

GRAND VALLEY STATE UNIVERSITY
PSY 361 PERCEPTION FALL 2020
SYLLABUS

What, When, and Where

Course Number: Psychology 361 section 1 Fall 2020

When: Mondays, 6:00-7:15pm for Group A and 7:30-8:45pm for Group B (I will assign you into one of the two groups randomly at least one week before school starts, please let me know if you have to be in Group A or Group B. I will do my best to assign you to your preferred group, under constraints)

Classroom: 2302 Au Sable Hall

Instructor Information

Taught by Dr. **Leon Lou**

Email (the most reliable way to contact me): loul@gvsu.edu

(I also have a GVSU gmail account (loul@mail.gvsu.edu) which I use exclusively for on-line office hour booking (see below)

Physical Office location: 2313 Au Sable Hall (I will usually be there 30mins before the class starts. You could stop by and talk to me as long as the campus social-distancing rules are followed)

On-line Office Hours: appointment by on-line booking leonlou.youcanbook.me for meeting during my regular on-line office hours (Thursday 9-12pm). Other times are also possible: Please contact me by email (loul@gvsu.edu); I will then send you a confirmation and a link for on-line meeting.

Course description

This course will provide you with an introduction to the study of perception, with a heavy emphasis on visual perception. In short, we will explore how we see, and to a lesser extent, how we hear, feel, smell and taste. It turns out that there's more to this than you might think. Many people tend to think that there can't be too much going on in perception, simply because it's so quick and effortless ("Isn't seeing like taking a picture with a camera?"). In reality, there's a tremendous amount of complicated (and interesting!) processing going on in your minds when you open your eyes and see. Our minds not only make perception possible, but make it seem like no big deal. Because of this, you will learn some surprising (even shocking) things in this course about how your mind works -- and also learn that some of the basic assumptions you've always had about how you perceive things are completely misguided.

Understanding how perception works can also provide a foundation for scientific understanding on individual differences in perception. However, this course will barely touch the role of perception in social interaction, and questions such as how the same event is viewed in drastically different ways by people of different cultural backgrounds and values. Instead, the course is almost exclusively concerned with understanding immediate sensations and perceptions triggered by visual and other sorts of stimuli received by the body. By the end of the class, I hope you will gain a better understanding of how human experience is constructed in the mind and brain, and how a valid distinction between reality and illusion can be made from experience.

Objectives (as in GVSU course catalog)

Upon successful completion of this course students will be able to:

- 1) describe basic issues of perception, including the scope and limitation of perception, the philosophical issues underpinning modern scientific studies on perception, the psychological and biological facts crucial to understanding perception, and the different approaches to a scientific understanding of perception.
- 2) explain the problems about perception that are unresolved by research and are still being investigated by scientists.
- 3) inform their world views with what is scientifically known or knowable about perception.

Online learning resources

As almost all of the course assignments and tests will be delivered remotely, it is extremely important to acquire the basic skills for navigating the Blackboard. I will provide more instruction for assignments that require use of web services/apps not familiar to everyone. For general learning resources, please check out GVSU [On-line education student resources](#). For technical problems with the blackboard, please contact [Information Technology Help Desk](#).

Covid-19 related attendance policy and regulations

Following University guidance, absence from classes will excused for students “who have been exposed to someone who tests positive for COVID-19 (and will need to quarantine) or who themselves have tested positive (and will need to isolate)”. For more details on attendance and other related issues, please refer to <https://www.gvsu.edu/provost/guidance-for-instruction-and-student-support-fall-2020-232.htm#AttendancePolicyfor2020-21>. Importantly, please frequently consult the most up-to-date information on classroom and building sanitation and cleaning here: <https://www.gvsu.edu/lakerstogether/cleaning-and-sanitation-2.htm>

Course Material

Required Text book

Steven Yantis & Richard Abram (2014). Sensation and Perception, 1st Edition, Worth.
Laker Store Portal:
https://eposweb-437.sequoiars.com/ePOS/form=robots/catalog.html&this_category=521&store=437
You could also purchase the book from amazon.com used books portals with a lower price, but the book could arrive too late.

Lecture outlines and notes

I will make my lecture slides and notes available after the class in case you are absent in class. In case of another campus lockdown (I don't think it would happen, but who knows), I may have to deliver my lectures synchronously and/or put their recordings on the blackboard.

