

**PSYC/NEUR 246 Exploring Sensation and Perception
Fall 2016**

Lecture/Lab - MWF, 1:10-2:10pm OLRI 205; Tu 1:20-2:50m, OLRI 352 Course website: See Moodle

Course Description: An examination of the processes of sensation and perception. While the course features a strong emphasis on neurophysiology of sensation, classical approaches to the study of perception will also figure prominently. We will be exploring the limits and errors in our own perceptive experiences through examples and laboratory components.

Course Goals:

1. Understand the neurophysiology of different senses
2. Explore our own senses and the errors and illusions in our perceptual systems
3. Communicate the science behind sensation and perception to the general public

Textbooks

Goldstein, E.B., (2014). *Sensation and Perception, 9th Edition*, Wadsworth, Cengage Learning. Additional readings listed on the calendar can be found on Moodle.

Instructor:

Julia Manor, jmanor@macalester.edu

Office hour: WF 9:30-10:00am Walking Office Hours on the LC track; Tuesdays 10:00-11:00am in my office OLRI 323

Preceptor: Alexandra Laske, alaska@macalester.edu, Office hours: Monday 4:30-5:30pm 3rd Floor OLRI

Exams:

- There will be 3 exams given during the term.
- Exams will be based on material from the books as well as lecture and lab material.
- All exams will be a mixture of multiple choice and essay format
- Exams will be taken in class and will be closed book.

Writing Assignments/Labs:

ALL WRITTEN ASSIGNMENTS WILL BE TURNED IN ON MOODLE

Labs:

There will be 3 full labs that will require an APA style lab write up (including intro/methods/results/discussion). Please see handouts for each lab for specific instructions. Full labs will be worth 20 points each. Full labs will be due during lab time two weeks after the lab date. In addition there will be 6 “mini- labs” which may be written up with a lab partner and are typically completed in class (or with minimal time outside of class). Mini-labs will be due by lab the week after they are assigned. One of the mini-labs will be dropped from the grades. Full labs can be made-up outside of class only at my discretion so make sure that you attend lab weekly!

Sensory Challenge Assignments:

One of the goals of this class is to allow you to explore your own sensory systems. To this end, we will have several “challenges” that are designed to get you thinking about how your senses work and how those senses impact your life. They will include brief write-ups (1-2 pages) or other creative projects.

Illusions:

Each student will select an illusion from one of the sensory domains. You will present the illusion to the class in a short 5 minute presentation demonstrating the illusion to the class. You will then write a short 2-3 page (double-spaced) paper about the illusion due one week after your presentation. The paper should contain the following elements:

- Name of the illusion (or effect)
- Example of the illusion (url ok but prefer copied image when possible)
- Citation or discoverer of the illusion
- Paragraph describing the illusion
- Paragraph describing the significance for perception (what does it tell us about our perception?)
- Include citations in APA format

Group Project:

In groups of 3-4, you will be completing a project. You will be creating an exhibit for a Museum of the Senses (other creative projects will be considered case by case). The *interactive* exhibit will be presented at the Kids Judge Neuroscience Fair on Saturday **November 19, 2016 from 12:00-4:30pm**. Your group will also turn in a brief write-up including time sheets of work each person contributed to your project. More information to come!

Grades:

Final grades will be determined based on exam performance, lab and sensory writing assignments, the illusion presentation, and the final project. The distribution of points is as follows:

Illusions	15 pts
Full Lab Assignments (3x20)	60 pts
Mini Lab Assignments (5x5)	25 pts
Exams (3x50)	150 pts
Sensory Challenge Assignments	40 pts
<u>Group Project</u>	<u>50 pts</u>
Total	340 pts

Policies:

Late Work:

Any assignments turned in after the beginning of class on the due date will be considered late. Assignments may be submitted late, but 5% of the total point value will be deducted for every 24 hour period that the assignment is late *including weekend days*. In cases of documented emergency, extensions may be given **at the instructor's discretion**.

Obtaining Help on Writing Assignments Prior to Turning Them In:

If you need help on a writing assignment, you can come to the office hours of the instructor or the preceptor. Entire drafts of papers will not be read prior to turning them in for a grade, but specific questions on a draft can be brought in for discussion. Links to APA formatting websites and an example APA style paper can be found on Moodle.

