

## Psychology 318 – Learning, Cognition, & Perception

Spring 2024

**Instructor:** Dr. Peter A. Krause ([peter.krause@csuci.edu](mailto:peter.krause@csuci.edu))  
**Office Hour:** Tu-Th 1:30-3:00 PM, Madera 1631  
& concurrently at <https://csuci.zoom.us/j/3028045588>  
**Lecture:** Tu-Th 10:00-11:50 AM, Sierra Hall 1422

### OVERVIEW AND AIMS

#### General:

Human beings have remarkable abilities to learn about, perceive, remember, and make inferences about their world. Philosophers going back at least to Classical antiquity have asked probing questions about how people create, store, retrieve, and manipulate mental representations, and of the exact relationship between mental representation and objective reality. Following the Behaviorists' development of rigorous behavioral measurement methods, and the advent of the digital computer, the modern discipline of cognitive psychology emerged circa 1962. The last ~50 years have seen a wealth of important findings about such diverse mental processes as visual object recognition, autobiographical memory, and speech production. This course takes as its subject a broad survey of these findings. It serves as an introduction to the major sub-disciplines of our exciting field, as well as a primer on *how* cognitive psychology, as a scientific enterprise, is done.

#### Catalog Description:

Four hours lecture per week. Prerequisite: PSY 100

Examines the ways that people learn, remember, and perceive. Basic learning and perceptual processes will be examined within an adaptive framework. The interaction between individual and environment will be examined in a variety of contexts including memory, reasoning, visual perception, speech, and language.

#### Learning Outcomes:

Upon completion of the course, the student will be able to:

- Discuss and apply knowledge of theories of learning, perception, and cognition
- Discuss and apply the results of research demonstrating key principles of learning, cognition and perception.
- Recognize and defend against common thinking fallacies and assumptions.
- Explain behavior, memory, reasoning, language and perception using appropriate theories or models.
- Use principles of learning, cognition and perception in problem solving.

## TEXTBOOK AND MATERIALS

### **Textbook:**

The textbook is **OPTIONAL** but **ENCOURAGED**. I have taught this course without a textbook in some semesters, and for some students that works well. Other students have asked if there is a book that is helpful. I originally built much of this course around the following:

Cognition (10<sup>th</sup> Edition), by Margaret W. Matlin & Thomas A. Farmer

### **Non-Textbook Optional Readings:**

Other **optional** readings will be taken from sources other than the assigned textbook. Some non-textbook readings will be supplied in PDF format on the course Canvas. Some readings in the sections on animal learning will also be taken from Human Learning and Memory by David A. Lieberman. This book is available for free, in electronic format, from the Broome Library website:

[https://csu-ci.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma997316503402903&context=L&vid=01CALS\\_UCI:JSBL&lang=en&search\\_scope=MyInst\\_and\\_CI&adaptor=Local%20Search%20Engine&tab=Everything&query=any,contains,human%20learning%20and%20memory%20lieberman&offset=0](https://csu-ci.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma997316503402903&context=L&vid=01CALS_UCI:JSBL&lang=en&search_scope=MyInst_and_CI&adaptor=Local%20Search%20Engine&tab=Everything&query=any,contains,human%20learning%20and%20memory%20lieberman&offset=0)

### **Homework Articles (required):**

Some homework assignments will require reading research reports from behavioral science periodicals. The relevant articles will be supplied online through the course Canvas portal.

### **Lecture Slides:**

Each lecture will be accompanied by a set of PowerPoint slides. You can find PDF copies of the slide decks in the Files>Lecture Slides folder of the Course Canvas. Slides will also be linked from the weekly module in the Modules section.

### **Canvas:**

This course uses a Canvas portal for announcements, resources such as homework readings and lecture slides, and grade reporting. If you have difficulty accessing the Canvas portal, please let me know immediately.

