

Cognitive Psychology (PSY 3120, CRN 46518)

Fall 2014, Aug. 25 – Dec. 19

Prof. Robert Carlson

Class Information

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

Class Time: 12:00 – 12:50

Class Location: McDonald 208

Contact Information

Office: McDonald 201

Phone: 652-7893

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Disclaimer: Details of this syllabus are subject to change (I hope not, but you never know). If changes are made, they will be announced in class during the scheduled class time.

Contacting Prof. Carlson: The most effective way to contact me is by e-mail (sending a message or comment through Canvas will generally not reach me). I check my DSU e-mail account regularly, and you can generally expect a response within one academic day (a day the campus is in session). If you speak to me in person, especially away from my office, **make sure to follow up any conversations with an e-mail** to remind me about our conversation. You are welcome to drop by any time to see if I have time to meet with you. If you want to be sure I will be there to talk with you during a time other than official office hours, please contact me via e-mail to make an appointment.

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*, 4th Edition. (Required)

Classic Psychology Article:

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.

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

Office Hours: MWF 10:00-10:50; Tu, 10:20-11:10; and by appointment

Prerequisites: PSY 1010, PSY 2000

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>. A more specific explanation of plagiarism within psychology can be found in Canvas. In this class, the most obvious way to cheat is to share questions and/or answers from quizzes or exams with other students. This type of behavior, in any form, is forbidden.. **Do not share test or quiz questions or answers with other students.** Also, you may not use notes or books when taking exams. Cheating will be dealt with harshly. What you may think is a minor instance of cheating can result in serious penalties.

Attendance Policy: I expect you to attend class regularly. There is a strong correlation between **class participation** and grades in my course, because there is a strong correlation between class participation and grades. Because of this, I strongly recommend that you **attend** class regularly **and participate** in class discussions. If you are unable to attend a class period, regardless of the reason for the absence, you (the student) are responsible to find out about information you have may have missed from that class period. Arrangements to make up missed work, such as taking exams, **must be made and approved prior to the absence.** Given that there is a range of time during which students may take exams, it is rare for an unexpected absence to consume an entire exam period. Therefore, it has been rare for me to grant make-up exams after the exam period has ended. Because quizzes can be taken any place and any time during the time the quiz is available, **make-up quizzes are never allowed.** In case you forget to take a quiz or are unavoidably prevented from taking a quiz, three quizzes are dropped from the calculation of your quiz average for the semester.

Classroom Policy: All students are encouraged to participate in classroom discussions (see above), but appropriate levels of maturity and respect (to the instructor and other students) must be demonstrated. Joking around with the professor is generally tolerated, and usually encouraged, as long as the joking is not offensive to others (including the instructor, but I don't offend easily). I want participation from everyone, so even if you believe your comments or opinions will not be appreciated by others, please feel free to offer your perspective. Other than not being offensive, I have very few rules in my classroom. If you are late or need to leave early, please try not to be disruptive to others. One rule that is important to me, however, is that there are to be **no electronic devices (e.g., cell phones, tablets, laptops) are used in the classroom, unless I give explicit permission.** Just because one student receives permission does not mean all students will receive permission.

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 Canvas. 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 through Canvas in the Testing Center. Each midterm exam must be taken during the exam time

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%

specified in the table to the right. 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.

<u>Exam</u>	<u>Window</u>
Exam 1	9/26/14 1:00 pm – 9/29/14 11:30 am
Exam 2	10/31/14 1:00 pm – 11/3/14 11:30 am
Exam 3	12/8/14 1:00 pm – 12/11/14 10:00 pm

Grading

Grading will be based on three criteria: three Midterm Exams (60%—based on all three), a Final Exam (25%), and quizzes (15%—based on all, except for the three lowest).

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. 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.

Final: The Final Exam will be administered **in class** during Finals Week, and it is your responsibility to verify the time and day this class's final exam will be held (you can find the Final Exam Schedule at <http://dixie.edu/reg/?page=fall2014>, if you scroll down toward the bottom of the page). The Final Exam will cover material discussed throughout the semester, and your score on this exam accounts for 25% of your final course grade. The format for this exam will be the same as the format for the midterm exams. **You will need to provide an answer sheet for the Final Exam.**

Quizzes: Quizzes must be taken up to a half-hour **before each class period** when there is a reading assignment, and the quizzes must be taken through Canvas. The quizzes will be short (typically 5 questions) and will test your understanding of the basic concepts from the assigned readings for the coming class period. The combined average of all quiz scores will comprise 15% of your final grade, except for the lowest 3 quiz scores which 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 prior to leaving** in order 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. **In virtually all cases, the make-up exam will be taken before the scheduled date.**

