

**Attention!**

This is a *representative* syllabus.

The syllabus for the course when you enroll may be *different*.

Use the syllabus provided by *your* instructor for the most up-to-date information. Please refer to your instructor for more information for the specific requirements for a given semester.

Feel free to contact the Psychology Advising Office for any questions regarding psychology courses either by email ([psychadvising@osu.edu](mailto:psychadvising@osu.edu)) or phone (614.292.5750).

Thank you!

# PSYCHOLOGY 3310(H) SENSATION & PERCEPTION (Honors) COURSE SYLLABUS, SP21

## IMPORTANT INFORMATION:

Course: PSYCH 3310H Credits: 3

Dates: Jan 11 – April 21, 2020

Section: 22365

Website: <https://carmen.osu.edu>

We will primarily use materials from two textbooks:

*Wolfe (2018). Sensation & Perception, 5th Edition. Oxford University Press: NY.*

*Schwartz, B.L. & Krantz, J.H. (2019). Sensation & Perception, 2nd Edition. Sage: Washington, DC.*

All readings will be in Carmen. If you choose to buy a book, choose Wolfe, especially if you have a neuroscience background. Schwartz has excellent online demonstrations.

## MODE OF DELIVERY:

- This course is 100% online. There are many opportunities for synchronous and asynchronous interaction with Dr. Meyer and each other. Synchronous sessions will occur M/W/F 11:30am-12:25pm, though we will not use all of those days, nor all of the time each time we meet. Meeting times and agendas will be announced in Carmen at least 1 week before the meeting. Synchronous sessions will include discussion (over Zoom), demos / activities designed to enrich your understanding of the topics, and highlights to prepare you for weekly assignments. Most Mondays will preview the upcoming content and assignments and answer questions from the prior week. Most Wednesdays will be a demo and discussion. All synchronous work (except discussions) can be made up in an asynchronous fashion, if you are unable to attend.

## COURSE TECHNOLOGY REQUIREMENTS

This online course was designed for the student with:

- **Basic computer & web-browsing skills, and Carmenaccess & familiarity.** See [Canvas Student Guide](#).
- **Current Mac (OS X) or PC (Windows 7+) with high-speedinternet connection, webcam, microphone, & use of BuckeyePass authentication.** iPad is acceptable.
- **Microsoft Office 365:** You are eligible for free Microsoft Office365 ProPlus. See: [go.osu.edu/office365help](https://go.osu.edu/office365help).
- **CarmenZoom:** text, audio, & video chat.
- **Need technology help?** Contact the OSU IT Service Desk. Standard support: <https://ocio.osu.edu/help> and 24/7 supportfor urgent issues is available.
- **Self-Service and Chat support:** <http://ocio.osu.edu/selfservice>
- **Phone:** 614-688-HELP (4357) **TDD:** 614-688-8743
- **Email:** [8help@osu.edu](mailto:8help@osu.edu)

## **WELCOME**

I look forward to meeting you and sharing with you the broad range of topics that are a part of how we perceive and interact with our world. We will learn how we translate a physical signal in our environment into a neural signal; how our minds construct our own realities from sensory information; and we will see that these research topics are directly relevant to our lives. I hope that by understanding these phenomena, you have a greater understanding of human perceptual capabilities, and can put this knowledge to use in your personal and professional lives.

## **COURSE OVERVIEW:**

Sensation & Perception (honors) will be an introduction to select topics in cognitive/experimental psychology, with an emphasis on visual and auditory perception. Research related to object recognition, motor control and human performance will be reviewed. The audience is undergraduate students with basic knowledge of psychology (prerequisite Psych1100).

## **COURSE OBJECTIVES:**

*By the end of this course I hope that you will be able to:*

- Describe the biological basis & major psychological theories of Sensation & Perception.
- Describe ways in which perception is in the mind/brain, and not in the stimulus or world.
- Appreciate the interdisciplinary methods used to infer human perceptual processes and abilities.
- Identify and explain “real world” examples of perceptual phenomena (art, music, design, sports, medicine).
- Have skills to make you successful in your chosen career (be it in psychology or something else completely).

## IMPORTANT RESOURCES:

### Taking Care of Yourself:

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. OSU offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting [ccs.osu.edu](https://ccs.osu.edu) or calling [614-292-5766](tel:614-292-5766). CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at [614-292-5766](tel:614-292-5766) and 24 hour emergency help is also available through the 24/7 National Suicide Prevention Hotline at 1-800-273-TALK or at [suicidepreventionlifeline.org](https://suicidepreventionlifeline.org)

The Dennis Learning Center (DLC, <https://dennislearningcenter.osu.edu/>) offers free, one-hour appointments where you can discuss various learning-related topics (note-taking, procrastination, test anxiety, exam preparation, time-management, etc.) with an academic coach and create a plan for success.