## EVALUATION

### Breakdown:

|   |     |
|---|-----|
| Weekly Quizzes (13, 2 dropped)                          | 30% |
| Final Paper (Research Proposal)                         | 15% |
| Cumulative Short-Answer Final                           | 15% |
| Homework Assignments (5)                                | 10% |
| Paper Rough Draft                                       | 10% |
| Annotated Study Guides                                  | 10% |
| Attendance  | 5%  |
| Meeting with Professor                                  | 2%  |
| Syllabus Quiz & Course Plan                             | 2%  |
| Learner Survey  | 1%  |
| Extra Credit for workshopping final<br>paper at the WMC | 1%  |
| EC for SONA Participation (1 hour)                      | 1%  |

### Quizzes:

At the beginning of each week, students will take a 7-item multiple-choice quiz about recent material online in Canvas. Quizzes will become available on Friday mornings at 9:00 AM and must be completed by Monday at 11:59 PM. Quizzes are timed, closed notes, and present questions and answers in a randomized order. Working together with other students on these quizzes is **not permitted**. Use of any reference materials besides your own memory is **not permitted**.

### Final Paper (Research Proposal):

Students will complete a 5- to 7-page (excluding reference list, title, etc.) research proposal which fleshes out the ideas explored in Homework 3 or Homework 4 (depending on which project they choose to develop). This proposal will not be carried out; the point is simply to think about what ideas must be accounted for when planning a research project. The proposal will begin by reviewing relevant literature (using the five references previously selected in Homework 5), and then describe the method and the predicted results. This paper is due in Finals Exam week (reference the Canvas and/or the schedule at the end of this syllabus for exact date and time). A detailed rubric, and two example papers, can be found on Canvas at Files>Paper Rubric.

### Cumulative Take-Home Short-Answer Final:

During Finals week, students will have two days to complete an online exam comprising several short-answer questions addressing material from throughout the *whole* course. A comprehensive study guide for material that may be tested is available on Canvas at Files>Short\_Answer\_Study\_Guide. Throughout the semester, students will be creating their own annotated version of this Study Guide (see below). As with the weekly quizzes, collaboration of any kind is **not permitted**. Students may complete the exam while referencing their annotated study guide, but all *other* reference materials, be they offline or online, are prohibited.

### Homework:

Written homework assignments will be periodically due in Canvas. Specific assignment prompts will be posted in the course Canvas portal. Taken together, the homework assignments provide a scaffold building toward the research proposal that serves as the final paper. The first two assignments will require the student to summarize and critique short journal articles, which will also be posted in Canvas. The prompts will specify the elements of the article on which to focus. The second two assignments will ask the student to imagine and briefly describe a hypothetical experiment for testing some prediction of a cognitive theory discussed in class. The final assignment will ask the student to select one of their two proposed experiments to serve as the basis for their final paper (see above). The assignment will require the student to identify five references from the research literature that they can use in the introduction to their final paper.

### Rough Draft:

Students will prepare a *complete* draft of their final paper to submit for my review, about two weeks before the due date of the final paper. This is *not* an outline or a second proposal, but a genuine attempt to write the paper through in its entirety. I will prepare individual qualitative feedback for each submission, intended to improve the quality of the final submission.

### Annotated Study Guides

You will be required to annotate the entirety of the Final Exam Study Guide, by supplying each key term or question in the guide with a short definition, description, or answer. This annotated guide will be turned in as *three chunks*, at periods throughout the semester. You will be permitted to use your annotations as notes when completing the take-home final.

### Attendance

I have found that students who drop off in attendance over the semester begin performing substantially worse in this course, and rapidly become at risk of stopping attending altogether, while also not turning in work. That being the case, this semester attendance at all class meetings is mandatory, enforced by a roll call at the beginning of class. I *do not* want you attending class sick, and I realize various unexpected but legitimate hardships may arise. Reach out to me directly for attendance forgiveness, preferably *before* the meeting you will miss. However, I reserve the right to stop forgiving attendance after 3 missed meetings.

