



# Psychology 304L (52487)

## Sensation and Perception

Fall 2022

Lecture Location: Grace Ford Salvatori Hall (GFS) 101  
Days and Time: Tuesday & Thursday; 10:00 a.m. to 11:50 a.m.

Online portion at <http://blackboard.usc.edu>

### **Instructor Information**

Dr. Clayton L. Stephenson  
Assistant Professor (Teaching) Psychology  
[clstephe@usc.edu](mailto:clstephe@usc.edu)

Office Location: SGM 525A  
Office Hours: Monday, Wednesday, Friday  
11:00 a.m. – 12:00 p.m. at Hahn Central Plaza  
Fountain; or by appointment

## Syllabus

### **Course Description**

Receptor processes and stimulus organization; traditional topics in the perception of objects, space, time. Laboratory demonstrations and exercises.

### **My Course Summary**

It has happened to the majority of us. Someone yells out, “Turn down that rickety music! I can’t hear myself think.” This is when you turn down the music so that there is a noticeable difference in volume. However, after some time passes, you turn up the music little by little over time without anyone noticing that the music is right back (or at least close) to the original volume. Why does the person not realize the music is it at its original volume? Are people not aware of the physical changes in their environment? Is it an issue that has to do with sensation or perception? These are the questions that psychological scientists ask. Other questions include, how much influence does the sensory system have on higher cognitive processes? Why is it that a painful stimulus delivered by another person hurts more than if the stimulus is delivered by the self even when the stimulus remains constant? What is it about odors that bring back such rich memories and, yet, we can barely remember someone’s name? In this course you will learn the methods and statistical procedures used in sensation and perception research, the principles of each sensation, and how perception of each sense influences other cognitive processes.

### **Prerequisites**

PSYC 100 (Introduction to Psychology)

### **Teaching Objectives**

- 1) Provide the terminology, background, and theories for sensation & perception.
- 2) Demonstrate multiple phenomena that occur in human sensation & perception.
- 3) Improve students’ critical thinking skills for psychological science.

## Student Learning Objectives

After successfully completing this course, students will be able to . . .

- 1) recall and define the terms in sensation & perception.
- 2) explain and distinguish between different sensory and perceptual experiences through the concepts, theories, and models in sensation & perception.
- 3) explain how sensation & perception functions during everyday experiences.
- 4) develop a better understanding and appreciation for their personal sensation & perception experiences.
- 5) demonstrate knowledge, understanding, and critical thinking about sensation and perception in their writing and verbal communication.

## Required Texts

Wolfe, J. M., Kluender, K. R., Levi, D. M., Bartoshuk, L. M., Herz, R. S., Klatzky, R. L., & Merfeld, D. M. (2021). *Sensation & perception* (6<sup>th</sup> ed.). Oxford.

**NOTE:** Textbook is available at the bookstore or online. Online resources for the textbook are available at <https://learninglink.oup.com/access/wolfe6e>

Assessment	Focused Learning Objective(s)	Due Date	Percent of Final Grade: Points
Bonus Prep 1	1, 2	September 13 <sup>th</sup>	0% (individual grade): 3 points
Bonus Prep 2	1, 2	October 4 <sup>th</sup>	0% (individual grade): 3 points
Midterm Exam	1, 2, 3	October 18 <sup>th</sup>	20% (individual grade): 100 points
Bonus Prep 3	1, 2	November 11 <sup>th</sup>	0% (individual grade): 3 points
Special Topics Paper	2, 3, 4, 5	November 22 <sup>nd</sup> by 11:59 p.m.	20% (individual grade): 100 points
Bonus Prep 4	1, 2	December 1 <sup>st</sup>	0% (individual grade): 3 points each
Mini-Projects	2, 3, 4, 5	September 22 <sup>nd</sup> , October 27 <sup>th</sup> , and November 29 <sup>th</sup>	20% (individual grade): 100 points
Final Exam	1, 2, 3	December 8 <sup>th</sup> from 11:00 a.m. to 1:00 p.m.	30% (individual): 100 points
Participation	2, 3, 4, 5	Continuous	10% (individual): 10 points each

## Bonus Preps

Bonus Preps are essentially practice exams. They are the length of a quiz (i.e., approximately 20 – 25 multiple choice questions) and one or two short answer questions. Bonus Preps have 0% weight in the calculation of your overall grade, therefore, you are *not* required to take the Bonus Preps. Instead, you can earn up to 3 points on each Bonus Prep and those points will be applied to your Midterm Exam (i.e., points from Bonus Preps 1 and 2) and to your Final Exam (i.e., points from Bonus Preps 3 and 4). Bonus Preps will be given at the start of class on their scheduled day, and you will have 35 minutes to complete them. Again, if you miss a Bonus

Prep, it *does not* impact your overall grade.

