

PSY 302: Sensation and Perception, Fall Term 2023

In Person: Tues & Thurs 12:40-2:00 pm

Room: Psychology 118

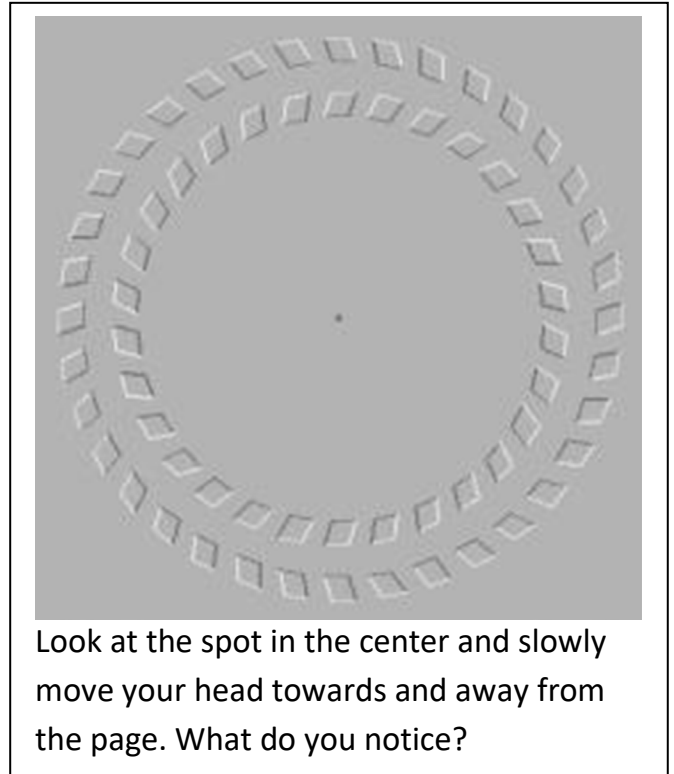
Instructor	Office Hours	Contact
Prof. - Mark W. Becker (he/him)	Mon 1-2pm and by apt. Psychology 285B	becker54@msu.edu 517-432-3367
TA. - Luciano "Lucky" Voutour (he/him)	Monday 10-11am on Zoom Link: https://msu.zoom.us/j/3890665705	voutourl@msu.edu

Course Description: The world is an external environment, yet our experience of it occurs within our brains. How do our senses transform the external world into information that our brains/minds can understand and reliably interpret? For instance, how does the light reflected off an object allow us to perceive and identify that object? How do hearing, smell, taste, and touch allow us to create a rich and detailed mental representation of the external world? To answer these questions, we will examine perceptual processes at different levels of analysis.

At the neurological level we will investigate how individual cells respond to external stimuli, how the anatomy and physiology of the perceptual systems allow for efficient processing of incoming information, and how different brain areas are specialized for the analysis of specific types of sensory information.

At a behavioral level we will investigate illusions and subjective experiences. A careful examination of these experiences reveals the processes underlying perception and the type of information used by the brain. For example, if you stare at the center of the figure and move your head toward and away from the page you should see an illusion of motion.

Since this works with virtually everyone and virtually every time, the illusion must be "created" by our brains. By investigating these types of errors we hope to learn more about the way the brain actively recreates the world.



Goals/Objectives:

- Learn the structure and function of our sensory systems.
- Learn how our brain compresses and analyzes incoming information.
- Learn how the brain actively interprets incoming sensations to lead to our perceptions.
- Learn how to design good experiments to investigate sensation & perception.

Required Text & Readings: The official required text is Sensation & Perception, 10th edition by Goldstein & Brockmole. However, you are welcome to use either the 8th or 9th edition to save money. I will occasionally post pdf files of research articles on D2L. These articles are to be read by the date indicated on the syllabus.

Website: I will maintain a D2L course webpage. I will add content to the site as the course progresses including: the syllabus, pdf's of the slides I use in class (linked off the schedule), handouts for any assignments, review sheets, a course schedule, and links to the any pdf's we use.

