

# PSYCH 120: Visual & Spatial Cognition

Summer Session II 2018  
Tu & Th, 9:00am – 12:30pm  
Physical Sciences 130

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## Instructor

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Office Hour: Tuesdays @ 12:30pm-1:30pm, SS2 305

## Teaching Assistant

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Office Hour: Thursdays @ 12:30pm-1:30pm, SS2 201

## Course Overview

Focuses on high-level perception and visual, spatial, and other sensorimotor representations as elements of human cognition. Topics include imagery, visual attention, mental models, spatial language, the body schema, near-body space, and brain organization for representing space.

Prerequisite(s): course 1 or 20 or 20A, and course 100.

## Course Learning Objectives

By the end of the course, each student should be able to:

1. Describe the major details of visual and spatial cognition from behavioral and neural standpoints
2. Identify and interpret real-world instances of cognitive processes related to visual and spatial cognition
3. Apply concepts from visual and spatial cognition to address real-world issues
4. Think critically about the design and interpretation of research related to visual and spatial cognition

## Textbook & Materials

All readings from academic journals and chapters are listed on the syllabus and will be posted on Canvas.

## Grading

Your grade for this course is determined by a weighted average of assignments, participation, and exams.

Exams	50%
<i>2 Exams (25% ea.)</i>	
Thought Papers	20%
<i>2 Papers (10% ea.)</i>	
Final Poster Project	20%
Kahoot Participation	10%

## Course Components

**Exams.** There are two non-cumulative exams in this course, each worth 25% of the final course grade. The exams will be administered in the beginning of class on 8/14 and 8/28 and you will have the entire class period to complete them. The exams will consist of a combination of multiple choice, fill-in-the-blank, and brief short answer questions. Study guides will be posted for each exam a week before the exam date.

### **Thought Papers.**

There are two thought papers that will be assigned during this course, each worth 10% of the final course grade. For each thought paper, you will choose one empirical article from the required readings list and write a 2-3 double spaced response. Your response must include: a summary of the article, a critique of something in the article, a connection of the findings of the article to material covered in the course, and a connection between the article and a real-world topic.

Resources for the thought papers will be available on Canvas. Short response papers should be submitted to Canvas on by 11:55pm on the due date. Due dates are 8/9 and 8/23.

**Final Poster Project.** The final poster accounts for 20% of the final course grade.

Throughout the course you will design and carry out a mini-research project with a group of your choosing. You will form groups, pick a project related to the course, collect and analyze data, create and present the poster. The final poster will be a way to present your findings to the class. Although some class time is set aside for work on the project, you will need to organize times to meet with your group outside of class as well. More information regarding the poster is available on Canvas.

**Kahoot Participation.** The final 10% of the course grade is comprised of your participation in answering Kahoot questions during class.

## Late Assignments/Exam Conflicts

If there are any potential conflicts with exam dates or assignments, please notify me as soon as possible. For assignments, there is a 3-hour grace period which will allow you to submit the assignment up to 3 hours after the deadline without a penalty. For each day an assignment is late, you will lose a letter grade on the assignment score. Make-up exams will be given on a limited basis and you must contact me before the exam date (unless completely unable). Makeups will be offered during other exam times or at a scheduled makeup exam at the end of the session.

## PSYCH 120: Course Schedule

Wk	Date	Topics	Readings	Due
1	7/31	Overview of Visual & Spatial Cognition  Vision: What & Why?	Milner & Goodale 1998 Darling, Della Sala, & Logie 2009  Carbon, 2014	

	8/2	Color Object Recognition	Conway, 2009 (Up to Color Vision Genetics and Retinal Mosaics) Hansen & Olkkonen, 2006  Edelman, 1997 Barnhart, 2010	
2	8/7	Visual Search Depth Perception	Wolfe, 2010 Plaisted, O’Riordan, & Baron-Cohen 1998  Cutting, 2005 Coren, 1992	
	8/9	Auditory Perception	Darwin 1997 Hofman, Van Riswick, & Van Opstal 1992	Thought Paper #1
3	8/14	Exam 1		
	8/16	Perceiving People Body Schema	Yovel & O’Toole, 2016  Haggard & Wolpert, 2005 Maravita & Iriki, 2004	
4	8/21	Navigation Imagery	Tversky, 1993 Navigation Chapter  Imagery Chapter Zeman, Dewar, & Della Sala	
	8/23	Language	Language, Space, & Vision Chapter Gesture Chapter Walker, Bergen, & Nunez, 2014 Kay & Regier, 2009	Thought Paper #2
5	8/28	Exam 2		

	8/30	In-Class Projects		Final Poster
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**Academic Honesty & Integrity Policy**

Academic integrity is the cornerstone of a university education. Academic dishonesty diminishes the university as an institution and all members of the university community. It tarnishes the value of a UCSC degree.

All members of the UCSC community have an explicit responsibility to foster an environment of trust, honesty, fairness, respect, and responsibility. All members of the university community are expected to present as their original work only that which is truly their own. All members of the community are expected to report observed instances of cheating, plagiarism, and other forms of academic dishonesty in order to ensure that the integrity of scholarship is valued and preserved at UCSC.