### **Midterm and Final Exam**

The Midterm and Final Exam will test your understanding of the major concepts in the course and will focus on both the details and "the big picture." Both exams are based on a combination of lecture material, class discussions, textbook, video-presentations, assignments, and handouts. The Bonus Preps are the best representation of what you can expect on the exams. The Midterm exam will consist of approximately 10 – 15 multiple-choice questions from each chapter (Chapters 1 – 8) and approximately five short essays. The final exam is cumulative with 10 -15 questions from the Midterm and 10 – 15 multiple choice questions from each chapter (Chapters 9 – 15) and approximately five short essays. **The Midterm Exam is on October 18<sup>th</sup> and the Final Exam is on December 8<sup>th</sup> from 11:00 a.m. to 1:00 p.m. Both exams take place in the same room as lecture.**

### **Three Mini-Projects**

You will complete three mini-projects on your own or with a partner (groups of three are okay, but no groups with four people). Each project will have a specific prompt on Blackboard that will explain topic and process to complete the assignment. Each prompt will become available one month before the respective due date. **The mini-projects are due September 22<sup>nd</sup>, October 27<sup>th</sup>, and November 29<sup>th</sup>.**

### **Special Topics Paper**

You will complete a research paper on a special topic related to sensation and perception. You may choose whatever topic you want, but it **MUST** focus on sensation and perception. Even if we haven't covered a sensory system (e.g., olfaction), you may still write on a topic related to that system. More information about the paper and its requirements are available on Blackboard. **The Special Topics Paper is due by 11:59 p.m. on November 22<sup>nd</sup>.**

### **Participation**

Reading the assigned material and completing the assignments before class and lab are important to understanding the lecture topics and to participating in the discussions. Participation will be assessed through in-class exercises, activities, and discussion. Most exercises will be worked on in class while some may be worked on both in class and at home. *Participations are due by 11:59 p.m. the same day of the class session and will be graded based on the completion and quality.* **Your lowest THREE participation points will be dropped from the calculation of your overall grade.**

### **Extra Credit: Participate in Research Studies and/or Alternative Essays**

Part of understanding the research process is being a participant in a study. You may participate in research studies conducted in the psychology department to earn extra credit. All points will be applied to your Final Exam. However, you *cannot* earn more than 100 points on your Final Exam, and any leftover extra credit points *will not* be applied to any other assignments. You can view and sign up for studies through the SONA system at <https://usc.sona-systems.com/>. You may complete up to *6 points* of credit on SONA. Please note that your participation in research is voluntary and you have the right to **NOT** participate in research studies. If you do not want to participate in studies, then you may complete the alternative, which is writing three two-page

papers on three separate topics, which are also posted on Blackboard. **All credits and/or papers are due by 11:59 p.m. on December 2<sup>nd</sup>. No exceptions!**

**Grading Scheme**

*Please Note: I do NOT curve the grade. Whatever grade you have on Blackboard is your grade in real-time that you earned to that date. I do round up (e.g., 93.45 = 93.5%) for your final grade. Finally, it is NOT appropriate for you to ask to make up an assignment at the end of the semester that was due past what is outlined in the late policy or to ask for extra credit beyond what is described above, so please do NOT ask for either.*

A = 100 - 93.5%; A- = 93.4 - 89.5%; B+ = 89.4 - 86.5%; B = 86.4 - 83.5%; B- = 83.4 - 79.5%; C+ = 79.4 - 76.5%; C = 76.4 - 73.5%; C- = 73.4 - 69.5%; D+ = 69.4 - 66.5%; D = 66.4 - 63.5%; D- = 63.4 - 59.5%; Below 59.5% = F

**Instructor Student Communication and Blackboard**

Blackboard (Bb) will be used to post announcements, send e-mails, and post all grades and course materials, so it is the student’s responsibility to frequently visit the course on Blackboard (website: <http://blackboard.usc.edu>). Bb transactions will follow the below guidelines.

