Cogs 111: Introduction to Cognitive Science
Fall 2011 Syllabus

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Hours: M&F 11:00-11:50; MWF 1:00-1:50 and by appointment
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Course Info: MWF 12:00pm, SB 271

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 interlocutor 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 any more!)

**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: Bermúdez, Chapter 1: The prehistory of cognitive science

August 24 – Syllabus Review / Introduction to Course
August 26 – Class Lecture / Discussion

Week 2: Bermúdez, Chapter 2: The discipline matures: Three milestones

August 29 – Class Lecture / Discussion
August 31 – Class Lecture / Discussion
September 2 – Class Lecture / Discussion

Week 3: Bermúdez, Chapter 3: The turn to the brain

September 5 – Class Lecture / Discussion
September 7 – Crick Lecture 4pm in KC 100; No 2pm class.
September 9 – First Exam – (Chapters 1 – 3)

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

Week 4: Bermúdez, Chapter 4: Cognitive science and the integration challenge

September 12 – Class Lecture / Discussion
September 14 – Class Lecture / Discussion
September 16 – Class Lecture / Discussion

Week 5: Bermúdez, Chapter 5: Tackling the integration challenge

September 19 – Class Lecture / Discussion
September 21 – Class Lecture / Discussion
September 23 – Second Exam – (Chapters 4 – 5)
Part III: Information-processing models of the mind (Bermúdez 142 – 283)

Week 6: Bermúdez, Chapter 6: Physical symbol systems and the language of thought

September 26 – Class Lecture / Discussion
September 28 – Class Lecture / Discussion
September 30 – Class Lecture / Discussion

Week 7: Bermúdez, Chapter 7: Applying the symbolic paradigm

October 3 – No class
October 5 – Class Lecture / Discussion
October 7 – Class Lecture / Discussion

Week 8: Bermúdez, Chapter 8: Neural networks and distributed information processing

October 10 – Fall Break / No Class
October 12 – Class Lecture / Discussion
October 14 – Class Lecture / Discussion

Week 9: Bermúdez, Chapter 9: Neural network models of cognitive processes

October 17 – Class Lecture / Discussion
October 19 – Class Lecture / Discussion
October 21 – Third Exam – (Chapters 6 – 9)

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

Week 10: Bermúdez, Chapter 10: How are cognitive systems organized?

October 24 – Class Lecture / Discussion
October 26 – Class Lecture / Discussion
October 28 – Class Lecture / Discussion

Week 11: Bermúdez, Chapter 11: Strategies for brain mapping

October 31 – Class Lecture / Discussion
November 2 – Class Lecture / Discussion
November 4 – Class Lecture / Discussion

Week 12: Bermúdez, Chapter 12: A case study: Exploring mindreading

November 7 – Class Lecture / Discussion
November 9 – Crick Lecture 4pm in KC 100; No 2pm class.

November 11 – **Fourth Exam – (Chapters 10 – 12)**

**Part V: New horizons** (Bermúdez 410 – 462)

*Week 13: Bermúdez, Chapter 13: New horizons: Dynamical systems and situated cognition*

- November 14 – Class Lecture / Discussion
- November 16 – Class Lecture / Discussion
- November 18 – Class Lecture / Discussion

*Week 14: Bermúdez, Chapter 14: Looking ahead: Challenges and applications*

- November 21 – Class Lecture / Discussion
- November 23 – **Thanksgiving Break / No Classes**
- November 25 – **Thanksgiving Break / No Classes**

*Week 15: Exam and Discussion*

- November 28 – **Fifth Exam – (Chapters 13 – 14)**
- November 30 – Course Discussion
- December 2 – Course Discussion

*Week 16: Discussion and Review*

- December 5 – Course Review

**Final Exam**

*Friday, December 9th, 12:30 – 2:30*