

Cognitive Psychology

For additional course information, including prerequisites, corequisites, and course fees, please refer to the Catalog: <u>https://catalog.uvu.edu/</u>

Semester: Spring Course Prefix: PSY Course Title: Cognitive Psychology Year: 2025 Course and Section #: 3420-003 Credits: 3

Course Description

Introduces the core concepts, theoretical perspectives, empirical findings, and historical trends in cognitive psychology. Includes perception, attention, memory, and higher cognitive processes. Explores animal as well as human research.

Course Attributes

This course has the following attributes:

- □ General Education Requirements
- Global/Intercultural Graduation Requirements
- ☑ Writing Enriched Graduation Requirements
- ☑ Discipline Core Requirements in Program
- □ Elective Core Requirements in Program
- □ Open Elective

Other: Click here to enter text.

Instructor Information

Instructor Name: Evan Clarkson

Student Learning Outcomes

- Explain the major concepts, theoretical perspectives, empirical findings, and historical trends in cognitive psychology.
- Solve problems related to thinking and behavior.
- Apply psychological principles to personal, social, and organizational issues.
- Compose disciplinarily-appropriate texts related to cognitive psychology.

Course Materials and Texts

Course materials are a combination of open educational resources and journal articles.

Course Requirements

Course Assignments, Assessments, and Grading Policy

Course assignments include:

Reflections: Brief, "blog post" style writing assignments of about a paragraph or two each, where students write about a topic within the readings or discussed in class. There will be at least 9 reflection posts, worth 25 points each. The lowest score will be dropped.

Quizzes: There will be at least 11 in-class quizzes, worth 10 points each. The lowest score will be dropped.

Paper 1: A 3–5-page paper on a topic related to cognitive psychology. A list of potential topics will be determined later in the course, after discussion with students. This assignment is worth 50 points. Paper 2: An 8-12-page paper on a topic related to cognitive psychology. A list of potential topics will be determined later in the course, after discussion with students. This assignment is worth 150 points and includes a 25-point rough draft, which students will receive extensive and individualized feedback on. Early Assessment: Students will complete an early assessment, which will act as a mock or partial exam. The assessment is constructed to help students calibrate their expectations for exams, in terms of format, content, and difficulty. The early assessment is worth 50 points. Students will be given an opportunity to improve their scores.

Midterm: An in-class midterm will be given, which will be composed of a mix of multiple choice and short answer questions. The exam will be open note, and will be worth 200 points.

Final Exam: An in-class final exam will be given, which will be composed of a mix of multiple choice and short answer questions. The exam will be open note, and will be worth 250 points. A subset of the exam will be cumulative.

GRADING POLICY:

Late work: I do not accept late work on Quizzes or Reflection assignments but I drop your lowest two scores in that category. Thus, you can miss two of these without penalty once the drop rules are applied at the end of the semester. I do accept late work on major assignments, like the "Early Assessment" and Paper submissions with a 10% daily penalty (starting after class the day the assignment is due). While I do not apply a late penalty on exams, I typically do not offer make-ups unless I am alerted in advance.

All this said, if you have questions or concerns, please do not hesitate to contact me. I want to help you! It is my job. It is easier to do that if you let me know your needs beforehand.

Rounding: While I take no pleasure in enforcing grade cut offs, at some point, there must be a line separating A's, B's, C's and so on. Thus, I enforce a strict rounding policy. If a student is within a half percent of a higher letter grade I will round their score up. In application this means I will round a score of 89.5% to an A- and a score of 79.7% to a B-. However, I will not round a score of 89.4% or 79.49% to a B-. I also will not round scores between full letter grades (such as a C to a C+ or an A- to an A). This is sometimes confusing, so I go over this in class.

Grade	Percent
А	94-100
A-	90-93
B+	87-89

Grade	Percent
В	83-86
B-	80-82
C+	77-79
С	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
Е	0-59

Required or Recommended Reading Assignments

Module 1: Introductions Watson, J. B. (1913). Psychology as the behaviorist views it. *Psychological Review*, 20(2), 158– 177. <u>https://doi.org/10.1037/h0074428</u>

Module 2: Methods & Philosophy

Choi O. S. (2017). What neuroscience can and cannot answer. *The journal of the American Academy of Psychiatry and the Law*, 45(3), 278–285.