Supplementary Readings (SR)

Supplementary readings are selected for both their interestingness and relevance to the themes of this course. Many post-class homework (“post assignments” for short) questions are about the supplementary readings:

1. Auvray, M., Hannequin, S., & O'Regan, J. K. (2007). Learning to perceive with a visuo-auditory substitution system: Localisation and object recognition with 'The vOICe'. *Perception*, 36, 416-430.
2. Chun, M., & Jiang, Y. (1999). Top-down attentional guidance based on implicit learning of visual covariation. *Psychological Science*, 10, 360 - 365.
3. Cowey, A., Small, M., Ellis, S. (1994). Left visuo-spatial neglect can be worse in far than in near space, *Neuropsychologia*, 32(9), 1059-1066.
4. Flanagan, J. R. and Lederman, S. J. (2001). Feeling bumps and holes. *Nature*, 412, 389-391.
5. Franklin, A., Bevis, L., Ling, Y., and Hurlbert, A. (2010). Biological components of colour preference in infancy, *Developmental Science*, 13(2), 346-354.
6. Jacomuzzi, A., Kobau, P., Bruno, N. (2003). Molyneux's question redux, *Phenomenology and the Cognitive Sciences*, 2: 255-280.
7. Jameson, K. & Highnote, S. (2001). Richer color experience in observers with multiple photopigment opsin genes, *Psychonomic Bulletin & Reviews*, 8(2), 244-261.
8. Langton, S., Watt, R. J., & Bruce, V. Do the eyes have it? Cue to the direction of social attention, *Trends in Cognitive Sciences*, 4(2), 50-59.
9. Little, A. C., Feinberg, D. R., DeBruine, L. M., Jones, B. C. (2013). Adaptation to faces and voices: unimodal, cross-modal, and sex-specific effects, *Psychological Science*, 24(11), 2297-2305.
10. Livingstone, M. & Conway, B. R. (2004). Was Rembrandt Stereoblind? *New England Journal of Medicine*, 351(12), 1264-1265.
11. Lou, L. (2020) Size inflation in drawing from mirror and proportional accuracy in observational drawing, *Perception*, 49(7), 749-770.
12. Mancuso, K. et. al. (2009). Gene-therapy for red-green colour blindness in adult primates, *Nature*, 461(7265), 784-787.
13. Moore, C., & Egeth, H. (1997). Perception without attention: Evidence of grouping under conditions of inattention. *Journal of Experimental Psychology: Human Perception & Performance*, 23, 339 - 352.
14. Sacks, O. (1995). The case of the color blinded painter, In "An anthropologist on Mars"
15. Simons, D. J., & Levin, D. T. (1998). Failure to detect changes to people in a real-world interaction. *Psychonomic Bulletin and Review*, 5, 644 - 649.
16. Tong, F., Nakayama, K., Vaughan, J. T., & Kanwisher, N. (1998). Binocular rivalry and visual awareness in human extrastriate cortex, *Neuron*, 21, 753-759.
17. Tsakiris, M. & Haggard, P. (2005). The Rubber hand illusion revisited (2005): Visuotactile Integration and self-attribution, *Journal of Experimental Psychology: Human perception and perception*, 31(1), 80-91.

1. Vision and Perception: <https://sk-sagepub-com.ezproxy.gvsu.edu/video/vision-and-perception-a-conversation-with-kalanit-grill-spector>
2. Visual Perception: https://digital-films-com.ezproxy.gvsu.edu/p_ViewVideo.aspx?xtid=74612
3. Do you see what I see: https://digital-films-com.ezproxy.gvsu.edu/p_ViewVideo.aspx?xtid=48257
4. Perception: the Theories: https://digital-films-com.ezproxy.gvsu.edu/p_ViewVideo.aspx?xtid=8786
5. Limits of Perception: https://digital-films-com.ezproxy.gvsu.edu/p_ViewVideo.aspx?xtid=55011
6. Everyday Illusion: https://digital-films-com.ezproxy.gvsu.edu/p_ViewVideo.aspx?xtid=74616

Illusion Websites

1. Illusion of the year: Illusionoftheyear.com (some of the most amazing visual illusions made by vision scientists in the past ten or so years)
2. Optical illusions : psychology.wikia.org/wiki/Optical_illusions (a list of classic optical illusions)
3. 141 Optical Illusions and Visual Phenomena: <https://michaelbach.de/ot/index.html> (a large number of most well researched illusions categorized with good, though not necessarily complete explanations)
4. Auditory illusions: <https://vitals.lifehacker.com/fair-fights-stacey-abrams-on-how-we-can-protect-our-rig-1844596436>
5. Five auditory illusions (BBC 4):
<https://www.bbc.co.uk/programmes/articles/52JjKxXgs2nck7jCc8YtbD9/can-you-believe-your-ears>

Course Delivering Details

Because of the Covid-19 situation, this course will be taught in “staggered hybrid” format as required by the University. Like a fully face-to-face night class, we will meet once every week. However, constraint by the policy on social distancing and the limited classroom capacity, we will meet for half of its regular time and each meeting involves half of the students.

