



PSY 280H1 Summer 2024 – Sensation and Perception

Online, asynchronous

| Contact Information | |
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| Instructor: Dirk Bernhardt-Walther | Teaching Assistants: Dory Xie Gevena Mariotti Alex Jacob |
| Preferred communication: Message in Quercus Email: dirk.bernhardt.walther@utoronto.ca | Preferred communication: Message in Quercus |
| Office Hours: Mondays (May 10 th – June 17 th) from 4 – 5 pm EST on Zoom | |

Course Description, Goals, and Prerequisites

The purpose of this course is to examine how we perceive our environment through our senses. As we will find out in this class, there are two parallel realities, the physical reality around us, and the psychological reality inside of our brain. In many cases, these two realities can be quite distinct. In the class we will explore how these two realities interact. We will discuss the physical, physiological, and cognitive aspects of perception that are related to the senses of vision, hearing, touch, smell, and taste.

Goals:

Upon successful completion of this course, students will be able to:

- describe the sensory systems;
- distinguish between sensation and perception;
- explain how sensory and perceptual processes shape our experience of “reality”;
- explain the basic principles of classical psychophysics;
- explain how human sensory systems respond to energy in the physical environment (i.e. light waves, air pressure, chemical molecules, etc.), transforming it into a perceptual experience that the brain can understand (i.e. sight, sound, smell, etc.);
- compare and contrast the five sensory systems in terms of their sensory/anatomical setup and perceptual organization;

- explain the roles of prior knowledge, and inference in our perceptual judgments and our conscious experiences;
- identify and define the leading terms, concepts, theoretical perspectives, empirical findings, and historical trends in the study of sensation and perception;
- compare and contrast psychological principles, theories, and methods as they pertain to sensory and neurological systems;
- critically read, understand, and evaluate scientific literature, understand and use scientific and technical vocabulary, and synthesize information from multiple sources.

Prerequisites: PSY100H1/ PSY100Y5/ PSYA01H3/ COG250Y1

Exclusions: PSY280H5/ PSYB51H3

Note about prerequisites: It is your responsibility to ensure that you have met **all** prerequisites listed in the Psychology section of the A&S Calendar for this course. If you lack any prerequisites you WILL BE REMOVED. No waivers will be granted.

Reading Material

Jeremy M. Wolfe, Keith R. Kluender and Dennis M. Levi, Sensation & Perception, 6th edition, 2021. (ISBN-13: 978-1605359724).

The textbook will be helpful for following the class, but it is not strictly needed. The book is available in hardbound, loose-leaf and ebook editions. All of these are acceptable. All three versions are available at the U of T bookstore.

Several copies of the textbook are available at Robarts Library.

Lecture materials:

Lecture slides, videos, assignments, and quizzes will all be posted on Quercus. Following the communications on Quercus closely is essential for this online course. Keeping up with readings and tasks is your responsibility.

Course Structure

The course is structured around six Units (0-5), each approximately one week. Unit 0 in the beginning of the class is shorter and meant to familiarize you with the class structure.

For each Unit, you should:

- Watch the lecture videos,
- Perform class activities,
- Participate in the Packback Discussion Forum
- Study for the Midterms (after Units 1 and 3) or the Final (after Unit 5)

Course Assessment

Evaluations consist of the following components:

i) Participation in the Packback Discussion Forum (100 points)

Participation is a requirement for this course, and the Packback Questions platform will be used for online discussion about class topics. Packback Questions is an online community where you can be fearlessly curious and ask open-ended questions to build on top of what we are covering in class and relate topics to real-world applications.

Packback Requirements:

The deadline for submitting questions on Packback will be each Friday night. Responses can be submitted until the following Sunday night.

Half of your Packback score (50 points total, 10 for each assignment) will be determined by you meeting the minimum expectations for each deadline:

- 2 open-ended Question with a minimum Curiosity Score of 60, worth 2.5 points each
- 4 Responses with a minimum Curiosity Score of 60, worth 1.25 points each
- Half credit will be provided for questions and responses that do not meet the minimum curiosity score.

If you meet these criteria *cumulatively over all assignments*, then you are eligible for additional credit (up to 50 points) at the end of the semester as follows:

| Average curiosity score | Points (out of 50) |
|-------------------------|--------------------|
| Above 70 | 25 points |
| Above 75 | 30 points |
| Above 80 | 35 points |
| Above 85 | 40 points |
| Above 90 | 45 points |
| Above 95 | 50 points |

Details of how to access Packback will be posted on Quercus.

ii) Class activities (100 points)

In each unit, you will be asked to perform hands-on activities related to the course content. You will be asked to submit evidence of your activities online. The number of activities per unit and the number of points per activity may vary. More details will be posted on Quercus.

iii) Two online Midterm exams (200 points each)

Two midterm exams covering the material of Units 0 and 1 (for the first midterm) and 2 and 3 (for the second midterm) will be written within a specific 24 hour period following the end of Units 1 and 3 (see course schedule).

iv) Online Final Exam (400 points)

A final exam covering the material from the entire class will be written during Final Exam Period. The final exam will be synchronous online at a fixed time for all students.

v) Extra credit (10 points)

You may receive extra credit of 10 points (1% of the grade) for participating in a 1-hour online psychology experiment. To participate in an online experiment for course credit, please send an email to: bwlab.experiments@gmail.com

The lab will contact you with further instructions.