Course Delivery: The plan is for the class and exam to be delivered in person....fingers crossed.

Office Hours: Both the TA and I will hold weekly office hours. Mine will be in person in my office. The TAs will be online via zoom (see the chart at the top for links, locations and times). If you cannot make either of these times, email one of us and we can try to schedule an alternative meeting time for a zoom meeting.

Attendance Policy: *If you are feeling ill, even slightly ill, please stay home!!*

If, however, you are feeling well, come to class. I cover things slightly differently than it is covered in the book, and I can tell you from years of experience that people who attend do better in the course. In addition, absences on exam days will follow the “Make up and Late Assignments” policies below.

Exams (75%): There will be three midterm exams (although one will be at the final exam time), each worth 25% of the total grade. These exams are designed to test your knowledge of the material and your ability to apply that knowledge to new situations. Exams will include multiple choice, fill in the blanks, and a couple of brief essays. The exams are to be taken in person during class time.

Assignments(Labs)/Participation (25%): Throughout the term we will do nine assignments/labs. These will be mini experiments or demos that you will access online (linked from D2L). Note: **Do not use Safari to run these** (it has problems, but other browsers should work). These are designed to make the information we are discussing in lecture more concrete, to expose you to perceptual research designs, to provide opportunities to work with and interpret data, and to provide an opportunity to think about the material from lecture. These assignments will require you to perform some activity (online), answer some brief questions based on that experience, and upload your answers to D2L. In terms of grading, these are learning opportunities, and if you hand in a legitimate attempt (your responses are not complete gibberish), you will receive credit. That said, the more thought and time you put into these assignments the more you will get out of them. I will also post “correct” answers to the questions after the assignment closes, so you can see what the correct answers are. Finally, for these assignments (and these assignments alone), it is acceptable to work with other members of the class – discussing the experiments and questions with others may be helpful. Still each individual will have to submit answers to the assignments. We will discuss these exercises in class to highlight key principles of the course and to provide insights into how to design and interpret perceptual experiments. You will receive 12.5 points for each assignment you complete on time, up to a total of 100 points (you need to complete 8 of the 9 experiments on time to get full credit).

Preparation: The course material will be unfamiliar to most of you and will be fairly challenging. As a result, the course will be primarily lecture-based (although I will try to keep you actively engaged with many demonstrations and exercises). Given this format, I leave the question of whether you read the assigned reading prior to class or after class up to each of you. If you are able to understand and keep up with the lectures, having my introduction to the material may actually allow you to get more out of the text. If, however, you are having difficulty with the lectures you should read the chapters before class. This should make lectures easier to follow. I would recommend looking at the chapters again shortly after lecture to fill in any of the details that I was not able to cover in class.

E-mail: When needed I will e-mail announcements to the class. I encourage you to regularly check your MSU e-mail account, and I would ensure that D2L is forwarding D2L emails to your primary email account.

Make Up Exams & Late Assignments: You may take a makeup exam in case of (1) a documented medical emergency, or (2) a legitimate schedule conflict, such as a religious holiday, that you inform me about at least 1 week in advance. In either case, please send email to me identifying the emergency or conflict as early as possible. If you have a legitimate excuse, you may take the exam either at another time on the normal exam day, or sometime prior to the next course meeting. If you cannot take the make-up on one of those days, then that exam will be omitted from your final score and its points distributed over the other exams. If you miss an exam for any other reason, or don’t notify me about your emergency or conflict in a timely manner, your score will be 0.

Late assignments will be accepted if there is a documented medical emergency or will be docked 10% of the total possible points.

If some other circumstance arises during the term that interferes with your ability to keep up in the course, please be aware that there is little that can be done to change a final grade once the term is over. If such a circumstance arises, please seek advice as soon as possible.

