



Psychology 304L (52503)

Sensation and Perception

Spring 2023

Lecture Location: Kaprielian Hall (KAP) 158
Days and Time: Tuesday & Thursday; 12:00 p.m. to 1:50 p.m.

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

Instructor Information

Dr. Clayton L. Stephenson
Assistant Professor (Teaching) Psychology
clstephe@usc.edu

Office Location: SGM 525A
Office Hours: Monday, Wednesday, Friday
2:00 p.m. – 3:00 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 rackety 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* (6th ed.). Oxford.

Assessment	Focused Learning Objective(s)	Due Date	Percent of Final Grade: Points
Bonus Prep 1	1, 2	January 31 st	0% (individual grade): 3 points
Bonus Prep 2	1, 2	February 16 th	0% (individual grade): 3 points
Midterm Exam	1, 2, 3	March 2 nd	20% (individual grade): 100 points
Bonus Prep 3	1, 2	April 11 th	0% (individual grade): 3 points
Special Topics Paper	2, 3, 4, 5	April 13 th by 11:59 p.m.	20% (individual grade): 100 points
Bonus Prep 4	1, 2	April 25 th	0% (individual grade): 3 points each
Mini-Projects	2, 3, 4, 5	March 9 th , April 4 th , and April 27 th	20% (individual grade): 100 points
Final Exam	1, 2, 3	May 10 th from 2:00 p.m. to 4:00 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 March 2nd and the Final Exam is on May 10th from 2:00 p.m. to 4:00 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 March 9th, April 4th, and April 27th.**

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 April 13th.**

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 April 28th. 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. ***ALL grades are in real-time. That is, all assignment weights and lowest scores dropped are done automatically in Blackboard.***
- 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

	Topic	Reading	Assignment Due Dates
WEEK 1			
Tuesday 01/10/2023	➤ Overview of course ➤ Philosophy of Perception	➤ Syllabus	➤
Thursday 01/12/2023	➤ Basic Neuroscience ➤ Psychophysics	➤ Chapter 1	➤

WEEK 2

Tuesday 01/17/2023	➤ Light & Eye	➤ Chapter 2	➤
Thursday 01/19/2023	➤ Light & Eye ➤ Measuring Visual Acuity	➤ Chapter 2 ➤ Chapter 3	➤

WEEK 3

Tuesday 01/24/2023	➤ Visual Receptive Fields	➤ Chapter 3	➤
Thursday 01/26/2023	➤ Middle Vision	➤ Chapter 4	➤

WEEK 4

Tuesday 01/31/2023	➤ Object Recognition	➤ Chapter 4	➤ <i>Bonus Prep #1</i>
Thursday 02/02/2023	➤ The Three Steps of Color Vision	➤ Chapter 5	➤

WEEK 5

Tuesday 02/07/2023	➤ Is Red to Me the Same Red to You?	➤ Chapter 5	➤
Thursday 02/09/2023	➤ Monocular and Binocular Cues	➤ Chapter 6	➤

WEEK 6

Tuesday 02/14/2023	➤ Development and Combination of Binocular Vision	➤ Chapter 6	➤
Thursday 02/16/2023	➤ Visual Search	➤ Chapter 7	➤ <i>Bonus Prep #2</i>

WEEK 7

Tuesday 02/21/2023	➤ Attention & Scene Perception	➤ Chapter 7	➤
Thursday 02/23/2023	➤ Computation of Motion	➤ Chapter 8	➤

WEEK 8

Tuesday 02/28/2023	➤ Eye Movements	➤ Chapter 8	➤
Thursday 03/02/2023	➤ <i>Midterm Exam</i>	➤ Chapters 1 – 8	➤ <i>Midterm Exam</i>

WEEK 9

Tuesday 03/07/2023	➤ Sound & ear	➤ Chapter 9	➤
Thursday 03/09/2023	➤ Sound & Ear	➤ Chapter 9	➤ <i>Mini-Project #1 Due</i>

