Course Title: Cognitive Science (PSYC 3025)

Term: Summer 2024 (May 6 – August 3)

Meeting Format: Asynchronous Online

Instructor: Dr. Trenton Wirth

Contact Information: wirthtd@ucmail.uc.edu | Office Hours: By Appointment (In person availability Tuesdays & Thursdays)

Course Description:

A survey of foundational concepts and current controversies in the interdisciplinary field of cognitive science. Topics may include artificial intelligence, language, the links between perception and action, embodied cognition, predictive processing, and related topics. Students will analyze and evaluate theories in cognitive science, and explore how these theories may address contemporary debates.

Required Text:

- Clark, Andy. *Mindware*, 2nd edition.

Additional Readings:

- Supplemental readings and materials will be provided on the course website

Course Objectives:

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

- Explain the key concepts, theories, and debates within the field of cognitive science.
- Analyze and evaluate different perspectives within cognitive science.
- Discuss the implications of cognitive science research for understanding the mind, behavior, and technology development.
- Apply cognitive science concepts to contemporary issues.
- Develop strong presentation and critical thinking skills through oral presentations and peer review.

Assignments and Evaluation:

- **Discussion Board Engagement (40%)** (see detailed "Course Discussion Board" section below)
    - **Questions** (10%): Post insightful questions reflecting engagement with the readings.
    - **Voting** (5%): Vote on discussion topics that spark your interest.
    - **Reflections** (25%): Write focused reflections, responding to selected questions and incorporating discussion insights.
- **Reading Quizzes (20%)**
    - Short quiz on the readings for each week
- **Short Papers (20%)**
    - Two papers (approx. 1000 words) delving into chosen topics and arguing a position.
- **Final Exam (20%)**
    - A final exam consisting of a mixture of short answer and extended response questions.

Course Policies:

- **Late Work:** Late submissions will be penalized unless prior arrangements are made or if there are extenuating circumstances.
- **Academic Integrity:** Plagiarism and cheating will not be tolerated. Refer to the university's academic integrity policy.
- **Communication:** All class communication will happen via the course website and email. Check regularly.
- **Respectful Discussions:** Diverse perspectives are welcome. Engage in constructive, respectful discussions.

Course discussion board

The discussion board assignments have 3 steps. The first is to read the text(s) and listen to the lectures, then post questions online. The second is to read all the questions and "like" the questions you wish to explore further as a classroom community. The third is to write a reflection (1-2 page double spaced) on the text(s), questions, and class discussions from that week. The steps are broken down in detail below.

Step 1: Questions (10%)

Students will post at least *two* questions about the assigned readings and course lectures on that week's discussion board. Students should complete this by 11:59pm on Tuesday of the week assigned.

Step 2: Voting (5%)

Students should then read through all of the questions and quotes posted on this week's discussion board and decide which questions that they wish to explore further as a community. To do this, students should "like" the questions they find interesting. This will provide a ranking of questions that the class would like to discuss further. This will directly impact the content addressed in video chats posted by the Professor. Students should complete this by 11:59pm on Wednesday of the week assigned.

Step 3: Reflections (25%)

Once the class has explored a set of questions on Thursday, each student is responsible for taking some time to reflect upon the questions and discussions of the week. To do this, each student should pick a question from the discussion board, copy it into a Word document and attempt to answer the question, or reflect on it. If the post was a thought or a position, the reflect can be an argued response to the thought/position. This may entail quoting from the assigned text(s) or referencing outside sources. It may even entail asking new questions or reflecting upon how others discussed the question. Each student should clearly credit the author(s) of the questions they are reflecting upon. The answer should be approximately 1-2 paged double spaced (500-1000 words), 12 point Arial Font. Students should complete this by 11:59pm on Sunday of the week assigned. *This is an assignment that is separate from the discussion board*.

Short Papers

Students will write two short papers (approx. 1000 words) on topics of their choosing **related to the course material**. The papers should be well-argued and supported by evidence from the readings and other sources. The first paper will be due at the end of week 5, and the second paper will be due at the end of week 11.

Tentative Schedule

Week	Topic	Readings	Assignments Due
1	Introduction to Cognitive Science	Syllabus, Clark Ch 1, Appendix A	Syllabus Quiz
2	Mind as Computation	Clark Ch 2, 3	Reading Quiz 1
3	Connectionism	Clark Ch 4	Reading Quiz 2, Discussion Board (Q, V, R)
4	Real Brains & Embodiment	Clark Ch 5, 6	Reading Quiz 3
5	Ecological Approach	Additional Reading (Prof Provided)	Short Paper 1, Reading Quiz 4

Week	Topic	Readings	Assignments Due
6	Dynamic Systems	Clark Ch 7, Chemero 2 (reserve)	Reading Quiz 5, Discussion Board (Q, V, R)
7	Cognitive Technology	Clark Ch 8	Reading Quiz 6
8	Extended Mind	Clark Ch 9, Additional Reading (Prof Provided)	Reading Quiz 7, Discussion Board (Q, V, R)
9	Enaction	Clark Ch 10	Reading Quiz 8
10	Predictive Processing	Clark Ch 11	Reading Quiz 9, Discussion Board (Q, V, R)
11	Course Review/Presentations	Clark Ch 12	Short Paper 2, Reading Quiz 10
12	Final Exam		Final Exam

Note: This schedule is subject to change. Updates will be posted on the course Canvas page.

Let me know if you want to explore further variations or refinements to this schedule!