Perceptual Processes Syllabus

Department of Psychology and Neuroscience

NESC / PSYO 2150 Fall 2026

Dalhousie University operates in the unceded territories of the Mi'kmaw, Wolastoqey, and Peskotomuhkati Peoples. These sovereign nations hold inherent rights as the original peoples of these lands, and we each carry collective obligations under the Peace and Friendship Treaties. Section 35 of the Constitution Act, 1982, recognizes and affirms Aboriginal and Treaty rights in Canada.

We recognize that African Nova Scotians are a distinct people whose histories, legacies, and contributions have enriched the part of Mi'kma'ki known as Nova Scotia for over 400 years.

Course Instructors

Name	Email	Office Hours
Dr. Nathan Crowder	nathan.crowder@dal.ca	online, by appointment

Course Description

[From Calendar] Perception deals with the way in which our senses provide us with information about our environment. This course focuses on the process by which sensory experiences are coded, how they are interpreted by the nervous system, and how experience modifies perception.

Course Prerequisites

[From Calendar] PSYO 1011.03 (or PSYO 1021.03 or PSYO 1031.03) and PSYO 1012.03 (or PSYO 1022.03 or PSYO 1032.03); OR SCIE 1506.09/1507.09 (or SCIE1505X/Y.18) OR BIOL 1010.03 (or BIOL 1020.03) and BIOL 1011.03 (or BIOL 1021.03). All prerequisite courses must have a grade of B- or better.

Course Exclusions

[From Calendar] PSYO 3005.03/NESC 3005.03

Learning Outcomes

- Describe how sensory information is transcribed into neural activity, and compare and contrast the transduction process across several senses.
- Distinguish the types of information available in the sensory input, and how the brain can work on this information.

- Discriminate between the physical properties of a stimulus and the perception of that stimulus.
- Identify when sensory illusions provide insights into the perceptual process, and when available, provide a neural explanation for those illusions.

Course Structure

Course Delivery

***IN-PERSON**:* lectures take place in the classroom, and live sessions will not be recorded. Midterms and the final exam will be paper exams delivered in-person. Quizzes will be asynchronous online.

Lectures

Mon. / Wed. / Fri. 11:35am - 12:25pm Studley LSC-PSYCHOLOGY P4260

Notes on online course components:

- Online Content will be delivered via Brightspace.
- Minimum technology: this course requires internet access, sufficient hardware to navigate Brightspace (e.g. view lecture PDFs and Panopto videos, completing online quizzes, etc.), and to engage in Microsoft Teams consultations during 'office hours'.
- If a student can provide evidence of power/technology malfunction during an online quiz, the weight of that quiz will be transferred to the final exam.
- All exams, due dates, meetings are scheduled on Halifax Time (GMT-3).
- If students connect to online resources from outside Canada, they are responsible for ensuring awareness and compliance with any applicable laws in the country from which they are connecting.

Student Resources

Office hours: For now, office hours will occur online via Microsoft Teams by appointment, but regular in-person office hours may be announced on Brightspace.

Course Materials

Textbook: E.B. Goldstein and L. Cacciamani, Sensation and Perception, 11th edition. Cengage, 2021.

- *Paper* and *Digital* versions of this textbook are available from the Dal Bookstore.
- The 11th edition is bundled with the *MindTap* digital resource, which can be helpful but will not be referenced or managed throughout the term.
- Previous editions (7-10th) of the Goldstein text cover similar but not identical material, so they are also acceptable.

Brightspace site: This site will be used for making announcements regarding class, posting slides and recorded lectures, delivering quizzes, posting grades, etc. You are expected to ***check Brightspace regularly*** for new content, announcements, and potential schedule changes. *If you have difficulties accessing or using Brightspace, please contact the folks at UCIS/WebCT for help.*

Lecture Notes: Lecture notes are ***the students' responsibility***. PDF files of PowerPoint slides covering important points of each chapter will be posted on the Brightspace site. However, these slides are ***not complete*** and will need to be supplemented by notetaking.

Assessment

Component	Weight (% of final grade)	Date	Duration / Format
Online Quiz 1 (Ch. 1+2)	0.5%	Sept. 23, 2026	~20 min – online
Online Quiz 2 (Ch. 3+4)	0.5%	Oct. 7, 2026	~20 min – online
Midterm 1 (Ch. 1, 2, 3, 4, 5 [first half])	29%	Oct. 9, 2026	50 min – In-person
Online Quiz 3 (Ch. 5+6)	0.5%	Oct. 21, 2026	~20 min – online
Online Quiz 4 (Ch. 8+9)	0.5%	Nov. 4, 2026	~20 min – online
Midterm 2 (Ch. 5 [Second half], 6, 8, 9, 10)	29%	Nov. 16, 2026	50 min – In-person
Online Quiz 5 (Ch. 11+12)	0.5%	Dec. 4, 2026	~20 min – online
Final Exam (cumulative)	39.5%	*Scheduled by Registrar**	120 min – In-person

Assessment notes:

- Each ONLINE QUIZ is asynchronous and will be available to start for a period of 46-70 hours before the scheduled meeting time (Halifax Time; GMT-3) on the date listed on the table above (i.e. you must complete the quizzes *before* the in-person classes).