To efficiently use the classroom time, you are expected to read, before each class session, selected sections of the chapters in the textbook assigned for then coming week and complete an open-book quiz (“pre-assignment” for abbreviation) on your understanding of the themes and important issues covered by the reading (see Schedule). You are also expected to post your questions on the discussion board about the readings----both what you don’t understand and whatever issues you consider to be related to the readings, as well as to respond to your peers’ questions if you can. In the classroom, I will lecture on broad issues and selected topics of each unit with demonstrations of various perceptual illusions. After each class on Monday you will have about two days to revise your answers to the pre-assignment questions, and to answer a few new questions in a post-class assignment (“post assignment” for abbreviation). Most of the new questions will come from the supplementary readings and various illusion websites, selected for enriching and broadening your understanding of the topics covered in the class. Both the pre- and post-assignments will be graded, with more weight on the post-assignments.

As an incentive for applying theories of perception to explain your experience and appreciating the wonder of perception, you are invited to post in a class blog on the Blackboard throughout the semester. The posting topics can cover anything related to the course material. As long as your posts are thoughtful and talks about a concept from the class you will receive full credit. Make your posts interesting by sharing an experience you have had with a perception concept or by sharing an interesting, related video clip not already mentioned in my lecture and other course material.

To highlight the point that illusions arise from the same perceptual system that enables “normal” perception, we will hold an on-line “Illusion Fest”. As the name indicates, this is going to be a festive event. You will pick your favorite illusion or perceptual mechanism, and create your own version of it. It cannot be a version of an example that was shown in class or in the textbook. To streamline the process, you will first submit a proposal. Once approved, you can proceed to generate it. Your illusion fest creation (in picture, video or audio files) will be due right after the Thanksgiving holiday and will be evaluated by your peers with regard to its quality, creativity, and its significance to understanding how perception works.

Finally, there will be three exams, two midterm exams and one final exam. The two midterm exams are not cumulative and will be in multiple choice format. They are open-book and on-line tests and you must complete each of them in fixed hours. I will provide correct answers after the test and will go over the test to provide feedback to you in the class following the test. The final exam will be cumulative, but in mainly short-answer format. It is not enough to remember but to truly understand the correct answers to the questions in the midterms for answering the questions in the final exam.

Keys to success in this class

1. Because the class meet for only half of the time as does its fully face-to-face version, it is extremely important that you have a sense of control over your learning and stay organized. Students are normally expected to spent two to three times more than the traditional class time studying outside of classroom, which means 6-9 hours per week. Well, it ultimately depends on your level of preparedness and motivation for the class, and what and how much else you have to do this semester. Please make a weekly schedule that works for you for reading the textbook and other course material and turn in the assignments on time (mostly every Wednesday and Saturday).
2. Engage with the course material: You will understand a new idea/concept/phenomenon only if you are truly motivated and interested in it, which means you are able to raise meaningful questions. Being able to raise a meaningful question is a sign of seeing a gap between what you already know and what is unknown but interesting to you. Please take notes when you read, try answering “Test Yourself” questions in each chapter, raise your questions on the discussion board, and complete the “pre-class assignment” of each of 10 units on time. Equally important is your willingness and capability to use my feedback in class to think over and revise the questions asked in the pre-class assignment. Similarly, please take the two midterm exam reviews as opportunities to fill any gaps in your understanding of the course material.
3. As stated above, regularly attending the class is expected of all students with exceptions covered by university policies in place before or specially implemented this semester because of the Pandemic. Please take your own notes of my lectures and do not hesitate to ask questions on points you don't understand or new questions that you consider to be related and not covered in my lectures.
4. Please check out many on-line resources of the Student Academic Success Center <https://www.gvsu.edu/sasc/academic-skills-resources-107.htm> for tips you find useful.

Grading

Your final grade will be based on the total points that accrue in following categories:

1. Pre-class assignments (10%)

There will be ten of them (10 point each and total of 100 points)

2. Post-class assignments (30%)

There will be ten of them (30 point each and total of 300 points)

3. Your questions and answers on course content posted on the discussion board (5%)

There will be a combined score of 50 points or 5 % for these questions.