Getting Class Help: The best way to get help is to come to office hours. Both Lucky and I will hold weekly office hours. If you can't make office hours, you can e-mail us to make an appointment for a different time. We will try to be diligent about responding, but occasionally your message may be hidden amongst the spam. If you don't hear back in a reasonable time, send the message again.

Getting Technology Help: If you are having difficulties with D2L the best bet is to call the IT helpline at (517) 432-6200; toll free (844) 678-6200; Email: ithelp@msu.edu. They are open 7am to midnight.

Academic Honesty: The Spartan Code of Honor states, "As a Spartan, I will strive to uphold values of the highest ethical standard. I will practice honesty in my work, foster honesty in my peers, and take pride in knowing that honor is worth more than grades. I will carry these values beyond my time as a student at Michigan State University, continuing the endeavor to build personal integrity in all that I do." In addition, Article 2.III.B.2 of the Student Rights and Responsibilities ([SRR](#)) states that "The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." The Psychology Department adheres to the policies on academic honesty as specified in [General Student Regulations 1.0, Protection of Scholarship and Grades](#); [the all-University Policy on Integrity of Scholarship and Grades](#); and [Ordinance 17.00, Examinations](#).

Therefore, unless authorized by your instructor, you are expected to complete all course assignments, including homework, lab work, quizzes, tests and exams, without assistance from any source. You are expected to develop original work for this course; therefore, you may not submit course work you completed for another course to satisfy the requirements for this course. Also, you are not authorized to use the www.allmsu.com Web site to complete any course work in this course. Students who violate MSU academic integrity rules may receive a penalty grade, including a failing grade on the assignment or in the course. Contact your instructor if you are unsure about the appropriateness of your course work. (See also the [Academic Integrity webpage](#).)

Inclusive Environment. MSU is committed to creating and maintaining an inclusive community in which students, faculty, and staff can work together in an atmosphere free from all forms of discrimination. The Office of Institutional Equity (OIE) reviews concerns related to discrimination and harassment based on sex, gender, gender identity, race, national origin, religion, disability status, and any other protected categories under the University Anti-Discrimination Policy (https://www.hr.msu.edu/policies-procedures/university-wide/ADP_policy.html) and Policy on Relationship Violence and Sexual Misconduct (<https://civilrights.msu.edu/policies/rvsm.html>). If you experience or witness acts of bias, discrimination, or harassment, please report these to OIE: <http://oie.msu.edu/>.

Limits to Confidentiality: Essays, journals, and other materials submitted for this class are generally considered confidential pursuant to the University's student record policies. However, students should be aware that University employees, including instructors, may not be able to maintain confidentiality when it conflicts with their responsibility to report certain issues to protect the health and safety of MSU community members and others. As the instructor, I must report the following information to other University offices (including the MSU Police Department) if you share it with me:

- Suspected child abuse/neglect, even if this maltreatment happened when you were a child,
- Allegations of sexual assault or sexual harassment when they involve MSU students, faculty, or staff, and
- Credible threats of harm to oneself or to others.

These reports may trigger contact from a campus official who will want to talk with you about the incident that you have shared. In almost all cases, it will be your decision whether you wish to speak with that individual. If you would like to talk about these events in a more confidential setting you are encouraged to make an appointment with the [MSU Counseling Center](#).

Accommodations for Students with Disabilities: Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities at 517-884-RCPD or on the

web at rcpd.msu.edu. Once your eligibility for an accommodation has been determined, you will be issued a Verified Individual Services Accommodation ("VISA") form. Please present this form to me at the start of the term and/or two weeks prior to the accommodation date (test, project, etc.). Requests received after this date may not be honored. If you require testing accommodations (e.g., additional time.) you must contact me and present your VISA *at least two weeks before the exam date* to schedule an alternative exam.

