This course will introduce a variety of issues of interest to cognitive scientists who study people's tutored and untutored reasoning and thinking skills. We will begin by examining skill in well-defined reasoning endeavors, and explore relationships between formal reasoning and everyday reasoning. Later we will turn our attention to decision making, both with laboratory tasks and in the real world. I hope to get you to think carefully about what it means to reason effectively, and to explore your own reasoning strengths and weaknesses. This course counts toward the cognitive science concentration and special major, and also toward the cognitive component of the psychology major.

Course requirements include two midterms, two short papers, a final essay, very short reports of group discussions, as well as occasional “laboratory assignments” where you will be asked to write about examples of reasoning and decision-making from your own experience. The two short papers will consist of writeups of a description of another person’s reasoning or decision-making. They will each be about 5-7 pages in length. There will be no final examination. The weights of the assignments are roughly the following: each midterm, 20%; each short paper, 20%; final essay, 10%. Group discussion reports, 10%. Grades are subject to adjustment based on regular, thoughtful class participation and for completing laboratory work in a timely and thorough way. Due dates for all assignments are provided on the attached schedule. You are expected to take note of them and to plan your work accordingly. Late work (especially late papers) will be penalized unless I hear from your class dean.

Readings for the course come from a variety of sources. The required texts are: Halpern, *Thought and knowledge (5th ed)*, and Kahneman, *Thinking, fast and slow*. You might also want to purchase your own copy of Perkins, *The mind's best work*, as we will read a good amount of that book in a very short time. Other readings are on ereserve.

Note that the reading load varies from week to week, and try to plan ahead. No additional outside reading will be required for the papers, although I assume you will incorporate relevant readings from the syllabus as appropriate.
This course is always an enjoyable one to teach, and I hope you'll come to find many of the topics enjoyable, too. I'll be announcing office hours shortly, and hope you'll come by to talk about topics related (or even unrelated!) to the course.

Tentative* schedule of topics and assignments
(*we may make changes in the schedule as the term progresses)

Date Topic and Assignment

M 1/5 Introduction and overview; the cases of The Missing Jam and Aunt Sarah

W 1/7 Historical approaches to modeling thinking
Read: Halpern, ch. 1

F 1/9 Thinking in the context of other cognitive processes
Read: Halpern, chs. 2, 3

M 1/12 Propositional and syllogistic reasoning
Read: Halpern, ch. 4

W 1/14 Analyzing arguments
Read: Halpern, ch. 5
First paper assigned

F 1/16 Methods of studying thinking
Read: Ericsson [ER]; Perkins (1981, p. 24-40) [ER]

M 1/19 Analogical and other formal inductive reasoning tasks.
Read: Sternberg [ER]

W 1/21 Catch-up day

F 1/23 Hypothesis formation, testing and evaluation
Read: Halpern, ch. 6 Wason [ER]

**First Paper Due**
M 1/26  Creative thinking: The mind's best work?  
Read: Halpern, ch. 10; Perkins (1981) 41-161 [rest of book is worth skimming] [ER]

W 1/28 Discussion: Studying everyday thinking  
Read: Perkins 1985 [ER]; Stanovich, West, & Toplak [ER]

F 1/30  Overview of decision-making  
Read: Halpern, chs. 7, 8

M 2/2  **First Midterm**

W 2/4  Two systems of thinking  
Read: Kahneman, Part 1, p. 3-104

F 2/6  Catch up day

M 2/9  Midterm break! You may have the day off. (You are most welcome).

W 2/11  Heuristics and biases in decision making  
Read: Kahneman, Part II, p. 109-195

F 2/13  Structuring a decision and making a final choice: Expected utility theory  
Read: Galotti [ER], Galotti, Wiener & Tandler [ER]  
Second paper assigned

M 2/16  Overconfidence in decision making  
Read: Kahneman, Part III  p. 199-265

W 2/18  Discussion: Using our heads, using our hearts  
Read: Kleinmuntz [ER], Eastwood, Snook, & Luther [ER]

F 2/20  Prospect Theory  
Read: Kahneman, Part IV, p. 269-374
M 2/23  Narrative-Based Decision Theory
Read: Beach [ER]

W 2/25  Two Selves
Read:  Kahneman, Part V, p. 377-418

F 2/27  Catch up day
Second Paper Due

M 3/2  Expertise and decision making
Read: Klein [ER] ch. 1-4

W 3/4  Making moral and ethical decisions
Read: Shumaker & Heckel, ch. 1 [ER] Paxton & Greene [ER]

F 3/6  Discussion: Can people articulate their thinking/decision-making processes?
Read: Fischhoff [ER]
Final essay assigned

M 3/9  Individual differences in decision-making
Read: Galotti, Tandler & Wiener [ER]

W 3/11 Second Midterm

M 3/16 (9 p.m.) Final Essays Due
(hard copies only to my mailbox) {early submissions welcomed!}
Bibliography

Texts:


Other Course Readings: (copies on ereserve at main libe)


