

Cognitive Psychology (PSY 3120 Section 2, CRN 24992)
Spring 2011, Jan. 10 – May 5
Prof. Robert Carlson

Class Information

Class Days: Mon., Wed., & Fri.

Class Time: 12:00 – 12:50

Class Location: McDonald 104

Contact Information

Office: McDonald 201

Phone: 652-7893

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Contacting Prof. Carlson: The most effective way to contact me is by e-mail. I check my e-mail regularly, and I am much more likely to remember to respond to an e-mail than to a phone message or a verbal conversation. If you speak to me in person, make sure to follow up that conversation with an e-mail to remind me to promptly address the matter.

Course Description: “Introduction to basic principles of human and non-human cognition. Topics include perception, categorization, attention, memory, knowledge representation, judgment and decision making, and problem solving.” (Description from Course Catalog) Basically, we study many aspects of human behavior that are not directly observable. We learn how objective scientific approaches can be used to infer how mental processes are working “behind the scenes.”

Course Objectives: The purpose of this course is for students to demonstrate an understanding of how cognitive psychologists apply the scientific method to develop an understanding of the study of the mind. Students will demonstrate their learning of a variety of scientific techniques used in cognitive psychology, theories of various mental activities, and results of the application of techniques and theories through short quizzes and longer exams. This course does not fulfill a general education requirement but does fulfill a requirement toward the Psychology major.

Course Requirements and Information:

Textbook: *Cognition: Exploring the Science of the Mind*, 3rd Edition. (Required)

Other Articles:

Halpern, M., and Miller, G. Online dialog re: Disclaimer by George Miller, retrieved online from members.shaw.ca/philip.sharman/miller.txt.

Miller, G.A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *The Psychological Review*, 63, 81-97.

Blackboard: We will use Blackboard Vista on a regular basis. (Required)

Office Hours: Mon., Wed., Fri., 11:00-11:50; Tue., Thu., 11:50-12:40

Prerequisites: PSY 1010

Course Fees: None

Academic Integrity: Cheating of any kind is not tolerated. Students must take all quizzes and exams independently (without the help of others, except for appropriate disability services). For further information regarding student responsibilities related to academic integrity, please refer to Section 5.33.5 of the DSC policy, which can be viewed at <http://www.dixie.edu/humanres/policy/sec5/533.html>. Other portions of this policy are also relevant, especially as they relate to fostering a learning environment that does not discriminate and is conducive to learning.

Attendance Policy: Learning is a collaborative process, so to maximize your learning in this course I strongly recommend that you attend class regularly and participate in class discussions. The correlation between class participation and grades is quite strong, so it is in your best interests to be an active, and not a passive, participant. Absences may be for a variety of reason, including for approved school functions, but even when appropriate protocol has been followed regarding excused absences the student is required to find out about and make up missed work (i.e., quizzes and exams). Arrangements to take quizzes or exams ahead of time (never after the due date) **must be made ahead of time** and approved by the instructor. It has been rare for me to grant make-up exams after the exam is scheduled, but it is common for me to allow students to take an alternate exam before the exam is scheduled.

Classroom Policy: All students are strongly encouraged to participate in classroom discussions, but I want to remind you that appropriate levels of maturity and respect (to the instructor and other students) must be demonstrated at all times.

Grading Information: Final grades in this course will be based on a percentage-based system, and there will **not** be a “curve” used to determine grades.

Grade Components: Quizzes (15%), Midterm Exams (60%), Final Exam (25%).

Quizzes will be administered through Blackboard Vista. You can take the quizzes any time it is convenient up to a half-hour before the next class period. The material covered on the quiz will be the next class period’s reading assignment.

Midterm Exams will be administered in the Testing Center. Each midterm exam must be taken during the exam time specified below. The material covered on each exam will reflect the material from the previous exam until and including the material on the last class before the exam period.

Grading Scale	
Grade	Range
A	>91%
A-	89-91%
B+	86-88%
B	82-85%
B-	79-81%
C+	76-78%
C	72-75%
C-	69-71%
D+	66-68%
D	62-65%
D-	59-61%
F	<59%

Grading

Grading will be based on three criteria: three Midterm Exams (60% total), a Final Exam (25%), and quizzes (15%).

Midterms: There will be three Midterm Exams in this course. Each exam will consist of a combination of true/false and multiple choice questions, plus a few other types of questions, such as fill-in-the-blank or diagram labeling. All midterm exams will be administered in the Testing Center, and must be completed during the dates specified on the syllabus. It is your responsibility to make sure the Testing Center is open and available. Your highest-scoring Midterm Exam will count 25% toward your final grade, the second-highest Midterm Exam will count 20%, and the lowest-scoring Midterm Exam will count 15% toward your final grade.

Exam	Window
Exam 1	2/11/11 1:00 pm – 2/13/11 10:00 pm
Exam 2	3/25/11 1:00 pm – 3/27/11 10:00 pm
Exam 3	4/27/11 1:00 pm – 4/29/11 10:00 pm

Final: The Final Exam will be administered in class during Finals Week and will cover material discussed throughout the semester. Your score on this exam accounts for 25% of your final grade and will follow the same format as the midterm exams.

Quizzes: Quizzes must be taken before each class period when there is a reading assignment, and the quizzes must be taken through Blackboard. The quizzes will be short (typically 4-7 questions) and will test your understanding of the basic concepts from the assigned readings for that class period. The combined average of all quiz scores will comprise 15% of your final grade. The lowest 3 quiz scores will not be factored into your grade (i.e., they will be “dropped”). **No make-up quizzes will be offered.** If you are likely to miss a significant period of time and will not be able to take a quiz, you may request to take a quiz in advance. Please contact me **at least 24 hours in advance** to make these arrangements.

