Professor:	Andrew Portal
Office:	S-559; 287-7548
Office Hours:	Tuesday 2:30 - 3:30 or by appointment
Teaching Assistants:	Penny MacDonald, Nicholas Smith
Office:	T.B.A.
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* (4th ed.), by Margaret W. Matlin

Course Overview

This course is designed to survey the research in human experimental 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 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.

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 anything you do not understand as you go.

There are three evaluative mechanisms in this course:

1. **First Exam** -- On *Saturday, February 28, from 9-11 in the morning*, there will be a test covering the first six weeks of lectures and the corresponding book chapters. There will be 50 multiple-choice questions (1 point each). 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 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, 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 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 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 1 1/2 inch margins and *double*-spaced (not 1 1/2 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 you type it.

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. You have had *fair warning* -- this project is due at the **beginning** of class on *Tuesday, April 7 at 1:00 p.m.* 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. The paper is worth 30% of your final course grade.

General Comments

1. Please be on time for class -- we will start at 1:10 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 TAs and me in our office hours, especially early in the term. Students tend not to take advantage of the assistance we can offer.

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 (until 1974)
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Learning, Memory, and Cognition
    (formerly *Journal of Experimental Psychology: Human Learning and Memory*)
Journal of Experimental Psychology: Human Perception and Performance
Journal of Memory and Language
    (formerly *Journal of Verbal Learning and Verbal Behavior*)
Memory and Cognition
Perception and Psychophysics
Psychological Bulletin
Psychological Review
Psychological Science
Quarterly Journal of Experimental Psychology

SYLLABUS 1997

Week & Dates	Text Readings	Lecture Topic and Issues Likely to be Discussed
1 Jan. 5 - Jan. 9	Chap. 1 & Chap. 3	Introduction to the Course; Origins and History of Cognitive Psychology; The Information Processing System; The Atkinson-Shiffrin Model
2 Jan. 12 - Jan. 16	Chap. 2 & Chap. 4	Pattern Recognition & Sensory Stores: Iconic and Echoic Memory; Template, Feature & Structural Theories; Bottom-up vs. Top-down; Word Recognition and Reading
3 Jan. 19 - Jan. 23	Chap. 2	Attention, Capacity, and Consciousness: Bottleneck Theories; Capacity Theories; Automatic vs. Controlled Processing; Arousal and Control
4 Jan. 26 - Jan. 30	Chap. 4	Short-term Memory (Working Memory): Encoding, Capacity, Duration, Retrieval and Forgetting;
5 Feb. 2 - Feb. 6	Chap. 5	Long-Term Memory (Episodic Information): Encoding, Capacity, Duration, Retrieval and Forgetting
6 Feb. 9 - Feb. 13	Chap. 3	Other Models of Memory: The Levels of Processing Approach; The Parallel Distributed Processing (PDP) Approach
Feb. 16-20	Review	**Reading**/Skiing/Tanning Week
7 Feb. 23 - Feb. 27	Review	

Midterm Exam - Saturday, February 28, 9-11.

Week & Dates	Text Readings	Lecture Topic and Issues Likely to be Discussed
8 Mar. 2 - Mar. 6	Chap. 6	Visual Imagery; Memory for Pictures; Mental Rotation

9 Mar. 9 - Mar. 12	Chap. 7	Semantic Memory and Memory for Text: Semantic Organization; Features and Networks; Story Recall; Scripts and Schemata
10 Mar. 16 - Mar. 20	Chap. 8	Language and Psycholinguistics: Grammatical Structure; Comprehension Processes; Inferences and Sentence Memory; Reconstruction; Language Disorders
11 Mar. 23 - Mar. 27	Chap. 11	Categorization and Decision Making: Concept Identification; Prototypes vs. Features; Probability Estimation; Availability and Heuristics
12 Mar. 30 - Apr. 3	Chap. 10	Thinking and Problem Solving: Problem Representation; Solution Strategies; The Role of Memory; Analogical Reasoning; Insight and Mental Set
13 Apr. 6 - Apr. 10	none	We'll See!