In the event a student is found in violation of the UCSC Academic Integrity policy, he or she may face both academic sanctions imposed by the instructor of record and disciplinary sanctions imposed either by the provost of his or her college or the Academic Tribunal convened to hear the case. Violations of the Academic Integrity policy can result in dismissal from the university and a permanent notation on a student’s transcript.

For the full policy and disciplinary procedures on academic dishonesty, students and instructors should refer to the [Academic Integrity page](#) at the [Division of Undergraduate Education](#).

**Students Requiring Accommodations**

UC Santa Cruz is committed to creating an academic environment that supports its diverse student body. If you are a student with a disability who requires accommodations to achieve equal access in this course, please submit your Accommodation Authorization Letter from the Disability Resource Center (DRC) to me privately during my office hours or by appointment, preferably within the first two weeks of the quarter. At this time, I would also like us to discuss ways we can ensure your full participation in the course. I encourage all students who may benefit from learning more about DRC services to contact DRC by phone at 831-459-2089 or by email at [drc@ucsc.edu](mailto:drc@ucsc.edu).

**Title IX**

The university cherishes the free and open exchange of ideas and enlargement of knowledge. To maintain this freedom and openness requires objectivity, mutual trust, and confidence; it requires the absence of coercion, intimidation, or exploitation. The principal responsibility for maintaining these conditions must rest upon those members of the university community who exercise most authority and leadership: faculty, managers, and supervisors.

The university has therefore instituted a number of measures designed to protect its community from sex discrimination, sexual harassment, sexual violence, and other related prohibited conduct. Information, advice, referrals, and/or copies of the UC Policy on Sexual Violence and Sexual Harassment and the UC Santa Cruz Procedures for Reporting and Responding to Reports of Sexual Violence and Sexual Harassment are available to all students, faculty, and staff by contacting Tracey Tsugawa, Title IX/Sexual Harassment Officer, 105 Kerr Hall, 459-2462, or

[ttsugawa@ucsc.edu](mailto:ttsugawa@ucsc.edu).

## Research Participation (Extra Credit)

Students can earn up to two extra credit points by completing research hours (or alternative assignments) by 5pm on Friday, August 31<sup>st</sup>, 2018.

Follow these easy steps to sign-up for research projects:

- 1) Go to the E-Link website at <https://ucsc.sona-systems.com>
- 2) If you are enrolled in the class at the start of the quarter, then an account should already be created for you. To log in for the first time, click “Forgot Password?” to retrieve the pre-set password. For those who added the class late, or for some reason the system won’t let you log in, you may need to click “Request Account.” Only request a new account if the “Forgot Password” link isn’t working.
- 3) Always enter your UCSC email address. You will receive your password via email.
- 4) Log in and follow the instructions.

**IMPORTANT:** You can earn extra-credit points by either participating in studies (surveys or experiments) or writing papers (the alternative assignment). Studies are posted throughout the quarter. Plan ahead and complete them as soon as possible. Check online often for new studies. If you know you cannot make it, and if the time until the study is more than 24 hours, you can cancel on E-link. If you fail to show up for a study, or fail to cancel in time, you will be marked as having an “unexcused no-show.” If you accumulate three unexcused no-shows you will be prevented from signing up for more experiments. All participation must be completed by 5pm on the Friday of the last week of instruction. Do not wait until the last week to sign up.

**What if you can’t find studies?** Although some studies may be available right at the start of the quarter, there may not be enough for everyone. Please be patient, researchers will post new studies throughout the quarter. There is usually a big spike in hours during the last couple weeks. If you are concerned about the availability of hours, please don’t email your instructors or TAs, instead email the pool administrator so that they can try to address the issue directly ([ucscresearchpool@gmail.com](mailto:ucscresearchpool@gmail.com)). This is also the best email to use if other issues arise during the quarter. If you participated in a study but didn’t receive credit after two days, please start by emailing the researchers directly. If the researchers don’t respond then send an email to the pool administrator. Rest assured, however, that all pending timeslots will be given credit at the end of the quarter before a report is sent to your professor.

**Alternative assignment:** If you prefer to not participate in research studies (or if you are under the age of 18) you may substitute up to two papers, each critically evaluating a psychology research article. If you are doing the alternative written assignments, they must be emailed directly to your instructor or TA by the last day of instruction. If you have any questions or concerns please contact the research pool administrator at [ucscresearchpool@gmail.com](mailto:ucscresearchpool@gmail.com).

Each paper should be 1-2 pages (double spaced, 12-point, times new roman) and critically evaluate a psychology research article (addressing the questions shown below). You will need to find articles published in 2017 or 2018 in one of the following journals: (a)

*Psychological Science*; (b) *Psychonomic Bulletin & Review*; (c) *Cognition*; (d) *Trends in Cognitive Science*.

- 1) What were the basic questions or hypotheses under investigation?
- 2) How did the researchers test their hypotheses?
- 3) What did the researchers find and how were these findings interpreted?
- 4) Are you convinced? Why or why not? Explain.