reserves the right to decide what accommodations (if any) will be made. Failure to adhere to any aspect of this policy may result in a denial of your request for accommodation. **You are responsible for checking your official U of T email and Quercus course announcements daily**, as accommodations may be time-critical.

For missed assignments, **do not wait for an instructor response to resume work on your assignment**. Extension accommodations may be as short as one business day, depending on the nature of the illness/emergency. You should complete your assignment as soon as you are able and email it your instructor.

For an anticipated event (e.g. scheduled surgery or an illness with a prolonged recovery period), submit a [Verification of Illness Form](#) completed by your doctor, AND this form to your instructor if you would like to request accommodations in advance of the assignment deadline or midterm date. **Declare your future absence on ACORN (absences can be declared up to 14 days in the future)**.

### **Missed Accommodations**

If an accommodation is granted but a continued illness/emergency prevents you from meeting the requirements of your accommodation, you must repeat the missed term work procedure to request additional accommodations. **Please make it clear in your subject line that you are requesting a second accommodation**. For example, if you are given an extension but are still sick and need more time, or if you miss a make-up midterm, you must submit another request ‘Missed Term Work Accommodations’ form and declare your extended absence on ACORN. \*\*\*Note: In the case of a missed make-up test, an opportunity to write a second make-up test may not be provided.