

PSYB57S - Memory and Cognition**Spring, 1997**

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Office: S-421A; 287-7439
Office Hours: Tuesday 2:00-4:00 or by appointment

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Office Hours: T.B.A.

Class Meetings: 1:00-2:00 Tuesday in S-309
1:00-3:00 Thursday in S-309

Textbook: *Cognition: Exploring the Science of the Mind*, by Daniel Reisberg

Course Overview

This course is designed to survey the research in cognitive psychology relevant to how we make sense of the world around us. The plan is to work gradually through the information processing system, beginning with how we extract information from the environment, continuing through how we attend to and remember information, 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 will be used to illustrate what can go wrong with basic cognitive processes, and practical issues also will be considered.

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, amongst 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.

General Comments

1. Please be on time for class -- we will start at 1:08 p.m. There will be a break at half-time on Thursday, but you should plan on lectures lasting right until 2:00 (or 3.00) p.m.
2. Absolute grades are not important in this course. Final grades will be based on relative performance with respect to the rest of the class.
3. Please feel free to visit the T.A. and/or me in our office hours, especially early in the term when it is quieter. Students tend not to take advantage of the assistance we can offer. We actually like visitors!

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 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. The syllabus suggests when to read each chapter in the text; keeping up with readings also allows you to clarify anything you do not understand as you go.

There are three evaluative mechanisms in this course:

1. **First Exam**—During the week following Reading Week (February 24-28), there will be a test covering the first six weeks of lectures and the corresponding book chapters (this may be either in class on Thursday or in an evening exam slot). There will be 40 multiple-choice questions (each with four alternatives). The exam is designed as a one-hour test, but you will be given two hours, 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.
2. **Second Exam**—During the final exam period, there will be a test covering the second 7 weeks of lectures and the corresponding book chapters. 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.
3. **Research Paper**—In the second week of class, you will each be given an article taken from a journal in one of the areas of cognitive psychology. Read it and become familiar with the research. Ultimately, you will write a paper with the following two components:
 - a) **Summary.** You should write a summary of your article, indicating what the goal of the research was, what the design of the experiments was, what the results were, and how these results were interpreted theoretically. This should be not more than two type-written, **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 possible way that 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 1.5-inch margins and *double-spaced* (not 1 ½ spaced). 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 your article. 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 the final one. Writing can be thought of as worth 15% of this project, or 5 of the 30-point total.

Feel free to discuss your ideas with others, including fellow students. You should also feel free to come and discuss your ideas with us, but keep in mind that things get very busy near the end of the term, so it is better to get started on this before the last minute. Ultimately, though, the paper should represent only your own work. You have had *fair warning*—this project is due at the beginning of class (i.e., 1:00 p.m.) on Tuesday, April 8. When you hand it in, please do not put it in any kind of folder or cover; simply staple in the upper left hand corner, attaching the article itself. Also attach a blank page at the back for comments. You are required to keep a photocopy (or disk copy) of the final submitted paper; in case of mishap, we will simply ask you for that copy. Any loss is *your* responsibility. You should not anticipate an extension.

Reference Information

The following is a list of the major journals in the field, which may help you when you are working on your papers. These are not required; they are here for your information. If the going gets rough, feel free to consult with us about anything that you do not understand.

Cognitive Psychology

Cognitive Science

Journal of Experimental Psychology: General

Journal of Experimental Psychology: Learning, Memory, and Cognition

Journal of Experimental Psychology: Human Perception and Performance

Journal of Memory and Language

Memory & Cognition

Perception & Psychophysics

Consciousness & Cognition

Psychonomic Bulletin & Review

Psychological Bulletin

Psychological Review

Psychological Science

Quarterly Journal of Experimental Psychology

PSYB57S—SYLLABUS 1997

Week & Dates	Text Readings	Lecture Topic and Issues to be Discussed
1 Jan. 6 - Jan. 10	Chap. 1	Introduction to the Course; Origins and History of Cognitive Psychology; The Information Processing System; Research Methods for Studying Cognition
2 Jan. 13 - Jan. 17	Chap. 2	Pattern Recognition & Sensory Stores; Iconic and Echoic Memory; Template, Feature & Structural Theories; Bottom-up vs. Top-down; Word Recognition and Reading
3 Jan. 20 - Jan. 24	Chap. 3	Attention, Capacity, and Consciousness; Bottleneck Theories; Capacity Theories; Automatic vs. Controlled Processing; Arousal and Control
4 Jan. 27 - Jan. 31	Chap. 4	Working (Short-term) Memory; Encoding; Organization, Memorization, and Learning
5 Feb. 3 - Feb. 7	Chap. 5	Long-Term Memory (Episodic Information); Types of Memory Tests; Implicit vs. Explicit Memory; Semantic vs. Episodic Memory
6 Feb. 10 - Feb. 14	Chap. 7	Associative Networks in Long-term Memory; Activation and Priming; Connectionist Models
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Feb. 17-21	Review	Reading/Skiing/Tanning Week
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7 Feb. 24 - Feb. 28	Chap. 6	Very Long-term Memory; Distortions of Memory; "Real World" Memory
8 Mar. 3 - Mar. 7	Chap. 8	Semantic Memory; Prototypes, Exemplars, and Categories; Scripts and Schemata

9 Mar. 10 - Mar. 14	Chap. 10	Long-term Visual Memory; Memory for Pictures; Imagery; Processing Strategies
10 Mar. 17 - Mar. 21	Chap. 9	Language and Psycholinguistics; Grammatical Structure; Comprehension Processes; Inferences and Sentence Memory; Language Disorders
11 Mar. 24 - Mar. 28	Chap. 11 & Chap. 14	Judgment; Cognitive Heuristics Introspection; Consciousness
12 Mar 31 - Apr. 4	Chap. 12	Reasoning; Logic; Decision Making
13 Apr. 7 - Apr. 11	Chap. 13	Problem Solving; Mental Set; Creativity; Intelligence
