

# PSY396F: Neurochemical Basis of Behavior

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## Summer (May/June) 2024 Syllabus

### Course Meetings

Day & Time	Delivery Mode & Location
Monday, 1:00 PM - 4:00 PM	In Person: RW 143
Wednesday, 1:00 PM - 4:00 PM	In Person: RW 143

### Course Contacts

**Instructor:** Dr. Paul Whissell

**Email:** [paul.whissell@utoronto.ca](mailto:paul.whissell@utoronto.ca)

**Office Hours and Location:** Tuesdays and Thursdays, from 11:00 am – 12:30 pm, SS4042

**Teaching Assistant:** Arya Rahbarnia

### Course Overview

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

### Course Learning Outcomes

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.

**Prerequisites:** PSY201H1/ ECO220Y1/ EEB225H1/ GGR270H1/ IRW220H1/ POL222H1/ SOC202H1/ STA220H1/ STA238H1/ STA248H1/ STA288H1/ PSY201H5/ STA215H5/ STA220H5/ PSYB07H3/ STAB22H3/ STAB23H3/ STAB57H3, (PSY260H1/ PSYB38H3)/ (PSY290H1/ PSY290H5/ PSYB64H3/ HMB200H1/ PSL300H1)

**Corequisites:** None

**Exclusions:** PCL200H1/ PCL476H1/ PSYC62H3

**Recommended Preparation:** None

**Credit Value:** 0.5

## Course Materials

**Optional (not required) Textbook:** *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.

## Marking Scheme

Assessment	Percent	Details	Due Date
<b>Term Test</b>	30%	<ul style="list-style-type: none"><li>o 2 hours allotted</li><li>o 30 fill in the blank questions (each worth 1 mark)</li><li>o 8 short written answer questions (each worth 5 marks)</li><li>o Total of 70 marks</li></ul>	May 22
<b>Research Assignment</b>	10%	<ul style="list-style-type: none"><li>o Short written assignment (~1500) on a neurotransmitter system that could be covered in the course but is currently not included.</li><li>o Details will be provided on Quercus</li></ul>	June 5
<b>Articles Quiz</b>	15%	<ul style="list-style-type: none"><li>o Not timed, only has a due date</li><li>o Questions based on articles available on online</li></ul>	June 12
<b>In-Person Final Exam</b>	45%		Final Exam Period

## Late Assessment Submissions Policy

10% per day late

## Course Schedule

Date	Description	Optional Chapter Reading
<b>Lecture 1</b> May 6	Introduction; <b>Assignment Posted</b>	3
<b>Lecture 2</b>	Introduction to Neuropharmacology	1 + 2

May 8		
<b>Lecture 3</b> May 13	Research Methods	4
<b>Lecture 4</b> May 15	Dopaminergic transmission	5, 9, 12 + 19
<b>May 20</b>	<b>Holiday (University Closed)</b>	
<b>Lecture 5</b> May 22	<b>TERM TEST (Lectures 1 – 4)</b>	
<b>Lecture 6</b> May 27	Adrenergic transmission	5, 11, 12
<b>Lecture 7</b> May 29	Study week, no activities planned	
<b>Lecture 8</b> June 3	Serotonergic transmission	6, 17, 18
<b>Lecture 9</b> June 5	Endocannabinoids, <b>Assignment Due</b>	14
<b>Lecture 10</b> June 10	GABAergic transmission	8, 10
<b>Lecture 11</b> June 12	Quiz Help Session, <b>Quiz Due @ 11:59 pm</b>	
<b>Lecture 12</b> June 17	Acetylcholine, <b>Exam Review</b>	11
<b>TBA</b> <b>June 19 – 24</b>	<b>In-person Final Exam</b>	

## Policies & Statements

Course Materials, including lecture notes

Course materials are provided for the exclusive use of enrolled students. These materials should not be reposted, shared, put in the public domain, or otherwise distributed without the explicit permission of the instructor. These materials belong to your instructor, the University, and/or other sources depending on the specific facts of each situation and are protected by copyright. Students violating these policies will be subject to disciplinary actions under the Code of Student Conduct.

### **Video Recording and Sharing (Download Permissible; Re-use 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. In this course, you are permitted to download session videos and materials for your own academic use, but you should not copy, share, or use them for any other purpose without the explicit permission of the instructor.

For questions about the recording and use of videos in which you appear, please contact your instructor.

### **Academic Integrity**

All suspected cases of academic dishonesty will be investigated following procedures outlined in the [Code of Behaviour on Academic Matters \(https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019\)](https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019). If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, please reach out to me. Note that you are expected to seek out additional information on academic integrity from me or from other institutional resources. For example, 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 <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 [A&S Student Academic Integrity \(https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity\)](https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity) and the [University of Toronto Website on Academic Integrity \(https://www.academicintegrity.utoronto.ca\)](https://www.academicintegrity.utoronto.ca).

### **Plagiarism Detection Tool**

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>).

### **Students with Disabilities or Accommodation Requirements**

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) at the beginning of the academic year by visiting <https://studentlife.utoronto.ca/departments/accessibility-services/>. 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 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 needs or condition with any instructor, and your instructors will not reveal that you are registered with AS.

## **Religious Accommodations**

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 cultural and religious traditions. 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 (such as 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.

## **Specific Medical Circumstances**

If you become ill and it affects your ability to do your academic work, consult me right away. Normally, I will ask you for documentation in support of your specific medical circumstances. This documentation can be an Absence Declaration (via ACORN) or the University's Verification of Student Illness or Injury (VOI) form. The VOI indicates the impact and severity of the illness, while protecting your privacy about the details of the nature of the illness. If you cannot submit a VOI due to limits on terms of use, you can submit a different form (like a letter from a doctor), as long as it is an original document, and it contains the same information as the VOI (including dates, academic impact, practitioner's signature, phone and registration number). For more information on the VOI, please see <http://www.illnessverification.utoronto.ca>. For information on Absence Declaration Tool for A&S students, please see <https://www.artsci.utoronto.ca/absence>. If you get a concussion, break your hand, or suffer some other acute injury, you should register with Accessibility Services as soon as possible.

## **Make-Up Assessments**

**If you miss the term test, you must provide documentation explaining your absence (see above) and complete a make-up test in a timely fashion.** If you do not complete a make-up test, you will receive a grade of 0 for the it. To ensure a make-up test can be completed as soon as possible, please contact the instructor within one week of the missed test. Most make-up tests should be scheduled within one week of the original test and completed within two weeks of the original test.

**If you miss the formal final exam, you must write a deferred final exam at a later date.** The deferred final exam will be similar in format to the missed final exam. To be eligible for a

deferred exam, you will need to file a petition with your College RO immediately following missing the exam.

### **Late/Missed Assignments**

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.

### **Re-marking Policy - Timeline and Protocol**

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.