Ramsey, W.M. (1989), Parallelism and functionalism. *Cognitive Science*, 13: 139-144. <u>https://doi.org/10.1207/s15516709cog1301_5</u>

Module 3: Basics of Cognitive Psychology

Fodor, J. (2006). How the mind works: What we still don't know. *Daedalus*, *135*(3), 86–94. <u>http://www.jstor.org/stable/20028056</u>

Module 4: Vision & Attention

Peissig, J. J., & Tarr, M. J. (2007). Visual object recognition: do we know more now than we did 20 years ago?. *Annual review of psychology*, 58, 75–96.

https://doi.org/10.1146/annurev.psych.58.102904.190114

Hommel, B., Chapman, C. S., Cisek, P., Neyedli, H. F., Song, J. H., & Welsh, T. N. (2019). No one knows what attention is. *Attention, perception & psychophysics*, *81*(7), 2288–2303. <u>https://doi.org/10.3758/s13414-019-01846-w</u>

Module 5: Divisions of Memory

Baddeley A. (2012). Working memory: theories, models, and controversies. *Annual review of psychology*, 63, 1–29. <u>https://doi.org/10.1146/annurev-psych-120710-100422</u>

Module 6: Forgetting and Consolidation

Wixted, J. T., Mickes, L., & Fisher, R. P. (2018). Rethinking the Reliability of Eyewitness Memory. *Perspectives on psychological science : a journal of the Association for Psychological Science*, *13*(3), 324–335. <u>https://doi.org/10.1177/1745691617734878</u>

Cowan, E. T., Schapiro, A. C., Dunsmoor, J. E., & Murty, V. P. (2021). Memory consolidation as an adaptive process. *Psychonomic bulletin & review*, 28(6), 1796–1810. <u>https://doi.org/10.3758/s13423-021-01978-x</u>

Module 7: Representation

Pitt, D. (2022). Mental representation. *The Standford Encyclopedia of Philosophy*. <u>https://plato.stanford.edu/archives/fall2022/entries/mental-representation/</u>

Fodor, J. A., & Pylyshyn, Z. W. (1988). Connectionism and cognitive architecture: A critical analysis. *Cognition*, 28(1-2), 3–71. <u>https://doi.org/10.1016/0010-0277(88)90031-5</u>

Module 8: Language & Unsymbolized thoughts

Cuskley, C., Woods, R., & Flaherty, M. (2024). The limitations of large language models for understanding human language and cognition. *Open mind : discoveries in cognitive science*, *8*, 1058–1083. <u>https://doi.org/10.1162/opmi_a_00160</u>

Martínez-Manrique, F., & Vicente, A. (2015). The activity view of inner speech. *Frontiers in psychology*, 6, 232. <u>https://doi.org/10.3389/fpsyg.2015.0023</u>

Module 9: Neuroscience & Lateralization

de Haan, E. H. F., Corballis, P. M., Hillyard, S. A., Marzi, C. A., Seth, A., Lamme, V. A. F., Volz, L., Fabri, M., Schechter, E., Bayne, T., Corballis, M., & Pinto, Y. (2020). Split-Brain: What we know now and why this is important for understanding consciousness. *Neuropsychology review*, *30*(2), 224–233. https://doi.org/10.1007/s11065-020-09439-3

Jasper, J. D., Christman, S. D., & Clarkson, E. (2021). Predicting interactions in handedness research: The role of integrated versus independent dual-processes. *Laterality*, *26*(6), 607–623. https://doi.org/10.1080/1357650X.2021.1879110

Module 10: Consciousness

Carruthers P. (2009). How we know our own minds: the relationship between mindreading and metacognition. *The Behavioral and brain sciences*, *32*(2), 121–182. <u>https://doi.org/10.1017/S0140525X09000545</u>

Kotchoubey B. (2018). Human consciousness: Where is it from and what is it for. *Frontiers in psychology*, 9, 567. <u>https://doi.org/10.3389/fpsyg.2018.00567</u>

Module 11: Embodied Cognition

Nicholas., B. (2013). Thirty years of prospect theory in economics: A review and assessment." *Journal of Economic Perspectives*, 27 (1): 173–96.