Disruptive Behavior: Article 2.III.B.4 of the [Student Rights and Responsibilities \(SRR\)](#) for students at Michigan State University states: "The student's behavior in the classroom shall be conducive to the teaching and learning process for all concerned." Article 2.III.B.10 of the [SRR](#) states that "The student and the faculty share the responsibility for maintaining professional relationships based on mutual trust and civility." [General Student Regulation 5.02](#) states: "No student shall . . . interfere with the functions and services of the University (for example, but not limited to, classes . . .) such that the function or service is obstructed or disrupted. Students whose conduct adversely affects the learning environment in this classroom may be subject to disciplinary action."

Attendance: Students who do not attend the first two days of class may be dropped from the class to allow space for other interested students. Beyond that, you are adults, if you choose not to come that is your decision, but that decision will likely come with consequences; those who do not attend do not do well.

Use of Lecture Notes: Course materials may not be reproduced, shared with those not in the class, or uploaded to other online environments. Doing so may result in disciplinary action.

Final Grade Scale

In %	In Points	Grade
89.5% +	358+	4
86.5%-89.4%	342+	3.5
79.5%-86.4%	318+	3
76.5%-79.4%	306+	2.5
69.5%-76.4%	274+	2
59.5%-66.4%	238+	1
Less than 59.5%	<238	0

Grade Breakdown

Item	Points	% of Final Grade
Midterm 1	100	25
Midterm 2	100	25
Final Exam	100	25
Labs	100	25
TOTAL	400 points	100%

Note: I reserve the right to make the grading scale more lenient.

Tentative Schedule Psy 203 – Fall 2023

Date	Topic	Lab to Run	Reading 8th Ed	Reading 9th Ed	Reading 10 th Ed
8/29	Introduction to the Course				
8/31	Balance	Run Weber's Law 9/1	pdf	pdf	pdf
9/5	Balance to Methods		Ch 1	Ch 1	Ch 1
9/7	Methods	Weber's Law Answers 5pm 9/8	pp 401-406	pp 395-400	pp 384-393
9/12	The Eye	Run RF & SC by 9/15	Ch 3	Ch 2	Ch 2
9/14	The Eye 2		Ch 3	Ch 2	Ch 2
9/19	The Retina	Run Tilt AE	Ch 2	Ch 3	Ch 3
9/21	V1	RF & SC Answers by 9/25 @ 5 pm	Pg 73-87	Pg 77-83	Pg 73-79
9/26	Orientation Tuning				
9/28	Catch up and Review	Tilt Answers by 5pm 9/28			
10/3	Midterm 1		Ch 9	Ch 9	Ch 9
10/5	Color 1		Ch 9	Ch 9	Ch 9
10/10	Color 2 & Motion 1	Run BioMotion by 10/11	Ch 8	Ch 8	Ch 8
10/12	Motion 2		pp 155-159	pp 154-163	pp 149-154
10/17	Depth	BioMotion Answers by 10/18	Ch 10	Ch 10	Ch 10
10/19	Depth 2 & Higher Streams	Run CB & ATTN Blink	Ch 10	Ch 10	Ch 10
10/24	Fall Break - No Class				
10/26	Higher Streams & Attention		Ch 5 & Pg 87-97	Ch 5 & Pg 83-95	Ch 5 & Pg 79-88
10/31	Attention and Binding	CB Answers	Ch 6	Ch 6	Ch 6
11/2	Catch up and Review	ATTN Blink Answers			
11/7	Midterm 2				
11/9	Dual Task Performance	PRP Demo	pdf	pdf	pdf
11/14	The Ear		Ch 11	Ch 11	Ch 11
11/16	Psychonomics - No Class	PRP Answers by 11/17			
11/21	Hearing	Run TapAdapt	Ch 11 & 12	Ch 11 & 12	Ch 11 & 12
11/23	Thanksgiving - No Class				
11/28	Localization & Speech		Ch 12 & 13	Ch 12 & 13	Ch 12 & 13
11/30	Smell & Taste	TapAdapt Answers	Ch 15	CH 15	Ch 15
12/5	Touch & Pain		Ch 14	Ch 14	Ch 14
12/7	Catch up & Review				

Final Exam Thursday 12/14 12:45-2:45 PM PSY 118