### One-on-One Meeting with Professor Krause:

You will be required to meet with me individually, either in person or over Zoom, sometime *between weeks 2 and 7* of the course. These meetings will take place in my office or at my personal meeting ID: 302 804 5588 (<https://csuci.zoom.us/j/3028045588>). This meeting is intended to help normalize the idea of office hours, to ensure that we know each other, and to give me the opportunity to evaluate your needs and concerns. **To get credit for this meeting, you must expect it to take at least 10 minutes, and you *must* prepare at least one question or conversation topic. Failure to come prepared to our meeting will result in no credit being granted.** The meeting requirement can be satisfied by appearing at my regular office hour. If my office hour does not fit your schedule, you may schedule an outside appointment using this booking tool:

<https://outlook.office.com/bookwithme/user/6a389d85ce9749c0b2aa28041ce326df@csuci.edu/meetingtype/SVRwCe7HMUGxuT6WGxi68g2?anonymous&ep=mCardFromTile>.

### **Syllabus Quiz & Course Plan, Introductory Learner Survey:**

Prior to the second lecture, students will complete a short survey about who they are and what their learning needs are. Students will also complete a quiz about course policies, which also asks them to set intentions for how they will allocate time to studying for the course, and what study strategies they will use.

### **Extra Credit:**

Students may receive 1% extra credit if they provide documentation that they worked with the Writing and Multiliteracy Center on their Final Paper.

I will be placing this class in CSUCI's SONA participation pool. Students may receive up to 1% extra credit for participating in up to **three hours** of psychological research being conducted over SONA. SONA can be accessed at: <https://csuci.sona-systems.com/>. Your login id is the "stem" of your CSUCI email. If you are new to the system, a password will be generated early in the semester. Otherwise, your password is the same as in the past.

### **Final Letter Grades:**

|                 |  |
|-----------------|--|
| 97 - 100%       | A+   |
| 93 - 96%        | A  |
| 90 - 92%        | A-   |
| 87 - 89%        | B+   |
| 83 - 86%        | B  |
| 80 - 82%        | B-   |
| 77 - 79%        | C+   |
| <b>73 - 76%</b> | <b>C</b> Per Psych Dept. policy, this is the passing threshold! A C- <b>WON'T COUNT!</b> |
| 70 - 72%        | C-   |
| 67 - 69%        | D+   |
| 60 - 66%        | D  |
| <60%            | F  |

## **COURSE POLICIES**

### **Submission of Assignments:**

All course assignments are turned in electronically on Canvas.

I reserve the right to penalize late submissions by 10% for each day they are late, at my discretion. However, I am acutely aware of how difficult it has become, post-pandemic, to manage life responsibilities. If you reach out to me to ask for extensions, they will almost certainly be granted. **If you have allowed a due date to pass by, please do not let this deter you from reaching out after the fact.** The most important thing is that we connect and get on the same page.

### **Contingency Planning:**

If, due to instructor illness or other unforeseen circumstances, in-person meetings become impractical during some weeks, Zoom meetings or asynchronous pre-recorded videos may be substituted.

During the first week of courses, the California Faculty Association has called upon CSU Faculty to strike. I believe that the current contract negotiations may represent an important turning point for more equitable treatment of my peers who work as adjunct faculty in this system (“lecturers”). I will therefore be withholding my labor during the strike period, which runs from 1/22 through 1/26. During this period, I will not hold class or expect you to prepare. I will *not* be available via email and will not hold office hours. I will not post the course Canvas until the strike has ended. Our first lecture meeting will take place during the week of 1/29.

**EDIT as of 01/22:** The strike has just ended, and thus we are holding classes 01/23 and henceforth. Some adjustments to attendance and scheduling may still occur as needed.

