

Psychology 7110 – Advanced Cognition

Fall Semester, 2006

Instructor: Dr. Lani Van Dusen

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Hours: By appointment

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Text: Neath & Surprenant (2002) *Human Memory*

Course Rationale

Cognition, or the act of knowing, is central to all human behavior and learning. Furthermore, understanding how the mind works is necessary to improving educational systems, adequately assessing human performance, providing effective counseling and treatment, and to self-improvement. To fully comprehend and apply cognitive skills, it requires a basic understanding of the theories and supporting research describing how the mind works.

Therefore, this course was designed to provide you with an in-depth view into theories of cognition and how these theories can be applied to explain human thought processes. During this course, you will discover how cognitions (thinking patterns) are formed, how they are retained, and how they are used to solve problems and make decisions.

Course Objectives

After successfully completing this course you will be able to:

- Delineate the underlying cognitive principles that allow the mind to work successfully
- Describe the strengths and weakness of various models of working memory
- Compare and contrast theories of knowledge representation
- Explain how retrieval works and why we forget
- Apply the information processing approach in describing every day thought events
- Distinguish between various forms of knowledge and explain techniques for effectively learning and retaining this information
- Describe the skills necessary for effective problem solving and decision making
- Conduct experiments and interpret research on improving mental processing

Course Structure

The course was designed to provide you with a high level of interaction with the material to be covered. Class meetings will be conducted using a lecture/discussion format. Oftentimes, the instructor will present new information, clarify information from the text, and exemplify relevant principles through informal demonstrations and activities. In addition, class discussions of relevant experiences and insights are encouraged and participation

points will be assigned based on discussion protocols (see evaluation section for more details). Finally, you will be asked to complete three field projects that provide experimental applications of the presented theories.

Course Evaluation

Evaluation of your performance in this course will be based on three sources: level and quality of class participation, completion and reporting of field projects, and your score on a final applied exam. Each of these sources and their contribution to your final grade is discussed below.

Class Participation

You are expected to attend all class meetings and to actively participate in instructor-led discussions of the accompanying course material. These discussions are meant to stimulate your interest and contemplation of the material – not to judge your ability level or oral fluency. Therefore, the quality of your responses has less to do with eloquence of articulation and more to do with reflectiveness of thought. To encourage this level of participation, you will be required to complete a discussion protocol form before each class that you can use to facilitate discussion of your ideas and to allow the instructor to determine your preparation and contribution to the class.

You will need to complete the discussion protocol form, requiring that you read the corresponding class material, before the class meeting covering the specified topic (see class calendar for the schedule of topics). Each discussion protocol form is worth 10 points (the distribution of points is included on the form). After the first, introductory class, there will be 14 class meetings allowing you to obtain 14 class participation scores. Your top 10 scores will be used in computing your course grade. (If you miss a class meeting, that score will be dropped automatically, as one of your low scores.) Thus, class participation accounts for approximately 45% of your course grade.

Field Projects

At various times throughout the course, the instructor will assign structured experiments focused on applying the theories discussed in class. These activities are intended to improve your understanding of the material (as we will discuss later in class — the best way to learn is to provide as much exposure and as many ways of knowing the material as possible), increase your familiarity with cognitive research techniques, and to assist you in applying cognitive skills.

The field projects will take the form of informal experiments or surveys which can be conducted with the use of friends. A detailed outline of the project and requirements will be made available to you during the class in which the related discussion takes place. You will then be given a week to conduct the activity and type a 2-4 page, double-spaced report on your findings and interpretation of the activity. Every project should include the following:

- Description of subjects

- ·Description of procedure followed
- ·Summary of findings (perhaps using a table)
- ·Interpretation of findings (relate to theories discussed in class)
- ·Implications for learning and thinking

Each field project is worth 20 points toward your course grade. There will be three projects assigned this semester. Thus, the field projects account for approximately 27% of your course grade.

Final Exam

There will be an exam administered during the finals week. The exam will present a real-life scenario of individuals' behaviors and outcomes. You will need to explain how the thought processes and cognitive skills of the individuals in the scenario led to the specific outcomes depicted. The exam is worth 60 points, accounting for approximately 27% of your course grade.

Course Grade

Your final grade in this class will be based on the number of points you receive from all sources of evaluation. The total possible number of points is 220 (100 from class participation, 60 from field projects, and 60 from the final exam). The following scale will be used in determining grades:

A	=	282 - 300 points
A-	=	270 - 281 points
B+	=	264 - 269 points
B	=	252 - 264 points
B-	=	240 - 251 points
C+	=	234 - 239 points
C	=	222 - 233 points
C-	=	210 - 221 points
D	=	180 - 209 points
F	=	Below 180 points

You are expected to maintain academic honesty at all times during the course. All work submitted as your own should be completed individually and without the assistance of outside help other than textbooks and notes. Students who violate academic honesty will receive a 0 grade for that activity, which will in all likelihood result in an "F" in the class.

If a student has a disability that will likely require some accommodations by the instructor, the student must contact the instructor and document the disability through the Disability Resource Center. In cooperation with Disability Resources, course material may be provided in alternative formats such as large print, audio, diskette, or Braille.

Tentative Class Calendar

Date	Topic	Readings
Aug. 29	Introduction to Cognition and the Information Processing Model	Chapter 1
Sept. 5	Sensation and Perception	Chapter 2
Sept. 12	Attention	www.wireinternet.com/attentionchapter.pdf
Sept. 19	Short Term Memory	Chapters 3 & 4
Sept. 26	Encoding Processes	Chapter 5
Oct. 3	Long Term Memory and Knowledge Structures	Chapter 10
Oct 17	Imagery	Chapter 11
Oct 24	Retrieval of Information	Chapter 9
Oct. 31	Forgetting	Chapter 6
Oct. 31	Construction and Reconstruction of Knowledge	Chapter 12
Nov. 7	Intentional Learning	Chapters 7 & 15
Nov. 14	Problem-solving	www.wireinternet.com/Problem-solving%20chapter.pdf
Nov. 28	Decision-making	www.wireinternet.com/decisionmakingchapter.pdf
Dec. 5	Cognitive Dysfunctions	Chapter 8
Dec. 12	Final Exam (11:30-1:20)	

*Last day to drop class is September 18