

PSY 402(W): Sensation and Perception, Fall Term 2020

Synchronous Online: Tues & Thurs 12:40-2:00 pm

Class Zoom Meeting Info: <https://msu.zoom.us/j/95407357682>; Passcode: Sparty2020 Meeting ID: 954 0735 7682

Instructors	Office Hours	Zoom for Office Hours	Contact
Prof. - Mark W. Becker	Tues 10:30-11:30am Sign up for time here . and by appt.	https://msu.zoom.us/j/95372142753 Meeting ID: 953 7214 2753 Passcode: Sparty2020	becker54@msu.edu ; 517-928-0937
TA. – Elle Wernette	Wed 1:30 – 3:00pm Sign up for time here . and by appt.	https://msu.zoom.us/j/92159400574 Meeting ID: 921 5940 0574 Passcode: 402001	delgros1@msu.edu

Course Description: The world is an external environment, yet our experience of the world 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 sound, 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 a number of different levels.

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.

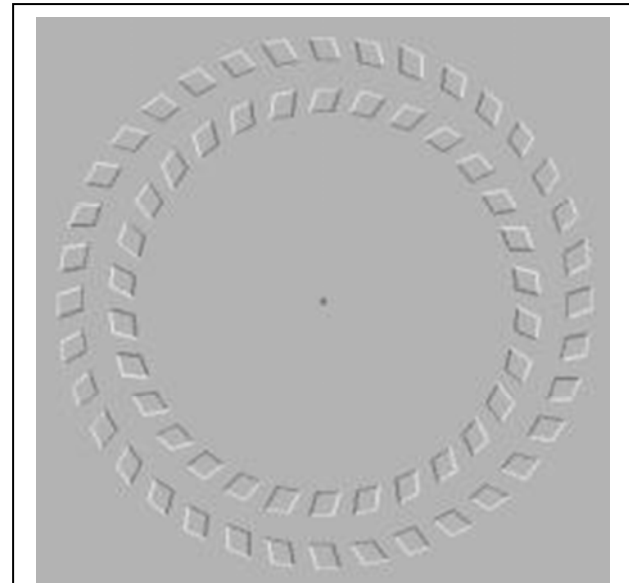
Through lab experiments we will learn the techniques that researchers use to investigate how the brain’s processing strategies combine with the neurological wiring and structures to give rise to perception.

Goals:

- Learn the structure and function of our sensory systems.
- Learn how our brain compresses and analyzes incoming information
- Learn how to design good experiments to investigate sensation & perception
- Learn to write up an experiment in APA style

Required Text & Readings: The official required text is Sensation & Perception, 9th edition by E. Bruce Goldstein. However, you are welcome to use either the 8th or 7th edition if you are trying to save money. In addition, I will occasionally post pdf files of research articles on my website. 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, handouts for the writing assignments, review sheets, a course schedule, links to the required pdf’s, pre-recorded lectures, and recordings of the live sessions.



Look at the spot in the center and slowly move your head towards and away from the page. What do you notice?

Course Delivery & Expectations: A majority of sessions will be live zoom sessions that occur at the scheduled course time. You are expected to be present at those zoom sessions, and a good portion of the course participation grade will depend on your participation in these live sessions. In addition, I expect people to have their cameras on during the course. This provides me feedback – am I going too fast, too slow, or have I confused people. The quality of those lectures will be better if you have your cameras on during the course.

Some lectures will be pre-recorded (asynchronous). You are expected to view these prior to the next live class. When there are asynchronous lectures, I will be present on zoom during the normal course time for drop-in office hours.

Exams (50%): There will be two midterm exams and a final exam. 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 handful of brief essays. The exams are to be taken live during course time, and for test security I would like you to have your cameras on while you take it.

Papers (40%): This is a writing intensive course. As a result there will be two papers. Each paper will consist of an APA style research paper. To generate data for these papers we will run computer based experiments on ourselves, and send the data that is produced to Dr. Becker. We will use the data generated during these meetings as the basis for the paper write-ups. The papers should be in APA style and consist of a title page, abstract, introduction, methods, results, discussion, figures, and references.

The first paper will be a relatively short (4 pages max in the body) assignment which will allow you to practice writing in this form and provide feedback about your writing. The original draft of the paper will be worth 10% of your final grade. You will have an opportunity to revise the original and resubmit it. The resubmitted paper will be worth an additional 5% of your grade.

The second paper will be longer (10-12 pages) and will be handed in twice. A polished draft (i.e., what you think is a final version of the paper) will be due in stages. Each section of the paper will be graded, and then handed back to you. The total from these initial stages will be worth 16.7% of your total grade. A final revision of that paper in which you put all the revised sections into one final manuscript will be worth 8.3% of your final grade.

Quizzes (6.7%): There will be 5 brief (10 questions) quizzes throughout the term. These are designed to make sure you are keeping up with lecture. They will be done asynchronously online. Your best four exams will be included in the calculation of your final grade (i.e., you get to throw out your lowest score or a quiz which you miss).