### **Disability Accommodations:**

If you are a student with a disability requesting reasonable accommodations in this course, please visit Disability Accommodations and Support Services (DASS) located on the second floor of Arroyo Hall, or call 805-437-3331. All requests for reasonable accommodations require registration with DASS in advance of need. You can [apply for DASS services here](https://www.csuci.edu/dass/students/apply-for-services.htm): <https://www.csuci.edu/dass/students/apply-for-services.htm>. Faculty, students and DASS will work together regarding classroom accommodations. You are encouraged to discuss approved accommodations with your faculty.

### **Academic Dishonesty:**

By enrolling at CSU Channel Islands, students are responsible for upholding the University’s policies and the Student Conduct Code. Academic integrity and scholarship are values of the institution that ensure respect for the academic reputation of the University, students, faculty, and staff. Cheating, plagiarism, submitting AI generated content as one’s own work, unauthorized collaboration with another student, knowingly furnishing false information to the University, buying, selling or stealing any material for an examination, or substituting for another person may be considered violations of the Student Conduct Code (located at <http://www.csuci.edu/campuslife/student-conduct/academic-dishonesty.htm>). **If a student is found responsible for committing an act of academic dishonesty in this course, the student may receive academic penalties including a failing grade on an assignment or in the course, and a disciplinary referral will be made and submitted to the Dean of Students office.** For additional information, please see the faculty Academic Senate Policy on Academic Dishonesty, also in the CI Catalog. Please ask about my expectations regarding academic dishonesty in this course if they are unclear.

There are many subtle forms of plagiarism that are nonetheless grounds for disciplinary action. Lifting individual sentences from a pre-existing document is plagiarism. Lifting individual sentences and strategically changing two or three words is *still plagiarism*. Whether you are citing the paper in question is of no consequence. **Direct lifting of text is *always plagiarism*, even if the source is cited.** As noted in the updated honesty statement above, submitting AI generated content as one’s own work is also plagiarism, and for the moment tools exist to sniff

out the likelihood of generated text. Finally, self-plagiarism is a thing, and it is *still plagiarism*. Submitting a paper you wrote for another course, or trying to pass off a paper from this course in one of your other courses, is a violation of academic honesty. To keep things cut-and-dried, **I will never accept written work that directly quotes another source, even if that prior source is attributed. Cited sources must be paraphrased.**

## STUDENT SUPPORT

### Campus Tutoring Services:

You are encouraged to make regular use of campus tutors and/or peer study groups, beginning in the second week of the semester. For campus tutoring locations, subjects and hours, go to: <http://go.csuci.edu/tutoring>.

### Civil Discourse Statement:

All students, staff and faculty on our campus are expected to join in making our campus a safe space for communication and civil discourse. In 2016, CI faculty (through the Academic Senate) voted to approve [Resolution SR 16-01](#) titled, “Commitment to Equity, Inclusion, and Civil Discourse within our Diverse Campus Community.” If you are experiencing discomfort related to the language you are hearing or seeing on campus (in or out of classes), please talk with a trusted faculty or staff member. Similarly, please consider whether the language that you are using (in person or on canvas) respects the rights of others to “engage in informed discourse and express a diversity of opinions freely and in a civil manner.”

### Emergency Intervention and Basic Needs Statement:

As CI’s website points out, “a recent study commissioned by the CSU Chancellor’s Office shows that nearly 25 percent of CSU students either regularly skip meals for financial reasons or lack access to toiletries and sufficiently nutritious food options. In addition, more than 10 percent are displaced from their homes due to things like an unexpected loss in income or personal safety issues.” If you recognize yourself, or someone you know from this description, please know that there are resources on campus to help, including the Dolphin Food Pantry for students which offers free food, toiletries and basic necessities. The Dolphin Pantry is currently located in Arroyo Hall, Room 117 and is open Monday – Friday 8:30 – 4:30 (please check the website below for updates).

