

PSY475H1F: Attention and Performance

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Teaching Assistant

Time and Location Wednesdays 2:00 pm - 5:00 pm (In Person)
University College RW 244

Office Hours By appointment: <https://utoronto.zoom.us/j/86146753390>

Prerequisites PSY201H1/ ECO220Y1/ EEB225H1/ GGR270H1/ IRW220H1/ POL222H1/
SOC202H1/ STA220H1/ STA238H1/ STA248H1/ STA288H1/ PSY201H5/
STA215H5/ STA220H5/ PSYB07H3/ STAB22H3/ STAB23H3/ STAB57H3,
(PSY270H1/ PSY270H5/ PSYB57H3/ COG250Y1/
(PSY280H1/ PSY280H5/ PSYB51H3)
Exclusion: PSYC52H3

Course Description "Everyone knows what attention is" Or do they? This class covers a range of topics in attention, such as how the brain allocates internal processing resources to achieve goal-directed behaviors. We cover popular tests of attention, experimental approaches and theories of attention that guide present day inquiry, with a special emphasis on how researchers infer attention from performance data. The goal is for you to leave this course with a strong understanding of concepts to do with filtering, orienting, alertness, control and arousal, and how scientists go about investigating these processes.

Learning Outcomes After completing the course, you should be able to:

- Identify and describe key methods used to tap attention processes
- Differentiate between popular theories of attention and consider how they apply to observations of human performance data
- Interpret and integrate research findings
- Recognize ways in which attention is competing for limited resources both in your daily life and as applied to the science of cognition
- Cooperate in attention research and contribute the local community
- Express your ideas about a research topic and make predictions about factors that may bias attention, and how attention may bias other types of processing and performance

Lectures All lectures will take place in person at RW143. Video and audio recordings are welcome upon request.

Course Materials There is no textbook for this course. Weekly lectures will be supplemented by readings that will be posted on Quercus.

Quercus You are responsible for logging in to Quercus (<https://q.utoronto.ca>) regularly where you will find weekly readings, lecture slides, announcements, etc.). I will usually post these slides Tuesday evenings. Note that the slides do not cover everything we go over in class and serve mainly to provide guidance. such, attendance will be helpful for scoring a high grade.

Class Schedule

<i>Date</i>	<i>Topic</i>
Sept 13	Lecture 1: Introduction to Attention
Sept 20	Lecture 2: Attentional Cuing and Capture
Sept 27	Lecture 3: Visual Search and Eye Movements (Poster Due)
Oct 4	Lecture 4: Attentional Control: How much do we have?
Oct 11	Lecture 5: Big Ideas: Signals of Attention, Premotor theory
Oct 18	Lecture 6: Failures of Attention, Task Switching, Conflict
Oct 25	Lecture 7: Object-based Attention (Midterm I)
Nov 1	Lecture 8: Incidental Statistical Learning (Guest Kristina Knox)
Nov 8	No Class – Fall Reading Week
Nov 15	Lecture 9: Big Ideas: Automaticity and Awareness
Nov 22	Lecture 10: Sustained Attention, Meditation and Pain
Nov 29	Lecture 11: Motor Control, Action and Attention (Guest Prof. Jay Pratt)
Dec 6	Lecture 12: Big ideas: Attention Training and Devices (Proposal Due)

Assessment Information

<i>Assessment</i>	<i>Value</i>	<i>Date</i>
Poster and Blurb	25%	Sep 31
Midterm I	30%	Oct 25
Review/Research Proposal	35%	Dec 5
Class Participation	8%	Ongoing
Study Participation	2%	Dec 6

