

## ***Neurochemical Basis of Behaviour (PSY396H1S)***

Summer Session, 2023

In-person course

Class time/location: Monday and Wednesday, 10 am – 1 pm in SS1086

### **Summary**

The functional relevance of neurotransmitters, with particular emphasis on their role in mediating behaviour.

### **Learning Objectives**

In this course, you will learn about:

- The structure of neurotransmitter systems;
- The effects and mechanisms of therapeutic and recreational drugs;
- The neurochemical basis of Behaviour and Behavioural disorders;
- Treatment and research approaches.

### **Our Team**

**Instructor:** Dr. Paul Whissell ([paul.whissell@utoronto.ca](mailto:paul.whissell@utoronto.ca)).

Virtual office hours by appointment every Friday.

**Teaching Assistant:** Nicolas Deom

### **Recommended Textbook (optional; NOT required)**

*Psychopharmacology: Drugs, the Brain and Behaviour*. 3<sup>rd</sup> edition. Mayer, J. S. and Quenzer, L.F. Sinauer Associates. Print ISBN: 9781605355559, 1605355550. eText ISBN: 9781605357287, 1605357286.



## Assessments

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Most of your grade will come from three main assessments: **two term tests** (each based on four lectures) and a **final exam** (cumulative, based on all lectures). At present, **all these assessments are planned to occur in-person, on-campus and during scheduled class hours**. The fourth and final component of your grade will be a **short written assignment**.

## Marking Scheme and Important Dates

- **30% Term Test on July 19**, based on Lectures 1 – 4
  - 2 hours allotted
  - 20 multiple choice questions (each worth 1 mark) and 8 short written answer questions (each worth 5 marks), total of 60 marks
- **45% Final Exam between August 17 – 25**, based on Lectures 5 – 10
  - Format TBA
- **15% Articles Quiz administered online via Quercus, August 14**
  - Not timed, only has a due date
  - Questions based on articles available on online
- **10% Written Assignment submitted online via Quercus, August 14**
  - Short written assignment (~1500) on a neurotransmitter system *that could be covered in the course but is currently not included*.
  - Details will be provided on Quercus

## Study Guide

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To assist you in preparing for your assessments, a study guide will be provided on Quercus. This guide will identify key highlights of lecture content that are likely to be tested. If you can provide detailed answers to the questions in this guide, it is likely you will score at least a B grade (70+) on all assessments. The study guide will be reviewed in pre-test tutorials (dates to be posted on Quercus shortly).

## Course Schedule

This is an in-person course with lectures and assessments occurring during a regularly scheduled time (Mondays and Wednesdays, 10 am – 1 pm). You must be available during this time period. This course should be treated as a synchronous course and should not conflict with other courses you are taking.

This year is an exceptional case as it is difficult to predict how the situation will develop. Depending upon school policies, our course may be moved permanently online at some point. If this occurs, you will be notified as soon as possible.

Date	Topic	Textbook Chapters
July 5	Lecture 01: Introduction; <b>Assignment Posted</b>	3
July 10	Lecture 02: Introduction to Neuropharmacology	1 + 2
July 12	Lecture 03: Research Methods	4
July 17	Lecture 04: Dopaminergic transmission in behaviour	5, 9, 12 + 19
July 19	<b>TERM TEST (Lectures 1 – 4)</b>	
July 24	Lecture 05: Adrenergic transmission in behaviour	5, 11, 12
July 26	Lecture 06: Serotonergic transmission in behaviour	6, 17, 18
July 31	Lecture 07: Endocannabinoids and behaviour, <b>Quiz Posted</b>	14
Aug 2	Lecture 08: GABAergic transmission in behaviour	8, 10
Aug 7	Holiday; No assigned work	
Aug 9	Lecture 09: Acetylcholine	11
Aug 14	Lecture 10: Guest Lecture, <b>Assignment Due, Quiz Due</b>	NA
<b>Aug 17 – 25</b>	<b>FINAL EXAM (All lectures)</b>	

## Course Policies

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### Missed Tests

In the event you miss an assessment due to illness, please use the **illness self-declaration tool on ACORN and notify the instructor as soon as possible**. If you miss a test due to other exceptional circumstances, you must still notify the instructor. According to departmental policies, you have a maximum of 1 week to get in touch about the missed test. Each situation will be handled on a case-by-case basis.