### Sexual Misconduct/Relationship Violence:

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at [titleix@osu.edu](mailto:titleix@osu.edu)

### Disability Services (SLDS):

**The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: [slds@osu.edu](mailto:slds@osu.edu); 614-292-3307; [slds.osu.edu](https://slds.osu.edu); 098 Baker Hall, 113 W. 12<sup>th</sup> Avenue.**

### Ohio State's Academic Integrity Policy:

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's [Code of Student Conduct](#), and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's Code of Student Conduct and this syllabus may constitute "Academic Misconduct." The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's Code of Student Conduct is never considered an excuse for academic misconduct, so I recommend that you review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct. **It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct.** The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>. **If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.**

Other sources of information on academic misconduct (integrity) to which you can refer include:

- The Committee on Academic Misconduct web pages ([COAM Home](#))
- *Ten Suggestions for Preserving Academic Integrity* ([Ten Suggestions](#))
- *Eight Cardinal Rules of Academic Integrity* ([www.northwestern.edu/uacc/8cards.htm](http://www.northwestern.edu/uacc/8cards.htm))

## ASSESSMENT & HOW YOUR GRADE IS CALCULATED

ASSIGNMENT CATEGORY	POINTS
<b>Make-it-Stick Practice Quizzes</b> What: Formative quizzes for each module. Multiple choice, T/F. Why: Retrieval practice and distributed practice helps you learn material. Helps you understand what material you do or do not understand. Testing improves memory! How: Open book; no time limit. Repeat for practice; Carmen keeps your highest score. Drops: Drop 3 lowest	30%
<b>Sensation &amp; Perception "in the real world" Response Papers</b> What: 5 short papers for you to connect what you've learned to your own experiences Why: We remember things that are personally relevant to us. Also, a course learning objective is to see how S&P is relevant to our daily lives How: Submit a short paper in Carmen When: See Carmen Drops: 1 dropped but let me know <b>BEFORE</b> the assignment closes if you need an extension past the close date.	20%
<b>Knowledge Appraisal Activities</b> What: Summative quizzes. Based on Make-It-Stick practice quizzes. Cumulative! Why: So you can evaluate what you've learned from a set of related modules. Provides opportunities for distributed practice and helps prevent forgetting of earlier course material How: Open book; no time limit. Repeat 1X; Carmen keeps your highest score When: See Carmen. Approximately every 3-4 weeks Drops: Drop 1 lowest score. A pre-test and post-test worth a smaller number of points are not dropped.	25%
<b>Sensation &amp; Perception "in the mind" (activities, discussions)</b> What: Most modules will have an activity to try, an in-class discussion, or a short answer question. The "Book Club" discussions may be included in this assignment group, too. [TBD] Why: Provide the opportunity to experience and think more deeply about a topic to improve memory. How: In Carmen. See specific instructions in Carmen Drops: Drop 3	25%
Total	100

See course schedule below and Carmen for due dates

The course will use OSU's standard grading scheme, which is:93–

100: A  
90–92.9: A-  
87–89.9: B+  
83–86.9: B  
80–82.9: B-  
77–79.9: C+  
73–76.9: C  
70 –72.9: C-  
67 –69.9: D+  
60 –66.9: D  
Below 60: E

## Diversity Statement

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

## MY RESPONSIBILITIES

- Design the course to be instructive & fair, in accordance to Ohio State policies
- Deliver information in a clear and organized way via readings, PowerPoints, multimedia, and offer students the opportunity to engage with the material in thoughtful activities, assignments & discussions.
- Be organized, prepared, intellectually stimulating, interested in teaching, and encourage student engagement with course material.
- Be available via email & by appointments
- Answer emails in a timely manner. I will make every effort to reply during normal business hours (9am-5pm) within 48 hours on weekdays.

## YOUR RESPONSIBILITIES

- Read the syllabus, instructions in Carmen, & understand the course policies.
- Take ownership of your educational experience and make responsible choices to ensure your success.
- Read, watch the videos, take good notes, study, ask questions, and actively participate in practice quizzes, activities, and discussion.
- Check OSU email and Carmen regularly for important updates.
- Be engaged with the course! If you fall behind or need an extension, proactively manage your situation.

**Attendance and participation requirements:** Because this is an online course, there are no set times in which you need to sit in a classroom.

**Make-it-stick Practice Quizzes.** Do them for each module *before the due date*. There may be several practice quizzes per week. The Make-It-Stick (MIS) quizzes are both to help you learn the content, identify what you need help understanding, and help you understand what contributes to remembering.