Assessment Details

- Research Participation**** You are encouraged to take part in experimental research* to learn about the process of running cognitive science experiments on topics in attention and performance. You will receive 1% for 1 hour time (or 2 credits for 2 hours). The studies will be approved by the research ethics committee and involve a debrief for educational purposes.
- *Alternative Paper Reviews*** If you chose not to participate in the research studies, you can submit two paper summaries (1% each) on new topics in attention. Find two peer-reviewed articles submitted in the past 2 years from journals: Attention Perception and Psychophysics; Journal or Experiment Psychology: Human Performance and Perception; or Psychological Science.
- Poster and Blurb*** You will prepare a poster as if for a conference presentation and a short blurb of the research. This will involve selecting an experimental paper from the last 2 years from the journal APP or JEP:HPP, it can (and likely will) have multiple experiments and submit the graphic + a 3 min blurb of your poster presentation. The graphic can be prepared in Powerpoint, Keynote, Illustrator or equivalent, using the figures from the paper which can be adapted to suit the presentation mode (i.e., crop, edit, circle, highlight, etc). The poster is to be roughly A4 size, Landscape, and must include: Title; Name; Institute (Use your own title, name and institute, but reference the paper down the bottom).
- Midterm I*** The midterm test will cover Lectures 1 to 6, and will occur in person. The midterm test will be held at UC244. All readings and lecture content are testable. The tests will consist of multiple choice, short, and long answer questions. Multiple choice questions will target knowledge of detailed information, and short and long answer questions will target depth of understanding and critical reasoning.
- Class Participation*** You will receive grades for active participation in class discussions, demonstrations, contribution to group activities and weekly attendance.
- Research Proposal*** For your Review/Research Proposal, you will need to present a thesis based on a brief literature review on a topic covered in the lectures. You will then propose an experiment to evaluate your thesis. Your review should clearly highlight a limitation of the research/theory, and your proposal should experimentally address the proposed limitation. Your research proposal should include a clearly defined research question, proposed method, results, and discussion section. It is **strongly recommended** that you consult either the instructor or TA with your thesis prior to starting. Your overall paper will need to be **2000 words or less**, and be in APA format (double-spaced, 12-pt font, 1" margins). A detailed marking scheme will be available on Quercus.

Course Policies

Late Penalty Late submissions will be penalized at a rate of **1% per day** of the assessment's initial value. If special consideration is needed, see the "missed deadline" section.

Missed Deadline Students who miss a deadline should let the instructor know as soon as possible and no later than one week after the missed date. To declare *Special Medical Circumstances*, students can use the Verification of Illness or Injury Form (VOI), or attach supporting documentation, such as: a medical note, the Absence Declaration via ACORN, College Registrar's letter or Letter of Academic Accommodation from Accessibility Services. Special consideration may be given at the instructor's discretion.

Re-marking Students that dispute their mark should first contact the course instructor or TA to clarify why they received the mark they did. If the student is still dissatisfied, they should contact the instructor who will then re-mark the assessment. Students should make such requests no later than two weeks after the assessment was returned. It is understood that marking is not always perfect, and I will try to conduct re-marking in an unbiased and fair manner. Note however, re-marking may not increase your grade, and if you request re-marking, your new grade is final. If a student is still dissatisfied with their mark, they should contact the undergraduate coordinator of the Psychology Department.

Equity, Diversity and Inclusion The University of Toronto is committed to equity, human rights and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.

Original Work 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>). Note this is a voluntary service, so if you take exception to using it contact the instructor and a different submission arrangement will be made.

Use of Generative AI Similar to defining when students may collaborate with classmates, to what degree, and when an assignment should be solely their own work, there are boundaries and limitations to artificial intelligence use in completing the course work. Any content produced by an artificial intelligence tool must be cited appropriately. Many organizations that publish standard citation formats are now providing information on citing generative AI (e.g., MLA: <https://style.mla.org/citing-generative-ai/>).

Students are encouraged to make use of technology, including generative AI tools, in the following ways:

- to gather information from across sources and assimilate it for understanding.
- to contribute to their understanding of course materials
- to create an outline for an assignment, but the final submitted assignment must be original work produced by the individual student alone.
- to submit, as an appendix with their assignments, any content produced by an artificial intelligence tool, such as code or paraphrasing, and the prompt used to generate the content.

Students may *not* use artificial intelligence tools for the following:

- taking tests, writing research papers, or completing course assignments.
- Students may not copy or paraphrase from any generative artificial intelligence applications, including ChatGPT and other AI writing and coding assistants, for the purpose of completing assignments in this course.

- Representing as one's own an idea, or expression of an idea, that was AI-generated may be considered an academic offense in this course.

This course policy is designed to promote your learning and intellectual development and to help you reach course learning outcomes.

Academic Honesty and Plagiarism Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. Potential offences include, but are not limited to:

In papers and assignments:

- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor in all relevant courses
- Making up sources or facts
- Obtaining or providing unauthorized assistance on any assignment

On tests:

- Using or possessing unauthorized aids
- Looking at someone else's answers during an exam or test
- Misrepresenting your identity

In academic work:

- Falsifying institutional documents or grades
- Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, please reach out to me. Also, see the U of T writing support (www.utoronto.ca/writing). Note that you are expected to seek out additional information on academic integrity from me or from other institutional resources (for example, the [University of Toronto website on Academic Integrity](#)).