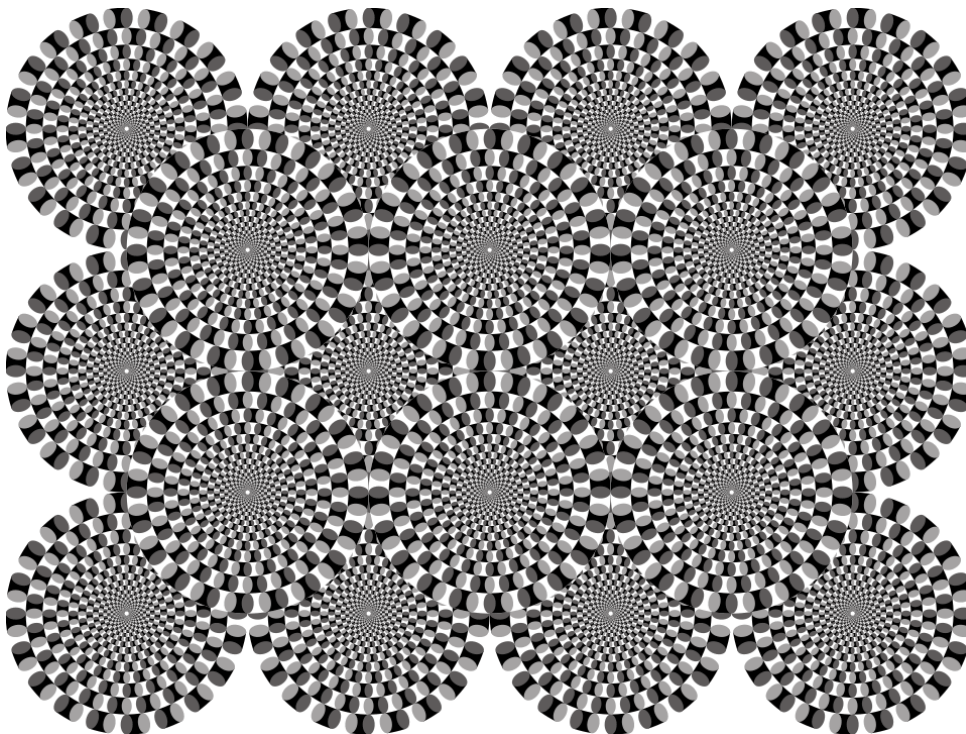
MAX Center for Writing: The Max Center is an excellent place to get another perspective and additional help on writing. Consult their website at <http://www.macalester.edu/max/writing/> for more information.

Accommodations

I want every student to have the opportunity to be their most successful. If you need accommodations to help you be your most successful, please contact Robin Hart Ruthenbeck at 651-696-6874 to discuss disability services and accommodations.

Assignments at a Glance

Assignments	Due date
Magnitude Lab (Lab Report I)	9/30
Physiology- Mini Lab I	9/27
Senseless Challenge	10/7
Vision- Mini Lab II	10/11
Vision 2- Mini Lab III	10/18
Ilab (Lab Report II)	10/24
Vision Challenge	10/28
Hearing- Mini Lab IV	11/8
Sound Localization (Lab Report III)	11/11
Hearing Challenge	11/14
Cutaneous- Mini Lab V	11/15
Kids Judge Projects	11/19
Olfaction/Taste-Mini Lab VI	12/6
Kids Judge Write-up	12/13



Calendar: Subject to Change!

Week	Class Topic	Lab Activities	Assignments Due
1 8/31-9/2	Introduction to course	No Lab	Chapter 1
2 9/5-9/9	Beginnings	Sensory Videos Paper discussion	Chapter 2 Burns (2005)
3 9/12-9/16	Neural Processing	Magnitude Estimation 1	Chapter 3
4 9/19-9/23	Cortical Organization	Physiology	Chapter 4
5 9/26-9/30	9/26 Exam 1 Perceiving Objects and Scenes	Vision 1	Chapter 5 Lab Report 1 Due 9/30 Rayner & Bertera (1979)
6 10/3-10/7	Motion	Vision 2	Chapter 8 Senseless Challenge Due 10/7
7 10/10- 10/14	Color Depth	Vision 3	Chapter 9 Chapter 10
8 10/17- 10/21	Continue Depth 10/19 Exam 2	FALL BREAK NO LAB!	
9 10/24- 10/28	Hearing	Hearing 1	Lab Report 2 Due 10/24 Chapter 11 Vision Challenge Due 10/28
10 10/31- 11/4	Auditory Localization Speech	Hearing 2	Chapter 12 Chapter 13
10 11/7- 11/11	Body/Cutaneous Senses	Cutaneous Senses	Chapter 14 Ragert (2004) Lab Report 3 Due 11/11
11 11/14- 11/18	Kids Judge Group Work Days (11/14-11/16) 11/18 Start Olfaction 11/19 KIDS JUDGE 12:00-4:30pm	NO LAB (Julia @ Society for Neuroscience)	Hearing Challenge Due 11/14 Chapter 15

Week	Class Topic	Lab Activities	Assignments Due
			PROJECTS DUE!
12 11/21	Continue Chemical Senses	Olfaction Lab	Herz et al (2004)
13 11/28- 12/2	Taste Taking Action Combining Senses	Taste	Chapter 7
14 12/5-12/9	TBD (Check Moodle)/Review Exam 3 12/9	No Lab	Final Project Paper Due 12/13