**Participating in online activities.** Most modules will usually have one activity and/or discussion. If you have a situation that might cause you to miss an entire week of class, discuss it with me *as soon as possible*

**Office hours and live sessions: OPTIONAL, BUT ENCOURAGED**  
All live, scheduled events for the course, including my office hours, are optional. If offered, these will be announced in Carmen on a weekly basis, and they will be at a consistent time.

## LATE ASSIGNMENT & MAKE-UP POLICY:

Most assignments will be **due** one week from when the module opens. You automatically have an extension: Most assignments will remain open for 10 days after the module opens (assignments that open on Monday will be due the following Monday and close Wednesday). There's no penalty for submitting after the due date. However, after the assignment closes, it will not be re-opened, unless you have made prior arrangements with me *before the assignment closes* to submit the assignment late. Response papers are eligible for extensions, activities, discussions, and practice quizzes are not. **See Carmen for due dates.** No make-ups. See Assessment table for the number of dropped assignments.

**COURSE CALENDAR: CARMEN IS THE OFFICIAL VERSION.** The course calendar below is subject to change depending on the rate of progress through the material, student interest in alternative topics, and/or scheduling constraints. **CARMEN IS THE OFFICIAL VERSION.**

Module Topic	Read	Watch	Do
<b>What's out there? Commonalities across the senses</b>			
Week 1 Welcome	Syllabus	Welcome Video Course Assignments and Assessments Video	3310 Pre-test Course Overview Quiz Introduction Discussion
Week 1, cont. History & Background	Web Essay; Wolfe pp. 19-33	What is real? Where does knowledge come from? Can we share the same experiences?	Make-It-Stick Practice Quiz
Week 2 Psychophysics	Wolfe pp. 19-33 or Schwartz pp 29-36	What is Psychophysics? Thresholds and magnitude estimation Psychophysical methods	Activity: Design an energy drink Make-it-Stick Practice Quiz
Week 3 Signal Detection Theory	Wolfe p. 13-17	Intro to SDT and why it matters SDT – terms and application	SDT Activity Response Paper 1 Make-it-stick Practice Quiz
<b>What's out there? Visual Perception: Eye to Brain</b>			
Week 4 Vision, Part 1: Waves of Light & Sound	Wolfe p. 17-19, 34-37, 284-287 OR Schwartz pp. 53-57	Waves: Light (& a little sound)	Make-it-stick Practice Quiz Knowledge Appraisal Quiz 1
Week 4, cont. Vision, Part 2: The Eye	Wolfe pp 37-41	Parts of the Eye video Accommodation and What can go wrong? How to see without glasses	Make-it-stick Practice Quiz
Week 5 Vision, Part 3: The Retina: Vertical Pathway	Wolfe pp 41-51	The Retina: A brief tour Transduction! Duplex Theory/Dark & Light adaptation	Make-it-stick Practice Quiz
Week 5, cont. Vision, Part 3: The Retina: Lateral Pathway	Wolfe Ch. 2 52-57 or Schwartz 73-77	The Retina, Part 2 (Lateral Pathway) Illusions	Center surround or Kuffler's Research demonstration Make-it-stick Practice Quiz
Week 6 Vision, Part 4: The Brain	Slides, Schwartz 90-107; Wolfe 71-89	More than meets the eye – The Brain Primary Visual Cortex Adaptation and tilt aftereffect illusion	Tilt aftereffect discussion Make-it-stick Practice Quiz Response Paper 2
<b>What's out there? Auditory Perception: Ear to Brain</b>			
Week 7 Waves, Again (Sound)	Read Wolfe Chapter 9 pp. 283-287 & Slides	Waves again (Sound)	Make-it-stick Practice Quiz
Week 7, cont. The Ear & Transduction	Read Wolfe Chapter 9 pp. 287-294	Parts and functions of the ear Auditory Transduction Transduction in the ear Lecture video	Make-it-stick Practice Quiz Knowledge Appraisal 2
Week 8 Pitch & Loudness	Wolfe Chapter 9 pp. 294-312	Intensity and Loudness Frequency and Pitch Masking Effects	Make-it-stick Practice Quiz Masking Demonstration
Week 8, cont. The Ear: What can go wrong?	Wolfe Chapter 9 pp. 294-312	What can go wrong? Lecture video	Make-it-stick Practice Quiz

Continued on next page...we're not done yet!