- 1) Grades: All grades and points will be posted on Bb two to three weeks after the completion of the exam, assignment, or activity. Grades will not be announced in class, via e-mail, or during office hours.
- 2) Course Materials: The syllabus, lab assignments, and supplemental reading material can be viewed and printed from Bb.
- 3) Announcements: Class announcements will be posted on Bb, as well as broadcasted in class.
- 4) Email: Any email communications from the instructor or TA will be sent via Bb or through the USC’s email service. USC requires that all e-mail communication between the instructor and students be sent via an official USC e-mail address. *Any student communication delivered from a non-USC e-mail address will be automatically discarded.*

***Tentative Schedule of Topics and Assignments***

	<b>Topic</b>	<b>Reading</b>	<b>Assignment Due Dates</b>
WEEK 1			
Tuesday 08/23/2022	➤ Overview of course ➤ Philosophy of Perception	➤ Syllabus	➤
Thursday 08/25/2022	➤ Psychophysics ➤ Basic Neuroscience	➤ Chapter 1	➤

## WEEK 2

Tuesday 08/30/2022	➤ Light & Eye	➤ Chapter 2	➤
Thursday 09/01/2022	➤ Measuring Visual Acuity	➤ Chapter 3	➤

## WEEK 3

Tuesday 09/06/2022	➤ Visual Receptive Fields	➤ Chapter 3	➤
Thursday 09/08/2022	➤ Middle Vision	➤ Chapter 4	➤

## WEEK 4

Tuesday 09/13/2022	➤ Object Recognition	➤ Chapter 4	➤ <i>Bonus Prep #1</i>
Thursday 09/15/2022	➤ The Three Steps of Color Vision	➤ Chapter 5	➤

## WEEK 5

Tuesday 09/20/2022	➤ Is Red to Me the Same Red to You?	➤ Chapter 5	➤
Thursday 09/22/2022	➤ Monocular and Binocular Cues	➤ Chapter 6	➤ <i>Mini-Project #1 Due</i>

## WEEK 6

Tuesday 09/27/2022	➤ Development and Combination of Binocular Vision	➤ Chapter 6	➤
Thursday 09/29/2022	➤ Visual Search	➤ Chapter 7	➤

## WEEK 7

Tuesday 10/04/2022	➤ Attention & Scene Perception	➤ Chapter 7	➤ <i>Bonus Prep #2</i>
Thursday 10/06/2022	➤ Computation of Motion	➤ Chapter 8	➤

## WEEK 8

Tuesday 10/11/2022	➤ Eye Movements	➤ Chapter 8	➤
Thursday 10/13/2022	➤ No Class! ➤ Fall Break!	➤ None	➤

## WEEK 9

Tuesday 10/18/2022	➤ <i>Midterm Exam</i>	➤ Chapters 1 – 8	➤ <i>Midterm Exam</i>
Thursday 10/20/2022	➤ Sound & Ear	➤ Chapter 9	➤

## WEEK 10

Tuesday 10/25/2022	➤ Analyzing Environment for Sounds	➤ Chapter 10	➤
Thursday 10/27/2022	➤ Music Perception	➤ Chapter 11	➤ <i>Mini-Project #2 Due</i>

## WEEK 11

Tuesday 11/01/2022	➤ Speech Perception	➤ Chapter 11	➤
Thursday 11/03/2022	➤ Spatial Orientation	➤ Chapter 12	➤

## WEEK 12

Tuesday 11/08/2022	➤ Vestibular Responses	➤ Chapter 12	➤ <i>Bonus Prep #3</i>
Thursday 11/10/2022	➤ Vestibular Responses	➤ Chapter 12	➤

## WEEK 13

Tuesday 11/15/2022	➤ Touch Physiology ➤ Pain ➤ Tactile Hedonics	➤ Chapter 13	➤
Thursday 11/17/2022	➤ Odorants, Epithelium, & Smells	➤ Chapter 14	➤

## WEEK 14

Tuesday 11/22/2022	➤ No Class!	➤ None	➤ <b><i>Research Paper Due by 11:59 p.m.</i></b>
Thursday 11/24/2022	➤ No Class! ➤ Happy Thanksgiving!	➤	➤