4. Class-blog posts (5%) or 50 points

5. Illusion Fest (5% or 50 points) and up to 1% extra credit for extraordinarily creative one.

6. Two Mid-term exams (12.5% or 125 points each and total of 25% or 250 points)

7. Final exam (20% or 200 points)

Total: 100% or 1000 points

Assignment of letter grade on percent score:

93-100% = A ; 89-92% = A- ; 86-88% = B+ ; 82-85% = B ; 79-81% = B- ; 76-78% = C+ ; 72-75% = C ; 69-71% = C- ; 65-68% = D+ ; 60-64% = D ; 0-59% = F

Withdrawal

Drop with a “W” deadline: November 20th

Available assistance

Students who have difficulty with the course should contact me as soon as possible. If you need special disability-related accommodation, please inform me and contact the Disability Support Resources (dsrgvsu@gvsu.edu, 331-2490).

Schedule

Date	Topic	Readings*, Assignments, & Exams
8/31	Course Overview Course description and requirements; Covid-19 related issues	Ch. 1 Library video 5
9/7	Labor-day recess, no class	
9/12		Pre assignment 1 due
9/14	Unit 1: Introduction to perception Lecture topics: Evolution of perception: from transduction to conscious perception; How do we measure people's perceptual capabilities	Ch. 1 Library videos 1, 2
9/16		Post assignment 1 due
9/19		Pre assignment 2 due
9/21	Unit 2: Light and the eyes Lecture topics: What is the difference between your eyes and a camera?	Ch. 2
9/23		Post assignment 2 due
9/26		Pre assignment 3 due
9/28	Unit 3: The visual brain Lecture topics: Primary visual cortex and its function; Why do we need so many different visual areas?	Ch. 3 SR. 3
9/30		Post assignment 3 due
10/3		Pre assignment 4 due
10/5	Unit 4: Perceiving visual features: Color Lecture topics: How do we perceive an infinite number of colors? What happens to the color blind?	Ch. 5 SR. 5, 7, 12, 14 Library video 3
10/7		Post assignment 4 due
10/10		Pre assignment 5 due
10/12	Unit 5: Perceiving visual features: depth and motion	Ch. 6, Ch. 7

	Lecture topics: Why do we perceive 3D even our eyes take 2D images? What happens to the stereo blind and the motion blind?	SR. 10
10/14		Post assignment 5 due
10/16		Midterm Exam 1
10/19	Review of Midterm Exam 1	
10/24		Pre Assignment 6 due
10/26	Unit 6: Perceptual Organization Lecture topics: How do we perceive figures from mosaics and pixels? How does the brain enable us to recognize faces, places and objects?	Ch. 4 SR. 8, 9, 13 Library videos 4, 6
10/28		Post Assignment 6 due
10/31		Pre Assignment 7 due
11/2	Unit 7: Perceptual constancy Lecture topics: How do we perceive the same size, shape, and color of an object at different viewing distances, viewing angles and with different illumination? Why can't most people draw what they see?	Ch. 4, Parts of Ch. 5 & Ch. 6 SR. 6, 11
11/4		Post Assignment 7 due
11/7		Pre Assignment 8 due
11/9	Unit 8: Attention and visual awareness Lecture topics: Can we perceive anything without attention? Is attention necessary for conscious vision?	Ch. 8 SR. 2, 15, 16
11/11		Post Assignment 8 due
11/14		Pre Assignment 9 due Illusion Fest proposal due
11/16	Unit 9: Sound, Ears, and auditory brain Lecture topics: How is hearing both different from and similar to vision?	Ch. 9, Ch.10
11/18		Post Assignment 9 due
11/21		Pre Assignment 10 due
11/23	Unit 10: Somatic senses and Chemical senses Lecture topics: What's special and unique about cutaneous (skin) senses, smell, and taste? What do the existence of synesthesia and the viability of sensory substitution suggest about brain mechanisms of perception?	Ch. 12, Ch. 13 SR. 1, 4, 17
11/25-11/29	Thanksgiving Recess	
11/30	No Class	
12/1		Post-assignment 10 due
12/2		Illusion Fest work due
12/5		Midterm Exam 2
12/7	Review of Midterm Exam 2	
12/14	Final Exam	

* I will append the syllabus with more details on the parts of each chapter for more focused reading. There are also parts of my lecture that are not covered by the textbook.

This course is subject to the GVSU policies listed at <http://www.gvsu.edu/coursepolicies/>