**If you miss a single term test (e.g. test 1) due to exceptional circumstances, you will be given an automatic grade reweight** wherein the proportion of your grade allocated to the missed test (e.g. 25% for test 1) will be reallocated to your other tests (e.g. 37.5% for test 2 and 54.5% for the final exam). Please note the assignment is not re-weighted.

**If you miss BOTH term tests (i.e. test 1 AND test 2) due to exceptional circumstances, you must attend a make-up test.** The date of this test will be announced after test 2. The make-up test will be similar in format to test 2. The weight of the make-up test will be 37.5% and the weight of the final test will be 54.5%. As before, the assignment is not re-weighted.

**If you miss the final exam, you must attend a make-up final exam at a later date.** The make-up final exam will be similar in format to the missed final exam. **To be eligible for a make-up exam, you will need to file a petition with your College RO for a deferred exam immediately following the missed final exam.**

### Late Policies

The standard late penalty is 10% per day late. If exceptional circumstances prevent you from submitting an assessment on time, please contact the instructor to discuss your situation.

### Regrade Requests

Inquiries must be made within two weeks of the returned grade. A regrade of your assessment may increase your grade, have no effect or decrease your grade (e.g. if an adding error is discovered during the re-evaluation). Please let us know if we can help you.

### Religious Accommodation

As a student at the University of Toronto, you are part of a diverse community that welcomes and includes students and faculty from a wide range of backgrounds, cultural

traditions, and spiritual beliefs. For my part, I will make every reasonable effort to avoid scheduling tests, examinations, or other compulsory activities on religious holy days not captured by statutory holidays. Further to University Policy, if you anticipate being absent from class or missing a major course activity (like a test, or in-class assignment) due to a religious observance, please let me know as early in the course as possible, and with sufficient notice (at least two to three weeks), so that we can work together to make alternate arrangements.

## Accessibility Needs

Students with diverse learning styles and needs are welcome in this course. If you have an acute or ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) ([www.accessibility.utoronto.ca](http://www.accessibility.utoronto.ca)) at the beginning of the academic year. Without registration, you will not be able to verify your situation with your instructors, and instructors will not be advised about your accommodation needs. AS will assess your medical situation, develop an accommodation plan with you, and support you in requesting accommodation for your course work. Remember that the process of accommodation is private: AS will not share details of your condition with any instructor, and your instructors will not reveal that you are registered with AS.

## Intellectual Property

Lectures slides and recordings are the intellectual property of the instructors. Under no circumstances should any of this content be shared online (e.g. via sites such as OneClass, Course Hero or Youtube). The Academic Handbook states: “It is absolutely forbidden for a student to publish an instructor’s notes to a website or sell them” (section 4.5)” Any student found violating this rule will be brought in to the Office of Student Academic Integrity. If you would like to share material with someone, please obtain approval from the content creator first.

## Academic Integrity

**You must complete all work in this course independently. You may not collaborate with anyone else** (*though you are encouraged to ask instructors and teaching assistants for help*). Your answers must be your own thoughts, expressed in your own words.

All students, faculty and staff are expected to follow the University’s guidelines and policies on academic integrity. For students, this means following the standards of academic honesty when writing assignments, collaborating with fellow students, and writing tests and exams. Ensure that the work you submit for grading represents your own honest efforts. Plagiarism—representing someone else’s work as your own or submitting work that you have previously submitted for marks in another class or program—is a

serious offence that can result in sanctions. Speak to me or your TA for advice on anything that you find unclear. To learn more about how to cite and use source material appropriately and for other writing support, see the U of T writing support website at [www.writing.utoronto.ca/](http://www.writing.utoronto.ca/). Consult the Code of Behaviour on Academic Matters for a complete outline of the University's policy and expectations. For more information, please see <http://www.artsci.utoronto.ca/osai> and <http://academicintegrity.utoronto.ca/>.

## Plagiarism Detection Tools

Normally, students will be required to submit their course essays to the University's plagiarism detection tool for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (<https://uoft.me/pdt-faq>). Please see here for more information: <https://teaching.utoronto.ca/ed-tech/teaching-technology/pdt/#pdt1>.

## Writing

As a student here at the University of Toronto, you are expected to write well. The university provides its students with a number of resources to help them achieve this. For more information on campus writing centres and writing courses, please visit <http://www.writing.utoronto.ca/>.

## Other Resources

- Student Life Programs and Services (<http://www.studentlife.utoronto.ca/>)
- Academic Success Services (<http://www.studentlife.utoronto.ca/asc>)
- Counselling and Psychological Services (<http://www.studentlife.utoronto.ca/hwc>)