Attendance & Participation (3.3%) : Attendance at each class is critical to your success. That said, things happen. So I will allow you to miss up to 3 classes without penalty. Starting with the fourth I will start to deduct 2 points from the participation points per miss. I will also have you hand in short answers to some of the demonstration exercises that effect your participation grade. I encourage you to participate in the demonstrations and in-class exercises and to ask questions throughout class. If you are confused by lecture, odds are someone else is too, please ask me. The more actively involved you are, the better.

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 or quiz 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 or quiz 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 or quiz will be omitted from your final score and its points distributed over the other exams or quizzes. If you miss an exam or quiz for any other reason, or don't notify me about your emergency or conflict in a timely manner, your score will be 0.

Late papers will be excepted if there is a documented medical emergency or will be docked 10% of the total possible points for each day they are late.

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 the TA and I will hold regular (zoom) office hours. We each have a google doc that you can use to sign up for a particular time during office hours (see the top of the syllabus for links to sign up and for the zoom links). 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 the tech (accessing zoom, accessing D2L, taking the exam on 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 (insert name of unit offering course) 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. (See Spartan Life: Student Handbook and Resource Guide and/or the MSU Web site: www.msu.edu.)

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.)

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 through the Student Judicial Affairs office.

Course Recordings: Meetings of this course will be recorded and those recordings will be available to students registered for this class. Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures and Zoom meetings. Recordings may not be reproduced, shared with those not in the class, or uploaded to other online environments. Doing so may result in disciplinary action.

Health and Safety: I think we would all like to be back to in person classes in the spring. The ability for us to do so, depends a great deal on our behavior. If we are careful socially distance, and wear our masks, we can drive the infection rate down. If we don't the virus will continue to spread and we will continue to have major disruptions to our schooling, business, and we will endanger others. Please be responsible and stay safe!!!

Final Grade Breakdown		
Item	Points	% of Total
Participation	20	3.33%
Quizzes (best 4)	40	6.67%
Paper 1 draft	60	10.00%
Paper 1 resubmission	30	5.00%
Final Paper draft	100	16.67%
Final Paper resubmission	50	8.33%
MT 1	100	16.67%
MT 2	100	16.67%
Final Exam	100	16.67%
TOTALS	600	100.00%

Final Numerical Grade		
Final Grade	Percentage	Points
4	90%	540
3.5	86%	516
3	80%	480
2.5	76%	456
2	70%	420
1.5	66%	396
1	60%	360
0	<.6	<360

Note: I reserve the right to make these scales more lenient.

Tentative Schedule

Date	Topic	Assignment	Reading 8th Ed	Reading 9th Ed
9/3	Introduction to the Course (live)			
9/8	Balance 1 & Balance 2 (asynchronous)		pdf on Website	pdf on Website
9/10	Balance 3 (live) –	Quiz 1 - Balance by 5pm 9/11		
9/15	Methods 1; Methods 2; Methods 3 (asynchronous)	do Weber's Experiment and submit data	Ch 1; page 401-406	Ch 1; page 395-400
9/17	Weber's Law Discussion (live)			
9/22	The Eye 1; The Eye 2(asynchronous)		Ch 3	Ch 2
9/24	The Eye 3 (live);	Do Receptive Field Experiment 9/25 Quiz 2 – Methods & The Eye by 5pm 9/25	Ch 2	Ch 3
9/29	Lateral Inhibition (Live)	Do Simultaneous Contrast Experiment by 9/30	Pg 73-87	Pg 77-83
10/1	<i>V1 (Live) –</i>	<i>Draft of Paper 1 Due by 5 pm</i>	Pg 73-87	Page 68-69
10/6	<i>Catch up & Review</i>			
10/8	<i>Midterm 1</i>			
10/13	Color Vision (asynchronous)	Do Additive and subtractive color Mixing	Ch 9	Ch 9
10/15	Color 2	<i>Paper 1 Revision Due</i>	Ch 9	Ch 9
10/20	Motion 1 –	Do Attention Lab & submit data	Ch 8	Ch 8
10/22	<i>Attention Lab Discussion -</i>	Watch LOTR video		
10/27	Motion 2 & Depth (live)	Quiz 3 – Color and Motion by 5pm 10/28	Ch 10 Pg 155-159	Ch 10 Pg 154-163
10/29	Depth 2 & Higher Streams		Pages 87-97	Pages 83-93
11/3	<i>ELECTION DAY</i> Higher Streams & Attention	<i>Methods & Results Due -</i>	Ch 6	Ch 6
11/5	Attention and Binding	Quiz 4 – Depth and Higher Streams	Ch 5	Ch 5
11/10	Catch up and Review			
11/12	<i>Midterm 2</i>			
11/17	Attention 3			
11/19	The Ear (asynchronous)	<i>Intro Due</i>	Ch 11	Ch 11
11/24	Hearing	Quiz 5 – The ear and hearing	Ch 12	Ch 12
11/26	THANKSGIVING			
12/01	Localization & Speech		Ch 13	Ch 13
12/03	- Smell & Taste	<i>Discussion & Abstract Due</i>	Ch 15	CH 15
12/8	Touch & Pain		Ch 14	Ch 14
12/10	Catchup & Review			
Final Exam: Thursday, Dec 17 2020 12:45pm - 2:45pm				