## WEEK 15

Tuesday 11/29/2022	➤ Taste, Flavor, and Papillae	➤ Chapter 15	➤ <i>Mini-Project #3 Due</i>
Thursday 12/01/2022	➤ Types of Tastes & Pleasure	➤ Chapter 15	➤ <i>Bonus Prep #4</i>

## WEEK 16

Thursday 12/08/2022	<b>Final Exam: 11:00 a.m. to 1:00 p.m.</b>		
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### **Statement on Academic Integrity**

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. *SCampus*, the Student Guidebook, ([www.usc.edu/scampus](http://www.usc.edu/scampus) or <http://scampus.usc.edu>) contains the University Student Conduct Code (see University Governance, Section 11.00), while the recommended sanctions are located in Appendix A.

### **Statement on Plagiarism**

Plagiarism, lazy writing, and cheating are violations of the Student Judicial Affairs & Community Standards and may be dealt with by both the instructor and the university. Plagiarism is defined as, "the act of presenting the ideas and writings of another as one's own." Lazy writing is defined as, "using quotes or paragraphs with the proper citation, but are used in a manner that a paper is stitched together and clearly has little or no original writing." Cheating is defined as, "the act of obtaining or attempting to obtain credit for academic work through the use of any dishonest, deceptive, or fraudulent means." In instances of academic dishonesty, the instructor will take appropriate action as outlined in the Academic Integrity Review Process (SJACS 14.10). For more information on avoiding plagiarism or lazy writing, see Chapter 1, Section 1.10 in the APA Publication Manual or visit [http://www.usc.edu/student-affairs/student-conduct/ug\\_plag.htm](http://www.usc.edu/student-affairs/student-conduct/ug_plag.htm).

### **Statement for Students with Disabilities**

Any student requesting academic accommodations based on a disability is required to register with Office of Student Accessibility Services (OSAS) each semester. A letter of verification for approved accommodations can be obtained from OSAS. Please be sure the letter is delivered to me or to the TA as early in the semester as possible. OSAS is in GFS 120 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. Website and contact information for OSAS: <https://osas.usc.edu/>; Phone: (213) 740-0776; TDD Only: (213) 740-6948; Fax: (213) 740-8216; email: [osasfrontdesk@usc.edu](mailto:osasfrontdesk@usc.edu).

### **Course Notes**

- 1) **Make-Up Policy:**
  - a. You may *not* make up Bonus Preps (they do not impact your grade directly) or participation points (hence, why the lowest three participation points are dropped).
  - b. The Midterm Exam may only be made up due to an emergency and must be completed within one week of the exam date.
  - c. The Final Exam cannot be taken early or late. Please schedule any plans around the date of the Final Exam. *No exceptions because this is university policy.*
- 2) **Late Assignments:** If your participation, mini-projects, or your research paper is turned in late, then you will receive a 5% reduction each day for the first two days turned in late. For the following five days (i.e., after the first two days) the late assignment will result in a 10% reduction for each day it is late. After seven days, an assignment cannot be turned in and will result in a grade of zero. *USC athletes should meet with me as soon as possible regarding their scheduled athletic events that may conflict with course requirements.*

- 3) Email: I typically respond to emails within 24 hours or less. However, I rarely respond to emails between 5:00 p.m. on Fridays to 7:00 a.m. on Mondays (i.e., the weekend). I will do my best to email over the weekend if it is urgent, but please note that I cannot guarantee it.
- 4) Feedback:
  - a. I will make every attempt to return assignments in a reasonable time by returning them no later than three weeks after the due date.
  - b. We will *not* review exams during class time. You may review exams during office hours or by making an appointment with me.
- 5) I will make every attempt to return assignments in a reasonable time by returning them no later than three weeks after the due date.
- 6) Zoom: There will be *no* Zoom option for this class. The class will *not* be streamed or recorded. Any request for me to do so will be denied.
- 7) Appeal Process: If you find that your answer in an assignment or exam was incorrect, but you think it is correct, you can appeal the decision in writing. The written appeal must have supporting documentation (e.g., reference to a class reading). The appeal cannot be based on your opinion or personal experience, but rather based on the course materials. Appeals must be delivered to the instructor no later than one week after the grade is posted. Appeals will not be accepted via email and no late appeals will be accepted.
- 8) Course Participation: Your best bet at remembering and understanding the material is to complete the required readings BEFORE class. Also, keep in mind that you may need to do *multiple* readings of the textbooks to gain a full comprehension.
- 9) University Escort Service: If you feel that you would like to be escorted to your vehicle, bus, or campus residence after 5:00 p.m., do not hesitate to call (213) 740-4911.