Lakoff G. (2012). Explaining embodied cognition results. *Topics in cognitive science*, 4(4), 773–785. https://doi.org/10.1111/j.1756-8765.2012.01222.x

Module 12: Emotion, Rationality, and Risk

Dunn, B. D., Dalgleish, T., & Lawrence, A. D. (2006). The somatic marker hypothesis: a critical evaluation. *Neuroscience and biobehavioral reviews*, *30*(2), 239–271. https://doi.org/10.1016/j.neubiorev.2005.07.001

Lange, J., Dalege, J., Borsboom, D., van Kleef, G. A., & Fischer, A. H. (2020). Toward an integrative psychometric model of emotions. *Perspectives on psychological science : a journal of the Association for Psychological Science*, *15*(2), 444–468. <u>https://doi.org/10.1177/1745691619895057</u>

Module 13: Moral Psychology

Clarkson, E., Jasper, J. D., & Gugle, B. (2022). Differences in moral judgment predict behavior in a Covid triage game scenario. *Personality and individual differences*, *195*, 111671. https://doi.org/10.1016/j.paid.2022.111671

Clarkson, E. (2022). Moral behavior in games: a review and call for additional research. *New Ideas Psychol.* 64:100912. doi: 10.1016/j.newideapsych.2021.100912

Module 14: Elimination

Ramsey, W. (2024). Eliminative materialism. *The Stanford Encyclopedia of Philosophy*. <u>https://plato.stanford.edu/archives/win2024/entries/materialism-eliminative/</u>

General Description of the Subject Matter of Each Lecture or Discussion

Module 1: Introductions

- 1. Define cognition and the scope of cognitive psychology
- 2. Discuss problems with introspection
- 3. Discuss problems with behaviorism

Module 2: Methods & Philosophy

- 1. Differentiate between neuroscience and cognitive psychology
- 2. Discuss importance of functionalist philosophy
- 3. Discuss mental paraphernalia

Module 3: Basics of Cognitive Psychology

- 1. Discuss core methods in cognitive psychology
- 2. Discuss core models in cognitive psychology

3. Identify outstanding problems that cognitive psychology continues to struggle to solve

Module 4: Vision & Attention

- 1. Discuss rival models of visual processing in context of modern evidence and historical debates
- 2. Discuss outstanding problems with definitions of attention
- 3. Discuss outstanding problems with rival models of attention

Module 5: Divisions of Memory

- 1. Differentiate between long-term memory, short-term memory, and working memory
- 2. Categorize different types of long-term memory (explicit vs implicit, episodic vs semantic, etc.)
- 3. Summarize factors that influence retrieval and reaction time

Module 6: Forgetting and consolidation

- 1. Discuss processes of consolidation and reconsolidation
- 2. Discuss utility of forgetting

3. Examine applications of research on memory and forgetting (such as eye witness testimony) Module 7: Representation

- 1. Identify different philosophical theories of representation
- 2. Examine the language of thought hypothesis and assumptions of symbolic structure
- 3. Discuss different cognitive models of knowledge

Module 8: Language and Unsymbolized thoughts

- 1. Discuss different models of language acquisition
- 2. Differentiate prior and current models of language (see classical vs connectionist accounts)
- 3. Discuss the controversy of unsymbolized thoughts in reference to the classical model
- Module 9: Neuroscience and Lateralization
 - 1. Discuss basics of neuroscience
 - 2. Differentiate inter and intra hemispheric processes
 - 3. Discuss individual differences (see degrees of handedness)

Module 10: Consciousness

- 1. Discuss the easy and hard problems of consciousness
- 2. Identify the limitations of intuition and introspection
- 3. Detail Carruthers "mind reading is prior" thesis

Module 11: Embodied Cognition

- 1. Define embodied cognition
- 2. Discuss problems with computer model and importance of embodied "grounding" of knowledge
- 3. Detail Cisek's synthetic model in comparison to analytic model
- Module 12: Emotion, Rationality, and Risk
 - 1. Differentiate theories of emotion
 - 2. Discuss Reyna's Fuzzy Trace model
 - 3. Evaluate the importance and problems with Prospect theory

Module 13: Moral Psychology

- 1. Define and overview moral psychology
- 2. Discuss dual process theories and their problems, in the context of moral psychology
- 3. Discuss research on morality in real-world contexts and simulations

Module 14: Elimination

- 1. Define folk psychology
- 2. Discuss problems with folk psychology
- 3. Evaluate areas within folk psychology that might be "eliminated"

Required Course Syllabus Statements

Generative AI

Easily accessible tools powered by Artificial Intelligence (AI) are growing in popularity. In this class if you want to use AI tools, I want you to be able to use these tools in an effective and ethical way. My goal is for you to learn and develop critical thinking and creative skills and AI doesn't need to work against that goal.

The use of generative AI tools (e.g. ChatGPT, Google Bard, etc.) is permitted in this course for the following activities:

- Brainstorming and refining your ideas;
- Fine tuning your research questions;

- Finding information on your topic;
- Drafting an outline to organize your thoughts; and
- Checking grammar and style.