- Quizzes will consist of approximately 5-10 questions in a variety of formats (multiple choice, multi-response, fill-in-the-blank).
- Once the exam is initiated, students will have ~20 minutes to complete all the questions. (~90-120 s per point on the quiz).

- In-person MIDTERMS will take place in the classroom at the regularly scheduled meeting time and will be exclusively multiple choice.
- * The ***final exam will be scheduled by the Registrar*** during the exam period. Do not plan to leave Halifax before the end of the exam period; travel is not a valid circumstance to reschedule the final exam.

Conversion of numerical grades to final letter grades follows the Dalhousie Grade Scale:

A+ (90-100)	B+ (77-79)	C+ (65-69)	D (50-54)
A (85-89)	B (73-76)	C (60-64)	F (0-49)
A- (80-84)	B- (70-72)	C- (55-59)	

Course Policies

1. Missed Academic Requirements

Missing an exam/quiz is unacceptable for any reason other than contagious illness or emergency. **If you are unable to write an exam or quiz**, you must inform Dr. Crowder by email, and submit a STUDENT DECLARATION OF ABSENCE (SDA) using Brightspace only (do not email SDAs or drop SDAs off in person).

- The Declaration of Absence form may only be used a maximum of **two times** throughout the term and may **only cover three consecutive days of absence**.
- If you miss a quiz/exam but do not submit proper documentation (signed Declaration of Absence) you will receive a mark of zero for that component.

IMPORTANT: In the event of a valid missed component **(see above), the weight of that item will be transferred to the final exam.**

2. Academic Integrity & Testing

General - **Quizzes and exams are "closed-book", which means no information other than the questions themselves is to be accessible during the quiz/exam. You must complete all quizzes and exams alone with no consultation/collaboration with other people or online resources.**

Computer-based quizzes - students are expected to complete quizzes online. Only one online device should be available for each student, and only the Brightspace page should be accessed during quizzes (i.e. no AI, google searches, messaging apps, etc.).

On paper exams – all head coverings must be removed or adjusted so invigilators have an unobstructed view of student's gaze direction. Students may not use their own paper during an exam, nor are they permitted to take any paper with them that they were supplied during the quiz/exam. No electronic devices may be accessed or visible during paper exams (this includes phones, or any tech-based watches, glasses, etc.). Electronic devices must be turned off and stored *before* entering the exam room. Come prepared to examinations - bring pencils/pens, erasers, etc.

3. Artificial Intelligence (AI)

Use of AI in this course is not recommended. However, **Microsoft 365 Copilot Chat** may be used to support studying and preparation (e.g. to generate practice questions, flash cards, chapter summaries, etc.), but not the production of ***assessed*** work (see Appendix A for full details).

The only AI tool that is acceptable for uploading course materials for your own learning is Dalhousie's licensed version of **Microsoft 365 Copilot Chat** because it does not infringe copyright under Dalhousie's Microsoft agreement.

Do not upload course materials into any other AI tools - doing so violates Dalhousie's Academic Integrity, Student Code of Conduct, and Fair Dealing (copyright) Polices.

4. Course Accessibility

Refer to the Student Accommodation Policy for more information on how Dalhousie instructors and staff work collaboratively with students to create and sustain an accessible educational environment.

- You are eligible for accommodations based on protected characteristics such as religion. If you have religious, cultural, or community-significant observances that conflict with course requirements, reach out to me to collaboratively find alternatives for completing the course requirements.
- To begin the process of requesting a formal academic accommodation, contact the Student Accessibility Centre

5. Health and Safety Statement

All students are required to comply with health and safety requirements on campus, and should be considerate of others' health concerns. Non-compliance may be reported under the Code of Student Conduct.

6. Online Transition Plan

There is a tiny chance that the university may require online instruction for some/all classes due to university or government mandated restrictions during the term. For the duration of online instruction, all assessment components will be replaced with equally weighted fortnightly online tests. The weight of a valid missed test will be equally distributed among the other tests.

7. Distributing Course Materials

Students will have access to lecture slides and (possibly) recorded lectures throughout this course. However, under no circumstances is this material to be shared, posted online, or distributed in any

other way. Personal copies of recordings must be destroyed at the end of term. Furthermore, students do not have permission to revise, modify, share, post on-line, or redistribute in any manner - electronic or otherwise - any of the lecture materials.

8. E-mail Etiquette

Students often don't appreciate how many emails their professors receive in a single day, most of which require a response. This year all consultations outside of class will be scheduled by email and take place via Microsoft Teams. I will endeavor to provide a helpful response to your email within a maximum of three *working days* of receipt. You can facilitate this by making sure that you:

- Read the syllabus and Brightspace page to determine whether the information you require is already available
- Enter the course number in the subject line: **2150**
- Include your FULL name and Dal student ID
- Write in full (grammatically correct) sentences, and proof-read your email message to be sure that it is clear and provides all pertinent information
- Do not write to request an exception to the syllabus
    - All students are subject to all the rules as outlined in this course syllabus and no exceptions will be made to any class policies under any circumstances

9. Course completion requirement

Academic Calendar regulation 16.1 states: “In order to complete a course satisfactorily, a student must fulfill all the requirements as set down in the course outline [Syllabus].”

