

Sensation & Perception 830:301:02 Spring 2021

Instructor: [Dr. Melchi M. Michel](#)

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Email: *Please make sure to include the course number (i.e., "[PSY 301]") in the subject line of your emails. You should expect a response from me within 48 hours.*

Phone: (848) 445-8919

Office Hours: Thurs. 2pm-3pm via Zoom (or by appointment; schedule via email)

Lecture

Sections	Days	Time	First Meeting	Location
02	Mon. & Thu.	11:30am – 12:50pm	1/21/2021	Zoom (check Canvas)

Course Materials

Readings:

- Required Textbook: *Sensation & Perception. 5th Ed.* (Wolfe, Kluender, Levi, et al., 2017) ISBN: 978-1605356419
Note: If you cannot find the book above at a reasonable price, the previous (4th) edition (ISBN: 978-1605352114) should also be acceptable. For some topics, the 5th Edition includes new information obtained from ongoing research, but I will cover any relevant new developments in the lectures.
- Additional assigned readings, including materials on the textbook's [companion website](#) (CW) and journal articles (JA), will be announced and posted via the course Sakai page. These will also be available via hyperlinks in the Associated Readings column of the course schedule below.
- You should try to complete each reading *before* attending its associated lecture(s)

Technology:

A desktop computer, laptop, or tablet will be required, along with access to a high-speed internet connection. These are needed to attend the Zoom classroom sessions, as well as to allow you access to other course resources (e.g., lecture slides, supplemental readings, exam study guides, perceptual demos, etc.).

Please visit the Rutgers Student Tech Guide page for resources available to all students. If you do not have the appropriate technology for financial reasons, please email Dean of Students deanofstudents@echo.rutgers.edu for assistance. If you are facing other financial hardships, please visit the Office of Financial Aid at <https://financialaid.rutgers.edu/>.

Course Goals

This course will provide an introduction to the scientific study of sensation and perception. We tend to think of the ability to perceive the world around us as an automatic process that happens ‘for free’ whenever we use our eyes, ears, nose, and other sense organs. But sensation-and-perception is an active process that relies on exquisitely sensitive receptors and powerful computational machinery housed in the brain, spinal cord, and peripheral nervous system. Our perceptual capabilities have been honed by evolution over many millions of years to arrive in their current form. The central focus of this course will be to examine how these sensory systems work and why. We will undertake a detailed study of the major senses (vision, audition, touch, smell, taste), using insights and methods from a variety of disciplines (philosophy, physics, computer science, neuroscience, psychology). We will begin with a study of the physical basis for perceptual information (e.g., light, sound waves), and proceed to the biological and psychological processes by which such information is converted to percepts in the brain.

Course Requirements

Attendance & Participation:

Students are expected to attend all classes. Classes will meet via Zoom and students must be logged in for the duration of the scheduled class period. Let me know as soon as possible if you have technical issues connecting to the class Zoom session.

The class will cover many new conceptual issues, some of which are not covered in the textbook. You are unlikely to learn the material without attending lectures. Should you expect to miss one or two classes, please use the University absence reporting website <https://sims.rutgers.edu/ssra/> to indicate the date and reason for your absence. An email is automatically sent to me.

Students are expected to pay attention in class, and to participate actively (e.g., answer questions that I pose in class, ask your own questions to clarify or flesh out lecture topics, etc.)

Exams:

Two closed-book midterm exams will be administered in class during the sixth and eleventh weeks of the semester, and a final exam will be administered during the official Rutgers final examination period. These exams will consist primarily of multiple-choice questions, but short answer and essay questions may also be included. Exam topics will include any of the assigned readings as well as anything covered in class (i.e., including in-class topics not covered in the readings). You will be responsible for bringing a pencil or other writing implement appropriate to answer Scantron-based multiple-choice questions to each exam.

The (comprehensive) final exam will be structured similarly to the midterm exams, but will be somewhat longer, and will carry twice the grade weight of the midterms. Please check the course schedule below for date of this final exam.

