PSYCHOLOGY 219: COGNITIVE PSYCHOLOGY

Spring 2013 T-Th 9:30 – 10:50 Severance 108

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Office Hours: T -Th (11:00-11:50) and by appointment

COURSE OVERVIEW: Cognitive psychology is the science of mental structures and processes involved in sensation, perception, attention, memory, problem solving, and language. In short, cognitive psychologists study the structures and processes that allow intelligent (and in a few cases, not so intelligent) behavior. As such, cognitive psychology is a cornerstone of modern day psychology having implications for social psychology, clinical psychology, and developmental psychology. Furthermore, research in cognitive psychology has many real world applications in the fields of engineering, computer science, marketing, and the law.

Course Goals and Objectives

1. Students will acquire an understanding of how Cognitive Psychologists study mental structures and processes.
   a. Students will be able to read about an experiment and interpret the results of the experiment.
   b. Students will be able to determine whether an experimental design is an adequate test of a theory.
   c. Students will be able to evaluate whether a set of results supports a theory or not.
   d. Students will be able to evaluate theories based on the experimental support for or against the theory.
2. Students will become familiar with the types of questions that concern Cognitive Psychologists by means of a broad coverage of the field.
   a. Students will demonstrate mastery of several concepts associated with each of the main topics concerning Cognitive Psychology.
   b. Students will understand the lower order to higher order progression of the field of Cognitive Psychology.
   c. Students will appreciate the interconnectedness of topics concerning Cognitive Psychology.
   d. Students will be able to evaluate whether knowledge from one topic can inform what we know about another topic of Cognitive Psychology.
3. Students will understand the reasons for applying the techniques of neuroscience and computational modeling to answer questions in Cognitive Psychology.
   a. Students will learn about the methods used in cognitive neuroscience and computational modeling.
   b. Students will learn about how cognitive neuroscience and computational modeling inform the knowledge base in cognitive psychology.
   c. Students will understand that some questions and theories cannot be adequately addressed using the methods of cognitive psychology alone.
   d. Students will appreciate that the intersection of the fields of cognitive psychology, cognitive neuroscience, and cognitive science provide better knowledge than can be constructed from any subset of the three.
4. Students will entertain cutting-edge questions and examine indications of future directions in Cognitive Psychology by means of an in-depth coverage of the field.
   a. Students will learn about the latest trends for each of the topics presented.
   b. Students will be able to identify several directions that the research in a given field might move.
5. Students will appreciate the applications of Cognitive Psychology.
   a. Students will endorse the importance of Cognitive Psychology for informing people about everyday problems and situations.
   b. Students will be able to identify the important areas of application of Cognitive Psychology.

Required Reading

The textbook for the course is *Cognitive Psychology: Connecting Mind, Research, and Everyday Experience (3rd ed.)* by E. Bruce Goldstein. In addition, you will be reading articles which will be posted on our course Blackboard site. If you are unable to access our Blackboard site, or if you are having any difficulties obtaining the textbook, please see me immediately.

Course Requirements

The exams will consist of two midterms and a final. The final is not cumulative (mostly). You are expected to take the exams at the scheduled time. If under extraordinary circumstances, I have granted you an alternate mid-term exam time, my policy is that all exam/course related questions must be asked before the normally scheduled exam. If you are taking the exam late, make sure that you have asked your questions before the exam time listed on the course schedule. Changes in the final schedule can be made by the Dean of Studies, only. Be forewarned, travel plans are insufficient justification for changing a final.

You will be answering a few questions from the end of each chapter of the textbook (see the schedule for the assigned questions). The question answers are due at the beginning of class on Tuesday (no exceptions). If you must be absent from class on a Tuesday due to illness, an emergency, or a pre-arranged absent you will need to make arrangements with me for submitting your answers **before** class on Tuesday.

You will be answering a set of questions for each of the assigned articles. The paper responses are due at the beginning of class on Thursdays (see schedule for exceptions). If you must be absent for class on Thursday, you may email me your paper responses **before** the class meeting in which they are due.

Summary of grade breakdown:	Points
Chapter Questions	10 (1 each)
Paper Responses	9 (2 each)
Exams	72 (20-25 each)
TOTAL	100

Course Policies

The Oberlin Honor Code applies to all work submitted in fulfillment of the requirements for the course. In addition, you may not use old exams for this course as a study guide; nor may you make available to others your old exams. If you have questions about the Honor Code, please feel free to ask.

The course policy for the paper responses is that you may collaborate with others in the class by discussing the assigned reading and how you might answer the questions about the reading. You must work alone when writing your responses. You may discuss the textbook questions and answers with other students but you must work alone when writing the answers to the questions.

On every assignment turned in for credit in the course, you will be required to write and sign the honor code: I affirm that I have adhered to the Honor Code on this assignment. For further information on Oberlin's Honor Code, go to http://new.oberlin.edu/office/dean-of-students/honor/students.dot.

Schedule

Dates and Reading Assignments	Chapter Questions	Tuesday Topic	Thursday Topic
Feb. 5th and 7th **Read Chs. 1 & 2**		Introduction to the Course, Topics, and Each Other Reading a Research Article	Neurons(Overview/Review) Methods: Neural Nets
Feb. 12th and 14th **Read Ch. 3**	3.1: 2 3.2: 4 3.3: 4	Object Recognition Chapter 3	Object Recognition
Feb. 19th and 21st **Read Article #1**		Faces Are Special	Face Recognition Article #1 Response
Feb. 26th and 28th **Read Ch. 4 & Article #2**	4.1: 6 4.2: 3 4.3: 4	Attention Chapter 4	Attention and Driving Article #2 Response
March 5th and 7th **Read Ch. 5 and Article #3**	5.1: 6 5.2: 1 5.3 3	Working Memory Chapter 5	Working Memory Article #3 Response
March 12th and 14th		Overview/Review of the Early Processes and Structures	**Exam 1**
March 19th and 21st **Read Ch. 6 and Article #4**	6.1: 4 6.2: 1 & 3	Memory Structures Chapter 6	Explicit and Implicit Memory Article #4 Response
March 26th and 28th		SPRING BREAK	SPRING BREAK
April 2nd and 4th **Read Ch: 7 & Article #5**	7.1: 6 7.2: 6 7.3: 5	Encoding and Retrieval Chapter 7	Encoding and Retrieval Article #5 Response
April 9th and 11th **Read Ch. 8 & Article #6**	8.1: 2 8.2: 3 8.3: 3	Eyewitness Memory Chapter 8	Eyewitness Memory Article #6 Response
April 16th and 18th		Overview/Review of Memory Processes and Structures	**Exam 2**
April 23rd and 25th **Read Chs. 9 & Article # 7**	9.1: 5 9.2: 4 10.1: 4 10.2: 3	Concepts, Categories, and Schemas Verbal Information Storage Chapter 9 and 10	Visual Imagery Visual Information Storage Article #7 Response
Ap 30th and May2nd **Read Ch: 11 & Article #8**	11.1: 1 11.2: 7	Language Chapter 11	Language and Thought Article # 8 Response
May 7th and 9th **Read Ch: 13 & Article #9**	13.1: 5 13.2: 4 13.3: 4	Problem Solving Chapter 13	Decision Making and Reasoning Article # 9 Response

Final Exam: The final exam is on Thursday, May 16th 2pm to 4pm. The final has two parts, one that is not cumulative and will cover only the material covered after Exam 2 and one new data set covering all of the major concepts from the course.