

PSY396H1S: Neurochemical Basis of Behaviour

July/August 2025 Syllabus

Course Meetings

Day & Time	Delivery Mode & Location
Monday, 10 – 1 pm	In Person: SS 1072

Course Contacts

Instructor: Dr. Paul Whissell (paul.whissell@utoronto.ca)

Office Hours and Location: Mondays and Wednesdays, 1 - 2 pm in SS4042

Teaching Assistant: Ece Yucer

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/ ECO220Y5/ PSY201H5/ STA215H5/ STA220H5/ PSYB07H3/ STAB22H3/ STAB23H3/ STAB57H3, **and one of** PSY260H1/ PSYB38H3 **or** PSY290H1/ PSY290H5/ PSYB64H3/ HMB200H1/ PSL300H1

Exclusions: PCL200H1/ PCL476H1/ PSYC62H3

Credit Value: 0.5

Course Materials

Optional (not required) Textbook: *Psychopharmacology: Drugs, the Brain and Behaviour*. 3rd 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
Term Test	35%	o 2 hours allotted o Fill in the blank and written answer questions	July 16
Research Assignment	10%	o Report (~1500) on a neurotransmitter system that could be covered in the course	July 30
Articles Quiz	10%	o Not timed, only has a due date	Aug 11
In-Person Final Exam	45%	o Details TBA	Exam Period (Aug 15 - 21)

Course Schedule

Date	Description	Optional Chapter Reading
July 2	Lecture 01: Introduction; Assignment Posted	3
July 7	Lecture 02: Introduction to Neuropharmacology	1 + 2
July 9	Lecture 03: Research Methods	4
July 14	Lecture 04: Dopaminergic transmission in behaviour	5, 9, 12 + 19
July 16	TERM TEST (Lectures 1 – 4)	
July 21	Lecture 05: Adrenergic transmission in behaviour	5, 11, 12
July 23	Lecture 06: Serotonergic transmission in behaviour	6, 17, 18
July 28	Lecture 07: Endocannabinoids and behaviour, Quiz Posted	14
July 30	Lecture 08: GABAergic transmission in behaviour, Assignment Due	8, 10
Aug 4	Holiday, no class	
Aug 6	Lecture 09: Acetylcholine	11
Aug 11	Lecture Topic (TBA), Quiz Help Session, Quiz Due	
Aug 15 - 21	FINAL EXAM (Lectures 5 – 10)	

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 and 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. Do not download, copy, or share any course or student materials or videos without the explicit permission of the instructor.

Recordings are an additional support service and are thus not guaranteed. Whenever possible, please try to attend class as recordings may not always be available. In the event recordings are available, they will be posted on the Friday at the end of the week.

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.

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.

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.

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>).

Departmental Guidance for Undergraduate Students in Psychology

The Department of Psychology recognizes that, as a student, you may experience disruptions to your learning that are out of your control, and that there may be circumstances when you need extra support. Accordingly, the department has provided a [helpful guide](#) to clarify your and your instructor's responsibilities when navigating these situations. This guide consolidates Arts & Science Policies for undergraduate students in one place for your convenience. As an instructor in the department, I will frequently consult with these recommendations when providing you with support, and I recommend that you also consult it to learn more about your rights and responsibilities before reaching out to me.

Mental Health and Well-Being

Your mental health is important. Throughout university life, there are many experiences that can impact your mental health and well-being. As a University of Toronto student, you can access free mental health and wellbeing services at Health & Wellness (<https://studentlife.utoronto.ca/department/health-wellness/>) such as same day counselling, brief counselling, medical care, skill-building workshops, and drop-in peer support. You can also meet with a Wellness Navigation Advisor who can connect you with other campus and community services and support. Call the mental health clinic at 416-978-8030 ext. 5 to book an appointment or visit <https://uoft.me/mentalhealthcare> to learn about the services available to you.

You can also visit your College Registrar to learn about the resources and supports available: <https://www.artsci.utoronto.ca/current/academic-advising-and-support/college-registrars-offices>

If you're in distress, you can access immediate support: <https://uoft.me/feelingdistressed>