In total, students can earn up to 1000 points (not counting extra credit).

Course Webpage

The website associated with this course is accessible via <https://q.utoronto.ca>

Course Policies**Use of Generative AI**

Artificial Intelligence (AI) can mimic human composition. My goal in this class is to teach you how to express your knowledge about *Sensation and Perception* in writing in the discussion forums and in the exams. AI can serve a useful purpose by tutoring you in your writing. This is implemented in the AI-assisted Packback Discussion Forum. This AI-supported will help you write high-quality contributions to the class discussions.

Other than for the Packback discussion, the use of generative artificial intelligence (AI) tools is strictly prohibited in all course assessments, including the midterms and the final assessment. This includes, but is not limited to, ChatGPT, GitHub Copilot, and open-source models that you have trained and/or deployed yourself. You may not interact with, copy, paraphrase, or adapt any content from any generative AI for the purpose of completing assignments in this course. Use of generative AI will be considered use of an unauthorized aid, which is a form of academic misconduct under the Code of Behavior on Academic Matters. This course policy is designed to promote your learning and intellectual development and to ensure that our evaluations are a fair and accurate assessment of your learning.

Missed Tests

Students have up to one week from the date of the missed test or assignment to contact the instructor and provide documentation (see "Absences due to illness").

Grading Policy

I follow the official University of Toronto, Faculty of Arts and Science grading scheme:

<https://advice.writing.utoronto.ca/general/grading-policy/>

Any requests for regrading must be made in writing no later than two weeks after a grade is released.

Penalties for Lateness

You have one week for the Packback discussion contributions and activities for each unit. I will not accept late submissions of these items. The midterm exams should be taken within the scheduled 24 hour period. Excused lateness due to illness needs to be documented. The final exam will be written synchronously during the Final Exam period. Please inform your college registrar if you cannot write the final exam that day.

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 unable to follow the class or missing a major course activity (like a test, or 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.

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>). 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>) and the *University of Toronto Website on Academic Integrity* (<https://www.academicintegrity.utoronto.ca>).

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.

Accommodation for Personal Reasons

There may be times when you are unable to complete course work on time due to non-medical reasons. If you have concerns, speak to me or to an advisor in your College Registrar's office; they can help you to decide if you want to request an extension or other forms of academic consideration. They may be able to email your instructors directly to provide a College Registrar's letter of support and connect you with other helpful resources on campus.

Written Communication Policy

Please check the syllabus and the class materials posted on Quercus before sending a message on Quercus or an email. You will find answers to most of your questions there. If you cannot find the answer there, then please post your question to the general class discussion on

Quercus. It is likely that some of your classmates have the same question. By posting on the class discussion, they will be able to see your question as well as my answer.

I am available to answer questions about lecture material in the online forum as well as through Zoom during office hours. Please address any questions about grading and assessment to your assigned TA. The preferred form of communication for the TAs and the instructor is direct messaging on Quercus.

Finally, please **consider all class communications as professional correspondence**. Proofread your message for spelling and grammar. Do not use short-hands and abbreviations – We are not your Facebook/Snapchat/WhatsApp buddies. Remember, **emails and posts on Quercus last forever and cannot be unsent**.

Academic Resources

Ongoing Learning Disability or Accommodation Requirement

Students with diverse learning styles and needs are welcome in this course. If you have an ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) (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 then 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.

Academic Integrity 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 (<https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019>) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences.

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, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources (<https://www.academicintegrity.utoronto.ca/>).

Other Resources

Student Life Programs and Services (<https://studentlife.utoronto.ca/>)

Academic Success Services (<https://studentlife.utoronto.ca/department/academic-success/>)

Counselling and Psychological Services (<https://studentlife.utoronto.ca/department/health-wellness/>)

Course Outline

| Dates | Topic | Reading Assignment |
|---------------------------------------------------------------------|---------------------------------------------|---------------------|
| May 6 th – May 12 th | Unit 0 – Introduction | Chapter 1 |
| May 13 th – May 19 th | Unit 1 – Vision I: Fundamentals | Chapters 2, 3, 4 |
| May 21 st , 7 am – May 22 nd , 7 am EST | Online Midterm 1, covering Units 0 and 1 | |
| May 20 th – May 26 th | Unit 2 – Vision II: Color and Depth | Chapters 5, 6 |
| May 27 th – June 2 nd | Unit 3 – Vision III: Attention and Motion | Chapters 7, 8 |
| June 4 th , 7 am – June 5 th , 7 am EST | Online Midterm 2, covering Units 2 and 3 | Chapters 1-6 |
| June 3 rd – June 9 th | Unit 4 – Hearing | Chapters 9, 10 |
| June 10 th – June 16 th | Unit 5 – Touch and the Chemical Senses | Chapters 13, 14, 15 |
| Date to be announced (June 19 th – 24 th) | Online Final Exam | All course content |