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Office/Lab: Olmsted Hall 301
Hours: MWF 1:00-1:50; 3:00-3:50
Course Info: MWF 2:00pm, SB 271
TI: Chris Graham (cg134@evansville.edu)

Course Description

This course will introduce basic concepts, issues and methodologies associated with the interdisciplinary study of human cognition. Specific topics will include (among others) mind, memory, perception, intelligence, and consciousness. We will also examine some elementary neuroscience, agent-environment relations, robotics and other efforts to model human intelligence using machines. Insights will be appropriately drawn from several fields, including anthropology, artificial intelligence, biology, linguistics, neuroscience, philosophy, psychology and robotics. Students should note from the start that this is not a science course in the conventional sense, but a preliminary preparation for the scientific study of cognition.

This course is offered for general education credit as a three-hour non-lab science option. However, it also serves as a requirement for majors and minors in cognitive science and majors in psychology and will be taught accordingly.

Required Text


Assignments

Each student will be required to read all of the assignments, participate in class discussion and take six exams, including a cumulative final.

Grading

- 7.5% Exam 1
- 7.5% Exam 2
- 15% Exam 3
- 15% Exam 4
- 10% Exam 5
- 30% Final Exam
- 15% Course Participation

Policies and “Rules”

It would be a wonderful world, if classrooms could run without rules, but experience has repeatedly taught me that they are necessary. The following stem primarily, but not exclusively, from two sources. The first is a matter of maintaining respect for honest students with a genuine desire to know. Being fair makes it imperative that they have every opportunity to learn and that they are not lost among the students who take a class only to meet a requirement and who, as a consequence, may only be looking for the highest grade in exchange for the least amount of learning.

The second is to help me maintain my concentration in the classroom. Most of my difficulty with this latter issue derives from the fact that class lecture is a form of conversation. Once I perceive that my interlocu-
tor is no longer listening, my priority automatically shifts from delivering a message to re-establishing contact, and I lose my train of thought. One student in a class can easily throw me off.

It is my hope that the following will respond adequately to these issues and that we will be able to conduct class at a level befitting an institution of higher learning. (In other words, we’re not in high school anymore!)

**Academic Honesty**

All work submitted in this course must be prepared by the student expressly for this course. A student who submits work that is plagiarized, bought, borrowed from the archives of a fraternity, copied from another student, etc., will fail the course. (If you don’t believe me, ask around.) I fully support the University’s Academic Honor Code. To avoid confusion, students should keep in mind that plagiarism occurs not only when someone copies an author word for word, but also when someone uses another’s ideas without giving credit, even if the ideas are paraphrased. Always document your sources!

**Attendance Policy**

I do not have an attendance policy per se. However, this course is structured in such a way that students who do not show up regularly may (will?) have trouble passing it. After all, it is difficult to participate if you’re not present, and I frequently test on material that is not in the reading. (Since I do not have an attendance policy, there is no reason to send excuses for missing class, whether by email or by phone. Your reasons for missing class are private and do not concern me. Please, in other words, keep them to yourselves.)

**Course Participation**

Course participation grades are not automatic. They are based on oral contributions to the collective learning experience of the class as a whole in terms of asking pertinent questions, answering questions correctly or, at least, provocatively, making insightful observations, and offering other meaningful expressions of interest in the material that help encourage learning. I begin by assuming a C for each student’s course participation grade and move from there. Students should realize that it is possible to talk a lot in class and receive a low grade for course participation.

**Electronic Technology in the Classroom (Cell Phones, Laptops, Etc.)**

The use of laptops, cell phones, gaming devices and other electronic contraptions is not permitted in class. Students caught using them will be asked to leave. (You can wear a watch, if you must, but please don’t sit staring at it during my lectures.)

**Email / Office Hours**

I do not read my UE email at home and, as a consequence, I will only answer student email during my scheduled office hours. Even then, I am not apt to sustain long, academic dialogues in this forum. (For extended discussion, please come visit me in person. Office hours are posted above.) Furthermore, during office hours, I will defer to students who show up in person, and this means that I may not be able to answer your email in the short term. In addition to the office hours listed above, I am available by appointment, either in person or by Skype.

**Food in the Classroom**

No eating in class.
Packing Up to Go

Often the most critical minutes in a class session are the last five, where conclusions are drawn and assignments are made. Please do not start to pack up your belongings before the end of class.

Stay at Home Policy

I easily lose focus when students aren’t paying attention, whether because they are talking to each other, passing notes, studying for another class, etc. If you do not wish to pay attention, please take advantage of my lack of an attendance policy and stay at home. After all, you get nothing for just showing up without paying attention, and I’m probably going to dock your participation grade just the same as if you had stayed at home.