Course Content

Approximate Date	**Topic**	**Goldstein Chapter**
Sept. 9	Course Introduction	
Sept. 11	Intro to Perception	1
Sept. 14	Physiology of Perception	2
Sept. 18	Retinal processing, LGN	3
Sept. 25	Visual Maps and Streams	4

Sept. 30	*National Day of Truth and Reconciliation, University closed*	
Oct. 5	Perceiving Objects	5 (first half)
Oct. 9	**Midterm #1**	1, 2, 3, 4, 5 (first half)
Oct. 12	*Thanksgiving, University closed*	
Oct. 14	Perceiving Scenes	5 (second half)
Oct. 16	Attention	6
Oct. 21	Motion Perception	8
Oct. 26	Color Perception	9
Nov. 2	Depth and Size Perception	10
Nov. 9-13	*Fall Study Week – no class*	
Nov. 16	**Midterm #2**	5 (second half), 6, 8, 9, 10
Nov. 18	Cochlea and Pitch	11
Nov. 25	Auditory Scenes	12
Dec. 2	Cutaneous Senses	15
Dec. 9	Pre-Final Exam Prep.	

University Policies and Statements

The link below guides students toward supports, university policies, and guidelines. These resources and policies are now hosted on a website, so they will remain up-to-date even if policies, statements, resources, and guidelines get amended.

Syllabus Appendix: Student Supports & University Statements, Policies, and Guidelines

Appendix A — Artificial Intelligence use in NESC/PSYO 2150

AI and your learning

This course is designed to help you build knowledge and understanding about the psychology and neuroscience of perception. AI tools can help you study, but improper use and/or relying on them to complete assessments meant to test or build your understanding is likely to harm your learning and leave you unprepared for exams, advanced coursework, and research. If you use AI tools, do so in a way that supports rather than undermines your learning.

What AI tools are

AI tools use algorithms and large datasets to generate, summarize, analyze, or revise text, images, or code in response to prompts. Examples include text generators, grammar and editing tools, AI search and summarization tools, and transcription or translation services. They can speed up some tasks, but they do not replace independent thinking, subject knowledge, or scholarly judgment.

Why caution is warranted

AI tools generate text from statistical patterns, not an understanding of truth or evidence; they can produce confident-sounding but incorrect explanations and unreliable or fabricated citations. You remain fully responsible for the accuracy, originality, and integrity of every AI output you use. In particular:

- using AI to complete coursework limits your development in reasoning, data interpretation, and scientific literacy;
- short-term gains from AI can mean weaker preparation for upper-year courses, labs, research, and professional programs;
- relying on AI in place of your own thinking can impair retention, problem-solving, and exam readiness.

AI and academic integrity

In this course, AI use is governed by the same expectations that apply to all academic work under Dalhousie's academic-integrity regulations (i.e. Intellectual Honesty). AI use that replaces or obscures your own intellectual work is unauthorized assistance and a form of academic misconduct. You are also responsible for protecting the privacy and intellectual property of others.

What is and isn't allowed

Permission does not equal endorsement; the primary risk is to your own learning and progression.

1. Learning support and independent study — you may: have concepts explained in different words; generate practice questions or flashcards; summarize assigned readings or lecture material for study; clarify terminology or methods.

2. Recordings, slides, and posted materials — you may: create personal summaries, outlines, or study guides, and translate content for accessibility. **You may not:** upload lecture recordings, slides, assessments, or other instructor materials to external AI platforms (these are protected by copyright).

3. Writing mechanics and language — you may: use AI for grammar and spelling, clarity and concision, and reference formatting. Help limited to mechanics is not misrepresentation when the ideas, structure, and analysis are your own.

4. Assessment-specific. In-person exams and Online quizzes: AI may be used to study beforehand, but ***no AI use is permitted during the exam/quiz***. Even though AI use for online assignments cannot be regulated easily, it undermines the purpose of the quiz and your learning.

NESC/PSYO 2150 AI Checklist

Activity	Allowed	Not allowed
Language assistance: identifying and correcting grammar, spelling, or sentence-structure errors.	☑	☐
Study notes from recordings: converting lecture audio into a transcript or summary notes for personal use (while respecting copyright).	☑	☐
Study notes from slides: converting slides into summary notes for personal use (while respecting copyright).	☑	☐
Drafting / outlining: using AI to draft or outline part of an assignment.	☐	☑
Completing graded work: using AI to write papers, essays, or assignments meant to be independent student work.	☐	☑
Online quizzes / tests: using AI to answer online quiz or test questions.	☐	☑
Non-approved tools: using AI tools other than Dalhousie's licensed Microsoft Co-Pilot.	☐	☑
Uploading course materials: sharing instructor or peer materials with external platforms without written consent / copyright permission.	☐	☑