

PSYCHOLOGY B57S

Winter 2002

Class: Mon 3:00-5:00 (S-309)
Wed 4:00-5:00 (S-319)

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or by appointment

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Textbook: *Cognition: Exploring the Science of the Mind* (2nd edition)
by Daniel Reisberg

Course Overview

This course is designed to survey the research in experimental psychology relevant to how we make sense of the world around us. This will be accomplished in the framework of modern cognitive psychology—the information processing approach to memory and thought. The plan is to work gradually through the processing system, beginning with how we extract information from the environment, continuing through how we learn and remember information, then examining how knowledge is organized, and concluding with how we make intelligent use of information in such complex tasks as decision making and problem solving. Along the way, research on cognitive disorders and practical issues will be raised.

Although the focus will be on the role of the memory system in information processing, topics will also include attention, imagery, language, categorization and creativity, among others. It is probably impossible to construct an overarching theory of cognition at this time, but the goal is to provide a broad understanding of human thought, and an appreciation of the domain of cognition. Toward that end, the role of controlled, laboratory-based psychological experimentation will be emphasized as one way to answer questions about the operation of mind.

Course Evaluation

The lectures and textbook are intended to complement each other, but they are far from perfectly overlapping. Because topics will be covered in lectures that are not included in the text (and vice versa), it is a poor idea to miss any lectures. There is a good deal of material to cover so falling behind is not recommended. It is for this reason that the syllabus suggests when to read each chapter in the text. Keeping up with readings has the added advantage of allowing you to clarify as you go anything that you do not understand.

There are three evaluative mechanisms in this course:

1. **First Exam** – Following Reading Week, there will be a test covering the first 6 weeks of lectures and the corresponding book chapters (Chapters 1, 3-7, and 11; note that Chapter 2 will never be covered or tested). There will be 40 multiple-choice questions (each with four alternatives). The exam is designed as a one-hour test, but will be given in a 2-hour time slot to remove time pressure. All questions will have an equal weight and there will be no penalty for guessing, so do not leave blanks. This exam will be worth 35% of the final grade. **This exam will take place on Wednesday, March 6, 5:00-7:00 PM.**
2. **Second Exam** – The second exam will cover the second 6 weeks of lectures and the corresponding book chapters (Chapters 8-10 and 12-15). This exam will be *non-cumulative*, and will have a format identical to the first exam. It will also be worth 35% of the final grade. **This exam will take place on a yet-to-be-determined date during the final exam period in April.**
3. **Research Paper** – In the second week of class, you will each purchase an article taken from a journal in the area of cognitive psychology. You will be expected to read the article and to become familiar with the research in it. Ultimately, you will write a research paper based on your article, and that paper will be worth 30%. **This paper is due on Monday, April 1 at 3:00 PM (i.e., before class).** It will consist of the following two components:
 - a) **Summary.** You should write a summary of your article, indicating the goal of the research, the design of the experiments, the principal results, and how these results were interpreted theoretically. This should be not more than two typed, double-spaced pages. It should be clearly written in normal prose (i.e., not "point form").
 - b) **Extension.** Using your own ideas, you should suggest one way in which the research in your article might be extended in a meaningful way. Provide sufficient methodological and theoretical detail for a good understanding of the experiment you propose. This should be a principled and substantive proposal, taking no more than two pages.

The final product will be a 4-page paper, typed with 1½-inch margins and *double-spaced* (not 1½ spaced or some other variation). Type font must not be smaller than 12-pitch elite. *Papers in any other format will not be accepted.* Where references are made to other articles, these should be cited using APA format (see any journal reference section) at the end of the paper. [Note, however, that this paper is meant to be a self-contained task, and use of reference material is not required.] A title page with a brief descriptive title of your own creation should be the first page of your submission. This title page should also clearly indicate the number circled on the first page of the journal article that you purchased. Please also hand in the journal article. You are also responsible for keeping a copy of the final version of your paper.

Writing style is important. Please write clearly and concisely in the manner of a journal article. This is difficult to do, and you are strongly encouraged to do at least two drafts of the paper before you type it, so leaving it until the last minute is a really bad idea. Writing can be thought of as worth 5 points of the total of 30-point value of this paper. Please be aware that plagiarism (representing the work of someone else as your own, whether their ideas or their words) will result in a mark of zero on this assignment.

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Winter 2002 Syllabus

WEEK	Monday (3-4)	Monday (4-5)	Wednesday (4-5)	READINGS
Jan 7-11	Introduction	History of Cognition	Information Processing	Chapter 1
Jan 14-18	Sensory Store	Iconic & Echoic Memory	Pattern Recognition	Chapter 3
Jan 21-25	Attention: Bottleneck	Attention: Capacity	Automaticity & Arousal	Chapter 4
Jan 28 – Feb 1	Working Memory	WM: Encoding & Capacity	WM: Retrieval & Forgetting	Chapter 5
Feb 4-8	Long-Term Memory	LTM: Encoding & Capacity	LTM: Retrieval & Forgetting	Chapter 6
Feb 11-15	Elaboration & Learning	Transfer Appropriate Processing	Imagery & Pictures	Chapters 7 & 11
Feb 18-22	<i>READING WEEK</i>	<i>READING WEEK</i>	<i>READING WEEK</i>	STUDY!!
Feb 25 – Mar 1	Semantic Organization	Semantic Networks	Text & Schemata	Chapter 8
Mar 4-8	Comprehension	Language	Reconstructive Memory	Chapter 10
Mar 11-15	Concept Identification	Prototypes & Features	Judgment	Chapters 9 & 12
Mar 18-22	Decision Making	Problem Representation	Intelligence & Creativity	Chapters 13 & 14
Mar 25-29	Thinking	Consciousness	Cognitive Neuroscience	Chapter 15
Apr 1-5	Practical Cognition	Drug Effects	The Big Picture	PAPER DUE!!