Students must take all three exams, and will be expected to take the exams at their scheduled dates and times. If you are so ill that you cannot physically take the exam on the scheduled day, you must let me know *before* the start of the exam, and you will need to provide a valid and documented excuse. In these (rare) cases, a make-up exam will be offered during the reading period at the end of the semester. This exam will be different than the corresponding midterm exam offered during the semester, and may vary considerably in both content and format.

Grade Breakdown

Component	Weight
Midterm Exam I	22.5%
Midterm Exam II	22.5%
Final Exam	45%
Attendance & Participation	10%
<i>Total</i>	<i>100%</i>

Academic Integrity

Collusion (getting any form of assistance from other students or outside sources) on exams is prohibited. Students suspected of doing so will be brought up on charges before university's Office of Student Conduct, and penalties, up to and including expulsion, will be imposed for those found guilty. (See <http://academicintegrity.rutgers.edu/academic-integrity-policy> for specifics).

Honor pledge

All students will need to sign the Rutgers Honor Pledge on every major exam, assignment, or other assessment as follows:

On my honor, I have neither received nor given any unauthorized assistance on this examination (assignment, paper, quiz, etc.).

Student Services

All of these services are being provided remotely during Spring 2021.

Academic Accommodations

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

Should you require academic accommodations, you should register with disability services as soon as possible. It is your responsibility to self-identify with the Office of Disability Services and to provide me with the appropriate documentation from that office at least one week prior to any request for specific course accommodations. There are no retroactive accommodations. If you require accommodations for exams (e.g., extended time, reduced distractions) you will be responsible for setting up and scheduling your own accommodations for each exam. The request form can be found at <https://ods.rutgers.edu/exam-accommodations>.

Wellness Services

- **Counseling, ADAP & Psychiatric Services (CAPS)** CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professionals within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community, and consultation and collaboration with campus partners.
 - Crisis Intervention : <http://health.rutgers.edu/medical-counseling-services/counseling/crisis-intervention/>
 - Report a Concern: <http://health.rutgers.edu/do-something-to-help/>
- **Violence Prevention & Victim Assistance (VPVA)** The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Anticipated Course Schedule

The topic headings in the schedule below contain links to the lecture slides. These links will generally become active approximately one hour before the start of the associated lectures.

The schedule below is subject to change. Please check the Sakai site regularly for announcements, updates, and additional readings.

Week	Dates	Topics	Associated Reading(s)
1	Thu. 1/21	Course Introduction & Overview Philosophy & Basic Methods	
2	Mon. 1/25 Thu. 1/28	Philosophy & Basic Methods Weber's Law & Psychophysics	Web Essay 1.1 (CW) Chapter 1
3	Mon. 2/1 Thu. 2/4	Light, Optics, & Early Vision Retina & Receptive Fields	Chapter 2
4	Mon. 2/8 Thu. 2/11	Visual Cortex & Spatial Vision I Visual Cortex & Spatial Vision II	Chapter 3 Michel-2013 (optional)
5	Mon. 2/15 Thu. 2/18	Object Recognition & Mid-Level Vision	Chapter 4
6	Mon. 2/22	Midterm Exam I	
	Thu. 2/25	Color Perception I	Chapter 5
7	Mon. 3/1 Thu. 3/4	Color Perception I Space & Depth Perception I	Chapter 5 Chapter 6
8	Mon. 3/8 Thu. 3/11	Space & Depth Perception II Motion Perception	Chapter 6 Chapter 8
Spring Break	Mon. 3/15 Thu. 3/18	Spring Break	
9	Mon. 3/22 Thu. 3/25	Eye Movements Attention	Chapter 7
10	Mon. 3/29 Thu. 4/1	Sound & Audition	Chapter 9
11	Mon. 4/5 Thu. 4/8	Auditory Perception I Auditory Perception II	Chapter 10 Chapter 11
12	Mon. 4/12	Midterm Exam II	
	Thu. 4/15	Vestibular Sensation	Chapter 12

Week	Dates	Topics	Associated Reading(s)
13	Mon. 4/19 Thu. 4/22	Somatosensation	Chapter 13
14	Mon. 4/26 Thu. 4/29	Olfaction	Chapter 14
15	Mon. 5/3	Gustation	Chapter 15
Final	TBA	FINAL EXAM @ TBA Be sure to check http://finalexams.rutgers.edu/ for updates	