If you use AI in the ways outlined above, you are still expected to complete an AI disclosure statement at the end of your papers. This statement must expressly reference (1) the AI model used, (2) a description or link to the input entered into the model, (3) a statement of how you evaluated the output. The use of generative AI tools is **not** permitted in this course for the following activities:

- Impersonating you in classroom contexts, such as by using the tool to compose discussion board prompts/responses assigned to you or content that you put into a Teams/Canvas chat.
- Completing group work that your group has assigned to you, unless it is mutually agreed upon that you may utilize the tool.
- Writing a draft of a writing assignment.
- Writing entire sentences, paragraphs or papers to complete class assignments.

You are responsible for the information you submit based on an AI query (for instance, that it does not violate intellectual property laws, or contain misinformation or unethical content). Your use of AI tools must be properly documented and cited in order to stay within university policies on academic honesty.

Using Remote Testing Software

 \Box This course does not use remote testing software.

 \boxtimes This course uses remote testing software. Remote test-takers may choose their remote testing locations. Please note, however, that the testing software used for this may conduct a brief scan of remote test-takers' immediate surroundings, may require use of a webcam while taking an exam, may require the microphone be on while taking an exam, or may require other practices to confirm academic honesty. Test-takers therefore shall have no expectation of privacy in their test-taking location during, or immediately preceding, remote testing. If a student strongly objects to using test-taking software, the student should contact the instructor at the beginning of the semester to determine whether alternative testing arrangements are feasible. Alternatives are not guaranteed.

Required University Syllabus Statements

Accommodations/Students with Disabilities

Students needing accommodations due to a permanent or temporary disability, pregnancy or pregnancyrelated conditions may contact UVU <u>Accessibility Services</u> at <u>accessibilityservices@uvu.edu</u> or 801-863-8747.

Accessibility Services is located on the Orem Campus in BA 110.

Deaf/Hard of Hearing students requesting ASL interpreters or transcribers can contact Accessibility Services to set up accommodations. Deaf/Hard of Hearing services can be contacted at <u>DHHservices@uvu.edu</u>

DHH is located on the Orem Campus in BA 112.

Academic Integrity

At Utah Valley University, faculty and students operate in an atmosphere of mutual trust. Maintaining an atmosphere of academic integrity allows for free exchange of ideas and enables all members of the community to achieve their highest potential. Our goal is to foster an intellectual atmosphere that produces scholars of integrity and imaginative thought. In all academic work, the ideas and contributions of others must be appropriately acknowledged and UVU students are expected to produce their own original academic work.

Faculty and students share the responsibility of ensuring the honesty and fairness of the intellectual environment at UVU. Students have a responsibility to promote academic integrity at the university by not participating in or facilitating others' participation in any act of academic dishonesty. As members of the academic community, students must become familiar with their <u>rights and responsibilities</u>. In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, assessments, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Likewise, instructors are responsible to clearly state expectations and model best practices.

Further information on what constitutes academic dishonesty is detailed in <u>UVU Policy 541: *Student*</u> <u>*Code of Conduct*</u>.

Equity and Title IX

Utah Valley University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, age (40 and over), disability, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other basis protected by applicable law, including Title IX and 34 C.F.R. Part 106, in employment, treatment, admission, access to educational programs and activities, or other University benefits or services. Inquiries about nondiscrimination at UVU may be directed to the U.S. Department of Education's Office for Civil Rights or UVU's Title IX Coordinator at 801-863-7999 – <u>TitleIX@uvu.edu</u> – 800 W University Pkwy, Orem, 84058, Suite BA 203.

Religious Accommodation

UVU values and acknowledges the array of worldviews, faiths, and religions represented in our student body, and as such provides supportive accommodations for students. Religious belief or conscience broadly includes religious, non-religious, theistic, or non-theistic moral or ethical beliefs as well as participation in religious holidays, observances, or activities. Accommodations may include scheduling or due-date modifications or make-up assignments for missed class work.

To seek a religious accommodation, a student must provide written notice to the instructor and the Director of Accessibility Services at <u>accessibilityservices@uvu.edu</u>. If the accommodation relates to a scheduling conflict, the notice should include the date, time, and brief description of the difficulty posed by the conflict. Such requests should be made as soon as the student is aware of the prospective scheduling conflict.

While religious expression is welcome throughout campus, UVU also has a <u>specially dedicated</u> <u>space</u> for meditation, prayer, reflection, or other forms of religious expression.