

Sensation & Perception

Course Details

Course Designator & Number: PSY 3031

Number of Credits: 3

Language of Instruction: English

Contact Hours: 45

Instructor: Dr. Laurence E. Heglar

Course Description

To develop an understanding of the psychological, biological, and physical bases of sensory experience in humans and animals. First we will consider the philosophical questions that humans have long posed about perception, and study the methods and techniques scientists use to try to answer them. We will study the sensory pathways, fundamental perceptual processing, and higher-level meaning-making, emphasizing the senses of vision and hearing. We will more briefly consider the orienting senses, skin senses, chemical senses (smell and taste), and the perception of time.

Course Objectives

- Learn the history and methods used in the science of sensation and perception.
- Learn the structure of the major sensory systems.
- Learn the transduction and transmission processes for the major sensory systems.
- Learn how sensory information is perceived and processed.
- Learn how perceptual information helps us in our lives.
- Learn additional applications of sensation and perception information.
- Learn about the changes to sensation and perception over the lifecycle.

Methodology

The format will be class lecture and students group work, with demonstration exercises and videos. The student is expected to have read the required material before class and be

prepared to contribute to an integrative and meaningful discussion. However, in order to have a meaningful discussion in this topic area, there are a lot of facts to learn first: historical dates; the parts and functioning of the perceptual systems; neural pathways and brain regions; theories; processes; functions; etc. Students will be left to learn many of the more straightforward facts through the required reading, supplemental resources (e.g., companion text web site) or discussion outside of class. You may be tested on all material covered in lectures, as well as material from the textbook and additional required readings that may not be covered in class

Course Prerequisites

Psy 1001 Introduction to Psychology

Required Reading / Materials

Textbook/Course Materials:

Goldstein, E. B. (2009). *Sensation and Perception* (8th ed.). Belmont, CA: Thomson Wadsworth.

Additional Readings

In addition to the text, additional readings will be assigned throughout the course.

Grading

Grading Rubric

Letter Grade	Score or Percentage	Description
A	93–100	Achievement that is outstanding relative to the level necessary to meet course requirements.
A-	90–92	Achievement that is significantly above the level necessary to meet course requirements.
B+	87–89	
B	83–86	
B-	80–82	Achievement that meets the course requirements in every respect.
C+	77–79	
C	73–76	
C-	70–72	Achievement that is worthy of credit even though it fails to fully meet the course requirements.
D+	67–69	
D	60–66	
F	0–59	Represents failure (or no credit) and signifies that the work was either (1) completed but at a level of achievement that is not worthy of credit or (2) was not completed and there was no agreement between the instructor and the student that the student would be awarded an I.

Summary of How Grades Are Weighted

Assignments	Percentage of Grade
Participation in class	5%
Homework and assignments	10%
Mid-term examination	30%
Final examination	30%
Overall grade	100%

Assessment Details

Midterms and final exam

There will be a midterm and a final exam, intended to assess learning on mostly (but not exclusively) factual information. The midterm will be held during a class period (see the schedule), and the final exam will be in the regularly scheduled final exam time period.

The material covered in the exams may include any of the required reading (textbook and additional readings), in addition to anything presented or discussed in class. Note that just because it is not covered in class does not mean it will not be on the midterm or the final. The final exam will not be cumulative. Exams may include a mixture of multiple choice and short-answer questions.

Homework and assignments

Short weekly practice quizzes will be given in class. The grading for these quizzes will be announced.

Final Project

A short (5–8 pages) paper will be required on some aspect of perception applied to real life. This will be presented to the class in the form of an informal discussion. Example topics could be: perception and brain damage, perception and aging, perception and driving, designing for the color-blind, motion sickness, etc. Further instructions about content and format will be discussed in class.

Participation

All students are expected to actively participate in class discussions, and to come to class showing evidence of having read the material. See note on Attendance below.

Course Content

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Unit 1

Theme

- Introduction to Perception
- Reading: Text, Ch. 1

Unit 2

Theme

- The Physiology of Perception
- Reading: Text, Ch. 2

Unit 3

Theme

- Perceptual Development
- Reading: Text, Ch. 16

Unit 4

Theme

- Introduction to Vision
- Reading: Text, Ch. 3
- Trip to Andalucia – one class day

Unit 5

Theme

- The Visual Cortex and Beyond
- Reading: Text, Ch. 4

Unit 6

Theme

- Perceiving Objects and Scenes
- Reading: Text, Ch. 5

Unit 7

Theme

- Midterm Exam
- Fall Break – Oct. 30 – Nov. 3

Unit 8

Theme

- Visual Attention
- Reading: Text, Ch. 6

Unit 9

Theme

- Taking Action
- Reading: Text, Ch. 7
- Nov. 9 – Holiday

Unit 10

Theme

- Perceiving Motion
- Reading: Text, Ch. 8

Unit 11

Theme

- Perceiving Depth and Size
- Reading: Text, Ch. 10

Unit 12

Theme

- The Auditory System
- Reading: Text, Ch. 11
- Student-led discussions of Final Projects
- Dec. 6 – Holiday

Unit 13

Theme

- Sound Localization and the Auditory Scene
- Reading: Text, Ch. 12
- Student-led discussions of Final Projects

Policies

Attendance Policy

Students are expected to be on time and attend all classes while abroad. Many instructors assess both attendance and participation when assigning a final course grade. Attendance alone does not guarantee a positive participation grade; the student should be prepared for class and engage in class discussion. See the on-site syllabus for specific class requirements.

University of Minnesota Policies & Procedures

Academic integrity is essential to a positive teaching and learning environment. All students enrolled in University courses are expected to complete coursework responsibilities with fairness and honesty. Failure to do so by seeking unfair advantage over others or misrepresenting someone else's work as your own can result in disciplinary action. The University Student Conduct Code defines scholastic dishonesty as follows:

Scholastic Dishonesty

Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis.

Within this course, a student responsible for scholastic dishonesty can be assigned a penalty up to and including an "F" or "N" for the course. If you have any questions regarding the expectations for a specific assignment or exam, ask.

Student Conduct

The University of Minnesota has specific policies concerning student conduct. This information can be found [on the Learning Abroad Center website](#).