Cogs 111 Calendar

Part 1: Historical landmarks (Bermúdez 3 – 85)

Week 1: January 9th – Bermúdez, Chapter 1: The prehistory of cognitive science
   January 9th – Syllabus Review / Introduction to Course
   January 11th – Class Lecture / Discussion
   January 13th – Class Lecture / Discussion

Week 2: January 16th – Bermúdez, Chapter 2: The discipline matures: Three milestones
   January 16th – MLK Day / No Class
   January 18th – Class Lecture / Discussion
   January 20th – Class Lecture / Discussion

Week 3: January 23rd – Bermúdez, Chapter 3: The turn to the brain
   January 23rd – Class Lecture / Discussion
   January 25th – Class Lecture / Discussion
   January 27th – First Exam – (Chapters 1 – 3)

Part II: The integration challenge (Bermúdez 86 – 141)

Week 4: January 30th – Bermúdez, Chapter 4: Cognitive science and the integration challenge
   January 30th – Class Lecture / Discussion
   February 1st – Class Lecture / Discussion
   February 3rd – Class Lecture / Discussion

Week 5: February 6th – Bermúdez, Chapter 5: Tackling the integration challenge
   February 6th – Class Lecture / Discussion
February 8\textsuperscript{th} – Crick Lecture, “Mechanisms of Sexually Dimorphic Estradiol Neuroprotection.” Dr. Damani N. Bryant, (Oregon Health & Science University) / Class will meet at 4:00 instead of our regularly scheduled time in KC 100.

February 10\textsuperscript{th} – Second Exam – (Chapters 4 – 5)

Part III: Information-processing models of the mind (Bermúdez 142 – 283)

Week 6: February 13\textsuperscript{th} – Bermúdez, Chapter 6: Physical symbol systems and the language of thought

February 13\textsuperscript{th} – Class Lecture / Discussion
February 15\textsuperscript{th} – Class Lecture / Discussion
February 17\textsuperscript{th} – Class Lecture / Discussion

Week 7: February 20\textsuperscript{th} – Bermúdez, Chapter 7: Applying the symbolic paradigm

February 20\textsuperscript{th} – Class Lecture / Discussion
February 22\textsuperscript{nd} – Class Lecture / Discussion
February 24\textsuperscript{th} – Class Lecture / Discussion

Week 8: February 27\textsuperscript{th} – Bermúdez, Chapter 8: Neural networks and distributed information processing

February 27\textsuperscript{th} – Class Lecture / Discussion
February 29\textsuperscript{th} – Class Lecture / Discussion
March 2\textsuperscript{nd} – Class Lecture / Discussion

Week 9: March 5\textsuperscript{th} – Spring Break

Week 10: March 12\textsuperscript{th} – Bermúdez, Chapter 9: Neural network models of cognitive processes

March 12\textsuperscript{th} – Class Lecture / Discussion
March 14\textsuperscript{th} – Class Lecture / Discussion
March 16\textsuperscript{th} – Third Exam – (Chapters 6 – 9)

Part IV: The organization of the mind (Bermúdez 284 – 409)

Week 11: March 19\textsuperscript{th} – Bermúdez, Chapter 10: How are cognitive systems organized?

March 19\textsuperscript{th} – Class Lecture / Discussion
March 21\textsuperscript{st} – Class Lecture / Discussion
March 23\textsuperscript{rd} – Class Lecture / Discussion

Week 12: March 26\textsuperscript{th} – Bermúdez, Chapter 11: Strategies for brain mapping
March 26th – Class Lecture / Discussion
March 28th – Class Lecture / Discussion
March 30th – Class Lecture / Discussion

Week 13: April 2nd – Bermúdez, Chapter 12: A case study: Exploring mindreading

April 2nd – Class Lecture / Discussion
April 4th – Fourth Exam – (Chapters 10 – 12)
April 6th – Easter Break / No Classes

Part V: New horizons (Bermúdez 410 – 462)

Week 14: April 9th – Bermúdez, Chapter 13: New horizons: Dynamical systems and situated cognition

April 9th – Class Lecture / Discussion
April 11th – “Complexity and Cognition: Circuits Not Software.” Dr. Anthony Beavers / Class will meet at 4:00 instead of our regularly scheduled time in KC 100.
April 13th – Class Lecture / Discussion

Week 15: April 18th – Bermúdez, Chapter 14: Looking ahead: Challenges and applications

April 16th – Class Lecture / Discussion
April 18th – Class Lecture / Discussion
April 20th – Class Lecture / Discussion

Week 16: April 23rd

April 23rd – Fifth Exam – (Chapters 13 – 14)

Final Exam

Tuesday, May 1st, 2:45-4:45 (Cumulative)