## APA LEARNING GOALS & LESSON OBJECTIVES

The American Psychological Association (APA) Guidelines for the Undergraduate Psychology Major describes a set of learning goals and outcomes for psychology majors at the completion of the baccalaureate degree. The content and organization of this course is designed to help you meet these goals by learning and demonstrating the following abilities at the (B)accalaureate or (F)oundational level, as denoted below:

### Goal 1. Knowledge Base in Psychology

- (B)- K1. Describe key concepts, principles, & overarching themes in psychology
- (B)- K2. Develop working knowledge of psychology's content domains
- (F)- K3. Describe applications of psychology

### Goal 2. Scientific Inquiry and Critical Thinking

- (B)- S1. Use scientific reasoning to interpret psychological phenomena
- (B)- S2. Demonstrate psychology information literacy
- (F)- S3. Engage in innovative & integrative thinking & problem solving
- (F)- S4. Interpret, design, & conduct basic psychological research
- (F)- S5. Incorporate sociocultural factors in scientific inquiry

### Goal 3. Ethical and Social Responsibility in a Diverse World

- (F)- E1. Apply ethical standards to evaluate psychological science & practice
- (F)- E2. Build & enhance personal relationships
- (F)- E3. Adopt values that build community at local, national, & global levels

### Goal 4. Communication

- (F)- C1. Demonstrate effective writing for different purposes
- (F)- C2. Exhibit effective presentation skills for different purposes
- (F)- C3. Interact effectively with others

### Goal 5. Professional Development

- (B)- P1. Apply psychological content & skills to career goals
- (F)- P2. Exhibit self-efficacy & self-regulation
- (F)- P3. Refine project-management skills
- (F)- P4. Enhance teamwork capacity
- (F) P5. Develop meaningful professional direction for life after graduation

Health and safety requirements: All students, faculty and staff are required to comply with and stay up to date on all university safety and health guidance (<https://safeandhealthy.osu.edu>), which includes *following university mask policies* and maintaining a safe physical distance at all times. Non-compliance will be warned first and disciplinary actions will be taken for repeated offenses." (Updated: Aug. 14, 2020)

What is that object? Visual & Auditory Object Recognition			
Week 9 Object Recognition	Schwartz Ch 4, 124-128; Wolfe Ch 4, pp. 106-110	Problems in Object Recognition	Make-it-stick Practice Quiz
Week 9, cont. Gestalt Psych	Schwartz Chapter 5 pp. 128-136 or Wolfe Chapter 4 pp. 111-123	Gestalt Principles Gestalt Psych and Good Design Geons How Computers Learn to Recognize Objects (YOLO)	Usability & Gestalt Principles Make-it-stick Practice Quiz Knowledge Appraisal 3
Week 10 Auditory Scene Analysis	Wolfe Chapter 10 pp 336-344	Auditory Scene Analysis	Make-it-stick Practice Quiz Response Paper3
Week 10, cont. What & Where, & What can go wrong?	Schwartz Ch 4 pp. 106-111; 137-149 or Wolfe 4 pp. 103-106, 131-133	What and Where Pathways Inferotemporal Cortex What can go wrong? Videos: Prosopagnosia, Visual Agnosia, Topographic Agnosia	Make-it-stick Practice Quiz Discussion: What can go wrong videos
What is that object? Color Perception & Where is that object? Auditory Localization & Visual Depth			
Week 11 Color: Background	Schwartz Ch 6 pp. 151-162 Wolfe Ch. 5 pp. 136-143	Lecture video: Color function Wavelengths of Light and Color (or Bill Nye) Metamers	Metameric Match Demo Make-it-stick Practice Quiz
Week 11, cont. Color: Theories	Schwartz Chapter 6 pp. 160-167, or Wolfe Chapter 5 pp. 138-154; 160-162	Photoreceptors and Univariate Video Theories of Color Perception	Make-it-stick Practice Quiz Knowledge Appraisal 4
Week 12 Color: Individual differences	Schwartz Chapter 6 pp. 169-183, Wolfe Chapter 5 pp. 155-171	Genetic differences in color vision How Color Blindness Works Constancies and Illusions Cultural differences in Color Perception	Color illusions assignment Make-it-stick Practice Quiz
Week 12, cont. Where is that object? Vision & Audition	Schwartz Chapter 7 pp. 187-223 and slides	Monocular depth cues and illusions Oculomotor and binocular cues Auditory localization video (headphones required)	Make-it-stick Practice Quiz
Is that object going to hit me? Motion Perception & Action It's all in your mind: Music Perception & Cognition			
Week 13 Motion Perception: Is it going to hit me? Or can I reach out and grab it?	Schwartz Ch 8 excerpts	Visual motion perception and Illusions	Motion illusion assignment Make-it-stick Practice Quiz Response Paper 4
Week 14 Action!!	Slides, Optional Rosenbaum chapter 1	We use motion to identify objects Failed affordances and design We use motion perception for navigation and avoid collisions Motor control	Discussion: Videos
Week 15 11/31-12/4 Music	No reading	McGurk effect Lecture videos & auditory examples	NA
Week 15, cont. Goodbye	NA	Video	Post-test Knowledge Appraisal 5 Class feedback/SEIs
NO FINAL EXAM: SEE CARMEN FOR FINAL DUE DATES ON LAST ASSIGNMENTS!			

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