

**San José State University**  
**Department of Psychology**  
**PSYC 235, Cognition Seminar, Section 1, Fall, 2022**

**Course and Contact Information**

Instructor(s):	Dr. Evan M. Palmer
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Office Hours:	Tues / Thurs 11:00 am – 12:00 pm [via Zoom or in person] (Office hours are a time every week when I will hang out in my office and be available to talk to any student who wants to visit. You can ask questions about the course or review material with me, we could talk about grad school or your career, or just chat!)
Class Days/Time:	Tues / Thurs 1:30 – 2:45 pm
Classroom:	Clark 117
Prerequisites:	Graduate Standing

**Course Description**

The field of cognitive psychology attempts to answer the question “How does the mind work?” by examining its information processing capabilities and limitations. Through laboratory experiments, theorizing, and computational modeling, cognitive psychology illuminates mental activities such as perception, memory, attention, mental imagery, thinking, reasoning, problem solving, decision making, and language.

From catalog: Theories and current research in cognitive psychology with emphasis on components of cognitive processing from pattern recognition to problem solving. Substantial emphasis on cognitive development and mechanisms of cognitive change. Prerequisite: Graduate standing.

**MYSJSU Messaging**

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on [Canvas Learning Management System course login website](#). You are responsible for regularly checking with the messaging system through [MySJSU](#) on [Spartan App Portal](#) to learn of any updates.

**Program Learning Outcomes (PLO) and Course Learning Outcomes (CLO)**

**PLO1. Knowledge Base of Psychology:** Students will demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.

- **CLO1.** Demonstrate knowledge of the different components of cognition, including perception, attention, memory, language, and decision making
- **CLO2.** Identify the cognitive mechanisms that underlie behavior

**PLO2. Research Methods in Psychology:** Students will understand basic methodological approaches used in psychology, including research design, analysis, and interpretation.

- **CLO3.** Describe different research methods used in cognitive psychology research
- **CLO4.** Infer appropriate conclusions from cognitive psychology research

- **CLO5.** Communicate findings and implications from cognitive psychology research

**PLO3.** *Critical Thinking Skills in Psychology:* Students will understand and be able to use critical and creative thinking, skeptical inquiry, and a scientific approach to address issues related to behavior and mental processes.

- **CLO6.** Synthesize evidence in favor of arguments pertaining to debates in cognitive psychology
- **CLO7.** Evaluate and criticize arguments pertaining to issues in cognitive psychology

**PLO4.** *Application of Psychology:* Students will understand and be able to apply psychological principles to individual, interpersonal, group, and societal issues.

- **CLO8.** Articulate how concepts in cognitive psychology apply to their everyday lives

**PLO5.** *Values in Psychology:* Students will value empirical evidence, tolerate ambiguity, act ethically, and recognize their role and responsibility as a member of society.

- **CLO9.** Respect the relative nature of empirical evidence
- **CLO10.** Recognize the value of intellectual curiosity and skepticism

## Required Texts/Readings

### Textbook

There is no required textbook in this course. All readings will consist of journal articles and book chapters which will be posted on Canvas.

### Journal Articles

- 1) Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review*, 63(2), 81.
- 2) Marr, D. (1982). *Vision. Ch 1: The philosophy and the approach*. Freeman.
- 3) Biederman, I. (1987). Recognition-by-components: A theory of human image understanding. *Psychological Review*, 94(2), 115.
- 4) Potter, M. C. (1976). Short-term conceptual memory for pictures. *Journal of Experimental Psychology: Human Learning and Memory*, 2(5), 509.
- 5) Cherry, E. C. (1953). Some experiments on the recognition of speech, with one and two ears. *Journal of the Acoustical Society of America*, 25, 975-979.
- 6) Posner, M. I. & Snyder, C. R. R. (1975). Attention and cognitive control. In R. L. Solso (Ed.), *Information Processing and Cognition: The Loyola Symposium* (pp. 55-85). Hillsdale, NJ: Lawrence Erlbaum Associates.
- 7) Treisman, A. M. & Gelade, G. (1980). A feature-integration theory of attention. *Cognitive Psychology*, 12, pgs. 97-136.
- 8) Wolfe, J. M., Cave, K. R., & Franzel, S. L. (1989). Guided search: an alternative to the feature integration model for visual search. *Journal of Experimental Psychology: Human perception and performance*, 15(3), 419.
- 9) Chun, M. M. & Potter, M. (1995). A two-stage model for multiple target detection in rapid serial visual presentation. *Journal of Experimental Psychology: Human perception and Performance*, 21(1).
- 10) Most, S. B., Smith, S. D., Cooter, A. B., Levy, B. N., & Zald, D. H. (2007). The naked truth: Positive, arousing distractors impair rapid target perception. *Cognition and Emotion*, 21(5), 964-981.
- 11) Green, C. S., & Bavelier, D. (2003). Action video game modifies visual selective attention. *Nature*, 423(6939), 534-537.
- 12) Luck, S. J., & Vogel, E. K. (1997). The capacity of visual working memory for features and conjunctions. *Nature*, 390(6657), 279-281.
- 13) Baddeley, A. (2010). Working memory. *Current Biology*, 20(4), R136-R140.