### Special Notes

- 1) Sensation and Perception is a fascinating course. It is also one of the first areas researched in psychology; therefore, there is a lot of information. Please read ahead of class, ask questions during class, and read again after class. As in any course, work of a significantly high caliber in each of the components of this course is an A (i.e., exceptional work).
- 2) Not all lecture material will cover the same information in the textbook. ***Please take a moment to think about the implications of the previous statement.*** It means that you will be solely responsible for reading and studying the textbook material for the exam even though it is not covered in the lectures.
- 3) Please have an electronic device available during class. Preferably a laptop computer.
- 4) *All assignments in this course are expected to be word-processed and graphs/tables should be computer-generated.*
- 5) **All assignments, except participation, should be completed using APA-style (7<sup>th</sup> ed.), including the use of a title page.** Assignments are due on predetermined due dates and should be submitted electronically through Bb. Word processing and data management software are available in several computer labs on campus. You should consult the 7<sup>th</sup> edition of the APA Publication Manual for all writing assignments.
- 6) All students are expected to have access to the student computer network. It is your responsibility to ensure that your access is up to date during the semester.

- 7) Tutors are available through the Learning Resource Center (LRC). If you should find that you are not doing as well in this course as you would like, please see me immediately. *I will help you: It is my job!* You can also arrange for tutoring through the LRC. The Writing Center is also available to tutor students who are having difficulty with writing. For assistance, visit their website at <http://college.usc.edu/writingcenter/> or call (213) 740-3691.

### **Emergency Preparedness/Course Continuity in a Crisis**

In case of a declared emergency if travel to campus is not feasible, USC executive leadership will announce an electronic way for instructors to teach students in their residence halls or homes using a combination of Blackboard, teleconferencing, and other technologies.

### **Statement of Course Content as a Copyright**

It is important to know that all material presented in class, labs, or discussion sent via email or posted on Blackboard is “all rights reserved” by the course instructor. In addition, some of it is copyrighted and distributed by a publishing corporation for in-class use only. ***You may not store, post, or distribute any course materials—on paper or electronically--for use by any student not presently enrolled in this course.*** Out of fairness to all current and future students, please do your part to protect our course content.

### **Syllabus as a Contract**

The purpose of this syllabus is to provide a contract between the instructor and the student. By enrolling in this class, you agree that you have read, understand, and will adhere to the syllabus guidelines and complete the assignments given in the class. I reserve the right to change the schedule of topics and readings and I will give notice to you of such changes well in advance of those changes.

## List of Prominent Journals in Sensation and Perception

Addiction  
Aging, Neuropsychology, & Cognition  
Applied Cognitive Psychology  
Attention, Perception, & Psychophysics  
Aviation Psychology and Applied Human Factors  
Behavioral Neuroscience  
Biological Psychology  
Brain  
Brain and Cognition  
Brain and Mind  
Cerebral Cortex  
Chemical Senses  
Cognition  
Cognitive Brain Research  
Cognitive Development  
Cognitive Neuropsychology  
Cognitive Psychology  
Cognitive Science: A Multidisciplinary Journal  
Consciousness and Cognition  
Human Brain Mapping  
Human Factors: The Journal of the Human Factors and Ergonomics Society  
Journal of Artificial Intelligence Research  
Journal of Cognition and Development  
Journal of Cognitive Neuroscience  
Journal of Experimental Psychology: Applied  
Journal of Experimental Psychology: Human Perception and Performance  
Journal of Mind and Behavior  
Journal of Sensory Studies  
Music Perception  
Neuroscience  
Perception  
Perceptual and Motor Skills  
Physiology and Behavior  
Psychological Review  
Psychological Science  
Psychomusicology: Music, Mind & Brain  
Psychonomic Bulletin and Review  
Science  
Trends in Cognitive Sciences  
Visual Cognition