Make-up Exam Policy

Make-up exams are not allowed, except in the event of *extreme* and *unanticipated* circumstances. If there is a reasonable reason to believe that a situation will arise that might prevent you from taking an exam at the scheduled time (such as participation in a school-related activity), it is **your responsibility** to make arrangements with the instructor **ahead of the scheduled exam date**. At least 2 days’ notice is customarily expected, and more time may be required in many cases to make adequate alternative arrangements. **Make-up quizzes are never allowed.**

Grade Calculation: Grades are calculated based on percentages for each quiz/exam and for each grade category (quizzes, midterms, final exam). **The total number of points does not matter in calculating your grade.** For example, if you score 4 out of 4 on one quiz, that counts as a grade of 100%; if you score 4 out of 5 on another quiz, that counts as a grade of 80%. Those two quizzes would lead to a Quiz Average of 90% (average of 80% and 100%), not 88.9% (8 out of 9 total points). The same principle applies to Midterm Exam grades, although for midterms each exam percentage is multiplied by a different percentage depending on the rank of each midterm (again, based on the percentage for each midterm). To calculate your grade for the class, first calculate your Quiz Average (QA) by averaging the **percentage scores** from each quiz, except for the three lowest quizzes which are not counted toward your grade. Next, calculate your Midterm Average (MA) by averaging the **percentage scores** from your Midterm Exam scores, with the highest two Midterm Exam scores each counting 25% of your grade and the lowest Midterm Exam score counting 15% of your grade (based on each midterm’s percentage score). To calculate your overall grade, use the following formula:

$$(QA\% * .15) + (ME1\% * .25) + (ME2\% * .20) + (ME3\% * .15) + (FE\% * .25)$$

This sum will be your total percentage grade in the course; use this to determine your letter grade in the course based on the Grading Scale listed above.

Course Outline

The reading assignments are listed below for each class meeting date. Unless otherwise specified, the reading is from the Reisberg textbook; other readings will be available on Blackboard. You are welcome to read the documents electronically directly through Blackboard or to print them out to have a paper copy, but when readings are assigned that are available on Blackboard I will expect that you received them.

¹ ME1 = highest midterm percentage; ME2 = second highest midterm percentage; ME3 = lowest midterm percentage

Course Schedule

<u>Date</u>	<u>Reading Description</u>	<u>Chapter: Pages</u>
Mon., Jan. 10	Introduction to the Course	---
Wed., Jan. 12	History of cognitive psychology	1: 4-13
Fri., Jan. 14	A brief example (working memory)	1: 13-23
Mon., Jan. 17	Martin Luther King Jr. Day (no class)	---
Wed., Jan. 19	Vision and the brain	2:40-55
Fri., Jan. 21	Visual object recognition	3:59-73
Mon., Jan. 24	Object recognition networks (words)	3:73-84
Wed., Jan. 26	Other object recognition theories	3:84-95
Fri., Jan. 28	Visual imagery (like perception)	11:339-350
Mon., Jan. 31	Visual imagery revisited	11:350-360
Wed., Feb. 2	Long-term visual memory	11:360-370
Fri., Feb. 4	Attention: costs and benefits	4:97-110
Mon., Feb. 7	Attention theories	4:110-116
Wed., Feb. 9	Divided attention and practice	4:116-129
Fri., Feb. 11	Leftover material and review for Midterm 1	---
Mon., Feb. 14	The magical number 7 ± 2	Miller; Halpern & Miller
Wed., Feb. 16	Introduction to working memory	5:133-140
Fri., Feb. 18	Working memory as a pathway to long-term memory	5:140-154
Mon., Feb. 21	President's Day (no class)	---
Wed., Feb. 23	Meaning and organization of memory	5:155-166
Fri., Feb. 25	Encoding and retrieval	6: 167-174
Mon., Feb. 28	Implicit memory	6:174-188
Wed., Mar. 2	Amnesia	6:189-197
Fri., Mar. 4	Memory errors	7: 198-211
Mon., Mar. 7	Better long-term memory	7: 211-221
Wed., Mar. 9	Autobiographical memory	7:221-232
Fri., Mar. 11	Long-term memory networks	8: 235-247
Mar. 14-18	Spring Break (no class)	---
Mon., Mar. 21	Retrieving from long-term memory	8: 247-258
Wed., Mar. 23	Connectionism	8: 258-266
Fri., Mar. 25	Leftover material and review for Midterm 2	---
Mon., Mar. 28	Generic knowledge and prototypes	9: 267-278
Wed., Mar. 30	Exemplars	9:278-290

Fri., Apr. 1	Conceptual knowledge	9:290-300
Mon., Apr. 4	Language basics – to phonemes	10: 301-312
Wed., Apr. 6	Language basics – words and structure	10: 313-322
Fri., Apr. 8	Understanding and learning language	10:322-337
Mon., Apr. 11	Heuristics and covariation	12: 375-392
Wed., Apr. 13	Base rates and improving on heuristics	12:392-408
Fri., Apr. 15	Reasoning and logic	13: 409-422
Mon., Apr. 18	Decision making and mental models	13: 422-433
Wed., Apr. 20	Maximizing and reason-based approaches	13:433-443
Fri., Apr. 22	Problem solving	14: 444-461
Mon., Apr. 25	Defining problems and creativity	14:461-477
Wed., Apr. 27	Leftover material and review for Midterm 3	---
Wed., May 4	Final Exam, 12:30 p.m. – 2:30 a.m., in class	All of it