- 14) Strayer, D. L., & Johnston, W. A. (2001). Driven to distraction: Dual-task studies of simulated driving and conversing on a cellular telephone. *Psychological Science, 12*(6), 462-466.
- 15) Tulving, E. (1985). How many memory systems are there? *American Psychologist, 40*(4), 385.
- 16) Roediger, H. L., & McDermott, K. B. (1995). Creating false memories: Remembering words not presented in lists. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 21*(4), 803.
- 17) Collins, A. M., & Quillian, M. R. (1969). Retrieval time from semantic memory. *Journal of Learning and Verbal Behavior, 8*, 240-247.
- 18) Rosch, E., Mervis, C. B., Gray, W. D., Johnson, D. M., & Boyes-Braem, P. (1976). Basic objects in natural categories. *Cognitive Psychology, 8*(3), 382-439.
- 19) Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology, 74*(6), 1464.
- 20) Ericsson, K. A., & Lehmann, A. C. (1996). Expert and exceptional performance: Evidence of maximal adaptation to task constraints. *Annual Review of Psychology, 47*(1), 273-305.
- 21) Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases: Biases in judgments reveal some heuristics of thinking under uncertainty. *Science, 185*(4157), 1124-1131.
- 22) Tversky, A., & Gilovich, T. (1989). The cold facts about the “hot hand” in basketball. *Chance, 2*(1), 16-21.
- 23) Pinker, S. (2003). Language as an adaptation to the cognitive niche. *Studies in the Evolution of Language, 3*, 16-37.
- 24) Saffran, J. R., Aslin, R. N., & Newport, E. L. (1996). Statistical learning by 8-month-old infants. *Science, 274*(5294), 1926-1928.

#### **Other technology requirements / equipment / material**

You will need reliable access to the internet to access Canvas and receive e-mails about the course. Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on the Canvas site. You are responsible for regularly checking with the messaging system through one.sjsu.edu.

#### **Library Liaison**

Christa Bailey, [christa.bailey@sjsu.edu](mailto:christa.bailey@sjsu.edu), [web link](#).

#### **Course Requirements and Assignments**

**Participation / Article Discussions:** Your participation grade will be determined by your level of engagement in class discussions and presentation of one journal article. I expect that you will read all articles before we discuss them in class, even articles that you are not presenting. Roughly 1/3 of your participation grade will be determined by how much you engage in classroom discussions about the articles. The other 2/3 of your participation grade will be determined by the quality of your article presentation and how effectively you lead a discussion about the article.

**Midterm Exam:** The midterm will be given on Thursday, October 13, 2022, and will consist of short answer and essay questions covering articles 1-12. Short answer questions will be answered in class and essay questions will be take-home.

**Make-Up Policy:** Exams can be made-up but only if 1) I am contacted ahead of time, and/or 2) there are extraordinary circumstances (e.g., family death, accident, severe illness) that caused you to miss the regularly scheduled exam. Extraordinary circumstances require documentation.

**Late Assignment Policy:** All assignments will be penalized 20% for every day they are late.

**Review and Preparation Activities:** In addition to engagement with the learning environment of the classroom, you will be required to independently prepare yourself for future classes by various out of class review and preparation activities. The university definition of a credit hour suggests that “Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally 3 hours per unit per week with 1 of the hours used for lecture) for instruction or preparation/studying or course related activities including but not limited to internships, labs, clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.”

### **Final Examination or Evaluation**

**Final Exam:** The final exam will be given on Wednesday, December 14, 2022, and will consist of short answer and essay questions covering articles 13-24. Short answer questions will be answered in class and essay questions will be take-home.

### **Grading Information**

#### **Grade Breakdown:**

- 20% Article Presentations
- 40% Midterm
- 40% Final Exam

#### **Grading Scale:**

<b>Grade</b>	<b>Percentage</b>
A+	96.50 – 100%
A	92.50 – 96.49%
A-	89.50 – 92.49%
B+	86.50 – 89.49%
B	82.50 – 86.59%
B-	79.50 – 82.49%
C+	76.50 – 79.49%
C	72.50 – 76.49%
C-	69.50 – 72.49%
D+	66.50 – 69.49%
D	62.50 – 66.49%
D-	59.50 – 62.49%
F	≤ 59.49%

### **Classroom Protocol**

All students are expected to exhibit professionalism and respect for each other and the instructor. Specifically, this means arriving to class on time, being prepared for class, participating in discussions, being civil to your fellow classmates and instructor, and paying attention to in-class demonstrations and lectures. If you arrive late to class or need to leave early from class, please sit near the door so as not to disturb the rest of the class. Please silence and put away cell phones during class. If I see that you are using your cell phone during lecture, I will ask you to put it away. Repeated violations of the cell phone policy may result in further disciplinary action. You may record lectures only if you obtain my

permission first, and such recordings are only to be used for personal study and may not be posted online.