Emergency housing and funds are also available. More information on these, and other services available at CSUCI can be found at: <https://www.csuci.edu/basicneeds/>

[See next page for full course schedule]

## SCHEDULE (SUBJECT TO CHANGE)

**Note:** Readings are optional but encouraged. Readings from the hard-copy textbook (Matlin & Farmer) are given in the form “M&F Ch. X”. Readings from the electronic format textbook (David Lieberman) are given in the form “DL Ch. X”. Readings from the Course Canvas are named according to article authorship.

| Date  | Lecture Topic  | Optional Reading | Submissions Due                   |
|-------|--|------------------|-----------------------------------|
|       | <b>Prologue – Introduction to Cognition and Learning</b> |                  |                                   |
| 01/23 | Intro, Philosophy, Biology                               |                  |                                   |
| 01/25 | Classical Conditioning                                   | DL Ch. 2         |                                   |
|       | <b>Theme 1 – Perception</b>                              |                  |                                   |
| 01/30 | Low-Level Vision   |                  | Quiz 1, Learner survey            |
| 02/01 | LL Vision Cont’d   |                  |                                   |
| 02/06 | High-Level Vision  | M&F Ch. 2        | Quiz 2                            |
| 02/08 | HL Vision Cont’d   |                  |                                   |
| 02/13 | Basic Audition   |                  | Quiz 3                            |
| 02/15 | Speech Perception  | M&F Ch. 2        |                                   |
| 02/20 | Cutaneous Perception                                     |                  | Quiz 4, HW 1,                     |
| 02/22 | Chemical Perception                                      |                  |                                   |
|       | <b>Theme 2 - Cognition</b>                               |                  |                                   |
| 02/27 | Attention  | M&F Ch. 3        | Quiz 5, Annot. 1, Meeting w/Dr. K |
| 02/29 | Working Memory   | M&F Ch. 4        |                                   |
| 03/05 | WM Cont’d  |                  | Quiz 6, HW 2                      |
| 03/07 | Mental Imagery   | M&F Ch. 7        |                                   |
| 03/12 | Semantic Memory  | M&F Ch. 8        | Quiz 7                            |
| 03/14 | LTM Encoding   | M&F Ch. 5        |                                   |
| 03/19 | <b>Spring Break</b>                                      |                  |                                   |
| 03/21 | <b>Spring Break</b>                                      |                  |                                   |
| 03/26 | Language Processing                                      | M&F Ch. 9&10     | Quiz 8, HW 3                      |
| 03/28 | Language Cont’d  |                  |                                   |
| 04/02 | Problem Solving  | M&F Ch. 11       | Quiz 9                            |
| 04/04 | Decision Making  | M&F Ch. 12       |                                   |



|       |  |             |  |
|-------|--|-------------|--|
|       | <b>Theme 3 - Action</b>  |             |  |
| 04/09 | Embodied & Situated Cog  |             | Quiz 10, HW 4                                |
| 04/11 | Embodied & Situated Cont'd   |             |  |
| 04/16 | Radical Behaviorism  | DL Ch. 4    | Quiz 11, Annot. 2                            |
| 04/18 | Motor Planning & Control   |             |  |
|       | <b>Epilogue: Stepping Back from the Loop and Revisiting the Self</b> |             |  |
| 04/23 | Hierarchal Predictive Coding   | Clark, 2013 | Quiz 12, HW 5                                |
| 04/25 | Hierarchal Predictive Coding cont'd                                  |             |  |
| 04/30 | Who You Are (YouTube lecture by M. I. Spivey)                        |             | Quiz 13, Rough Draft                         |
| 05/02 | Final Exam Review 1  |             |  |
| 05/07 | OPTIONAL Bonus Lecture – Deep Learning                               |             | Quiz 14                                      |
| 05/09 | Final Exam Review 2  |             |  |
| 05/15 | <b>Final Work Due</b>  |             | Annot. 3,<br>Take-Home Final,<br>Final Paper |