WEEK 10

Tuesday 03/14/2023	➤ Spring Break! ➤ No Class!	➤ None	➤
Thursday 03/16/2023	➤ Spring Break! ➤ No Class!	➤ None	➤

WEEK 11

Tuesday 03/21/2023	➤ Analyzing Environment for Sounds	➤ Chapter 10	➤
Thursday 03/23/2023	➤ Music Perception	➤ Chapter 11	➤

WEEK 12

Tuesday 03/28/2023	➤ Speech Perception	➤ Chapter 11	➤
Thursday 03/30/2023	➤ Spatial Orientation	➤ Chapter 12	➤

WEEK 13

Tuesday 04/04/2023	➤ Vestibular Responses	➤ Chapter 12	➤ <i>Mini-Project #2 Due</i>
Thursday 04/06/2023	➤ Vestibular Responses	➤ Chapter 12	➤

WEEK 14

Tuesday 04/11/2023	➤ Touch Physiology ➤ Pain ➤ Tactile Hedonics	➤ Chapter 13	➤ <i>Bonus Prep #3</i>
Thursday 04/13/2023	➤ No Class!	➤ None	➤ <i>Special Topics Paper Due</i>

WEEK 15

Tuesday 04/18/2023	➤ Odorants, Epithelium, & Smells	➤ Chapter 14	➤
Thursday 04/20/2023	➤ Olfaction and Cognition	➤ Chapter 14	➤

WEEK 16

Tuesday 04/25/2023	➤ Taste, Flavor, and Papillae	➤ Chapter 15	➤ <i>Bonus Prep #4</i>
Thursday 04/27/2023	➤ Types of Tastes & Pleasure	➤ Chapter 15	➤ <i>Mini-Project #3 Due</i>

WEEK 17

Wednesday 05/10/2023	Final Exam: 2:00 p.m. to 4:00 p.m.		
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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) 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.
- 6) 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.
- 7) 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.
- 8) 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 (7th 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 7th 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.

Statement on Academic Integrity

The University of Southern California is a learning community committed to developing successful scholars and researchers dedicated to the pursuit of knowledge and the dissemination of ideas. Academic misconduct, which includes any act of dishonesty in the production or submission of academic work, comprises the integrity of the person who commits the act and can impugn the perceived integrity of the entire university community. It stands in opposition to the university's mission to research, educate, and contribute productively to our community and the world.

All students are expected to submit assignments that represent their own original work, and that have been prepared specifically for the course or section for which they have been submitted. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s).

Other violations of academic integrity include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), collusion, knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university. All incidences of academic misconduct will be reported to the Office of Academic Integrity and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see [the student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#).

Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

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.

Statement for Students with Disabilities

USC welcomes students with disabilities into all of the University’s educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at osas.usc.edu. You may contact OSAS at (213) 740-0776 or via email at osasfrontdesk@usc.edu.

Support Systems:

[*Counseling and Mental Health*](#) - (213) 740-9355 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

[*988 Suicide and Crisis Lifeline*](#) - 988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

[*Relationship and Sexual Violence Prevention Services \(RSVP\)*](#) - (213) 740-9355(WELL) – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

[Office for Equity, Equal Opportunity, and Title IX \(EEO-TIX\)](#) - (213) 740-5086

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

[Reporting Incidents of Bias or Harassment](#) - (213) 740-5086 or (213) 821-8298

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

[The Office of Student Accessibility Services \(OSAS\)](#) - (213) 740-0776

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

[USC Campus Support and Intervention](#) - (213) 740-0411

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

[Diversity, Equity and Inclusion](#) - (213) 740-2101

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

[USC Emergency](#) - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

[USC Department of Public Safety](#) - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call

Non-emergency assistance or information.

[Office of the Ombuds](#) - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

[Occupational Therapy Faculty Practice](#) - (323) 442-2850 or otfp@med.usc.edu

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.

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