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). Also, only use the percentage score to calculate your Midterm Average, with a different percentage multiplied to each Midterm Exam percentage (see below). 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 percentage quiz scores which are not counted toward your grade. Next, multiply your highest Midterm Exam percentage by .25, multiply your middle Midterm Exam percentage by .20, and multiply your lowest Midterm Exam percentage by .15. Multiply your Final Exam percentage by .25, and you can calculate your course grade:

$$(QA\% \times .15) + (ME1^1\% \times .25) + (ME2\% \times .20) + (ME3\% \times .15) + (FE\% \times .25)$$

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 are available on Canvas. You are welcome to read the documents electronically directly through Canvas or to print them out to have a paper copy, but when readings are assigned that are available on Canvas I will expect that you received them.

Course Schedule

<i>Date</i>	<i>Reading Description</i>	<i>Chapter: Pages</i>
Mon., Aug. 25	Introduction to the Course	---
Wed., Aug. 27	History of cognitive psychology	1: 4-13
Fri., Aug. 29	A brief example (working memory)	1: 13-23
Mon., Sep. 1	Vision and the brain	2:40-55
Wed., Sep. 3	Visual object recognition	3:59-73
Fri., Sep. 5	Object recognition networks (words)	3:73-84
Mon., Sep. 8	Labor Day (no class)	---
Wed., Sep. 10	Other object recognition theories	3:84-95
Fri., Sep. 12	Visual imagery (like perception)	11:339-350
Mon., Sep. 15	Visual imagery revisited	11:350-360
Wed., Sep. 17	Long-term visual memory	11:360-370
Fri., Sep. 19	Attention: costs and benefits	4:97-110
Mon., Sep. 22	Attention theories	4:110-116
Wed., Sep. 24	Divided attention and practice	4:116-129
Fri., Sep. 26	Leftover material and review for Midterm 1	---
Exam 1 Must be Completed Between Sep. 26 and Sep. 29		

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

Mon., Sep. 29	The magical number 7±2	Miller; Halpern & Miller
Wed., Oct. 1	Introduction to working memory	5:133-140
Fri., Oct. 3	Working memory as a pathway to long-term memory	5:140-154
Mon. Oct. 6	Meaning and organization of memory	5:155-166
Wed., Oct. 8	Encoding and retrieval	6: 167-174
Fri., Oct. 10	Implicit memory	6:174-188
Mon., Oct. 13	Amnesia	6:189-197
Wed., Oct. 15	Memory errors	7: 198-211
Fri., Oct. 17	Fall Break (no class)	---
Mon., Oct. 20	Better long-term memory	7: 211-221
Wed., Oct. 22	Autobiographical memory	7:221-232
Fri., Oct. 24	Long-term memory networks	8: 235-247
Mon., Oct. 27	Retrieving from long-term memory	8: 247-258
Wed., Oct. 29	Connectionism	8: 258-266
Fri., Oct. 31	Leftover material and review for Midterm 2	---
Exam 2 Must be Completed Between Oct. 31 and Nov. 3		
Mon., Nov. 3	Generic knowledge and prototypes	9: 267-278
Wed., Nov. 5	Exemplars	9:278-290
Fri., Nov. 7	Conceptual knowledge	9:290-300
Mon., Nov. 10	Language basics – to phonemes	10: 301-312
Wed., Nov. 12	Language basics – words and structure	10: 313-322
Fri., Nov. 14	Understanding and learning language	10:322-337
Mon., Nov. 17	Heuristics and covariation	12: 375-392
Wed., Nov. 19	Base rates and improving on heuristics	12:392-408
Fri., Nov. 21	Reasoning and logic	13: 409-422
Mon., Nov. 24	Decision making and mental models	13: 422-433
Nov. 26-28	Thanksgiving Break (no class)	---
Mon., Dec. 1	Maximizing and reason-based approaches	13:433-443
Wed., Dec. 3	Problem solving	14: 444-461
Fri., Dec. 5	Defining problems and creativity	14:461-477
Mon., Dec. 8	Leftover material and review for Midterm 3	---
Exam 3 Must be Completed Between Dec 8 and Dec 11		
Wed., Dec. 10	???	---
Fri., Dec. 11	Review for Final Exam	All of it
Fri., Dec. 19	Final Exam, 12:00 p.m. – 2:00 p.m., McD 208	All of it