### **Statement on Diversity, Equity & Inclusion**

We all have diverse personal experiences, identities, and values that bias how we view the world. I hope that we can embrace this diversity and work together to ensure each student feels like a valued member of the learning community. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. It is also my intent that students from all backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength, and benefit.

### **Academic Integrity**

I do not tolerate any forms of academic dishonesty in my courses. I take issues of academic dishonesty very seriously and pursue disciplinary action rigorously, so please take extra care to avoid this sort of unpleasant situation. All writing assignments will be checked for plagiarism by TurnItIn on Canvas. Plagiarized assignments automatically receive a score of 0 in this course. Any incidents of cheating on exams result in an automatic grade of 0 for the exam. If the academic dishonesty is particularly egregious, you may receive an automatic F in the course. All incidents of academic dishonesty are reported to the Office of Student Conduct and Ethical Development (SCED) and students may appeal any accusations of academic dishonesty through SCED.

Note: At the graduate level, violations of academic integrity are especially serious.

### **University Policies**

Per [University Policy S16-9](#), relevant university policy concerning all courses, such as student responsibilities, academic integrity, accommodations, dropping and adding, consent for recording of class, etc. and available student services (e.g. learning assistance, counseling, and other resources) are listed on [Syllabus Information web page](https://www.sjsu.edu/curriculum/courses/syllabus-info.php) (<https://www.sjsu.edu/curriculum/courses/syllabus-info.php>). Make sure to visit this page to review and be aware of these university policies and resources.

# PSYC 235 / Cognition Seminar

## Fall, 2022

### Course Schedule

(Schedule is subject to change. Changes will be announced in class or via email.)

<b>Date</b>	<b>Topic</b>	<b>Readings</b>
Tues, 8/23	Welcome / History of Cognitive Psychology	
Thurs, 8/25	Philosophy/ /Approach	1-Miller (1956)
Tues, 8/30	Philosophy/Approach	2-Marr (1982)
Thurs, 9/1	Object Recognition	3-Biederman (1987)
Tues, 9/6	Scene Perception and Scene Gist	4-Potter (1976)
Thurs, 9/8	Classic Attention Tasks	5-Cherry (1953)
Tues, 9/13	Attention & Cognitive Control	6-Posner & Snyder (1975)
Thurs, 9/15	Visual Search	7-Treisman & Gelade (1980)
Tues, 9/20	Guided Search	8-Wolfe, Cave & Franzel (1989)
Thurs, 9/22	Attentional Blink	9-Chun & Potter (1995)
Tues, 9/27	Emotion-Induced Attentional Blink	10-Most, et al. (2007)
Thurs, 9/29	Video Games and Attention	11-Green & Bavelier (2003)
Tues, 10/4	Visual Working Memory	12-Luck & Vogel (1997)
Thurs, 10/6	Catch-Up & Review	
Tues, 10/11	Catch-Up & Review	
<b>Thurs, 10/13</b>	<b>MIDTERM</b>	<b>Articles 1 - 12</b>
Tues, 10/18	Working Memory	13-Baddeley (2010)
Thurs, 10/20	Divided Attention & Dual Tasks	14-Strayer & Johnston (2001)
Tues, 10/25	Long Term Memory	15-Tulving (1985)
Thurs, 10/27	Failures of Memory	16-Roediger & McDermott (1995)
Tues, 11/1	Knowledge Structures	17-Collins & Quillian (1969)
Thurs, 11/3	Categorization	18-Rosch, et al. (1976)
Tues, 11/8	Schemas and Bias	19-Greenwald, McGhee & Schwartz (1998)
Thurs, 11/10	Expertise	20- Ericsson & Lehmann (1996)
Tues, 11/15	Judgment and Decision Making	21- Tversky & Kahneman (1974)
Thurs, 11/17	Judgment and Decision Making	22-Tversky & Gilovich (1989)
Tues, 11/22	Language	23-Pinker (2003)
<b>Thurs, 11/24</b>	<b>THANKSGIVING BREAK</b>	
Tues, 11/29	Language	24-Saffran, Aslin & Newport (1996)
Thurs, 12/1	Catch-Up & Review	
Tues, 12/6	Catch-Up & Review	
<b>Wed, 12/14</b> <b>12:00 – 2:30 PM</b>	<b>Final Exam</b>	<b>Articles 13-24</b>