

# Cognitive Psychology (PSY 3120, CRN 46518)

Fall 2012, Aug. 20 – Dec. 14

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

E-mail: rcarlson@dixie.edu

**Disclaimer:** Details of this syllabus are subject to change (I hope not, but you never know).

**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 comment made to me before or after class (I tend to forget those comments, unfortunately). 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 to address the matter in a timely manner. I may not be in my office a lot outside of office hours, but 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 feel free to 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*, 4<sup>th</sup> 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](http://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.

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

Office Hours: Mon., 2:20-3:50; Tue., 10:20-11:50

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:** I find that, for most students, it is very difficult to passively learn this subject matter because it is so different from other psychology courses. Therefore, 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. Regardless of the reason for the absence, the student is responsible to find out about, and make up, missed work or announcements made in class. Arrangements to take exams ahead of time (never after the due date) **must be made prior to the absence**, including a plan for making up the exam 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 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 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 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.

<b>Grading Scale</b>	
<b>Grade</b>	<b>Range</b>
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. 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

<b>Exam</b>	<b>Window</b>
Exam 1	9/21/12 1:00 pm – 9/24/12 11:30 am
Exam 2	10/26/12 1:00 pm – 10/29/12 11:30 am
Exam 3	12/5/12 1:00 pm – 12/10/12 11:30 am

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 will cover material discussed throughout the semester. Your score on this exam accounts for 25% of your final grade and will consist of only true/false and multiple-choice questions. **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 4-7 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. 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 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). The same principle applies to Midterm Exam grades, although for midterms each exam percentage is multiplied by a different percentage depending on whether it is your lowest or highest midterm score (based on percentage). 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.

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<sup>1</sup> ME1 = highest midterm percentage; ME2 = second highest midterm percentage; ME3 = lowest midterm percentage

## 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

<u>Date</u>	<u>Reading Description</u>	<u>Chapter: Pages</u>
Mon., Aug. 20	Introduction to the Course	---
Wed., Aug. 22	History of cognitive psychology	1: 4-13
Fri., Aug. 24	A brief example (working memory)	1: 13-23
Mon., Aug. 27	Vision and the brain	2:40-55
Wed., Aug. 29	Visual object recognition	3:59-73
Fri., Aug. 31	Object recognition networks (words)	3:73-84
Mon., Sep. 3	<b>Labor Day</b> (no class)	---
Wed., Sep. 5	Other object recognition theories	3:84-95
Fri., Sep. 7	Visual imagery (like perception)	11:339-350
Mon., Sep. 10	Visual imagery revisited	11:350-360
Wed., Sep. 12	Long-term visual memory	11:360-370
Fri., Sep. 14	Attention: costs and benefits	4:97-110
Mon., Sep. 17	Attention theories	4:110-116
Wed., Sep. 19	Divided attention and practice	4:116-129
Fri., Sep. 21	<b>Leftover material and review for Midterm 1</b>	---
Mon., Sep. 24	The magical number $7\pm 2$	Miller; Halpern & Miller
Wed., Sep. 26	Introduction to working memory	5:133-140
Fri., Sep. 28	Working memory as a pathway to long-term memory	5:140-154
Mon. Oct. 1	Meaning and organization of memory	5:155-166
Wed., Oct. 3	Encoding and retrieval	6: 167-174
Fri., Oct. 5	Implicit memory	6:174-188
Mon., Oct. 8	Amnesia	6:189-197
Wed., Oct. 10	Memory errors	7: 198-211
Fri., Oct. 12	<b>Fall Break</b> (no class)	---
Mon., Oct. 15	Better long-term memory	7: 211-221
Wed., Oct. 17	Autobiographical memory	7:221-232
Fri., Oct. 19	Long-term memory networks	8: 235-247

Mon., Oct. 22	<b>Spring Break (no class)</b>	---
Wed., Oct. 24	Retrieving from long-term memory	8: 247-258
Fri., Oct. 26	Connectionism	8: 258-266
Mon., Oct. 29	<b>Leftover material and review for Midterm 2</b>	---
Wed., Oct. 31	Generic knowledge and prototypes	9: 267-278
Fri., Nov. 2	Exemplars	9:278-290
Mon., Nov. 5	Conceptual knowledge	9:290-300
Wed., Nov. 7	Language basics – to phonemes	10: 301-312
Fri., Nov. 9	Language basics – words and structure	10: 313-322
Mon., Nov. 12	Understanding and learning language	10:322-337
Wed., Nov. 14	Heuristics and covariation	12: 375-392
Fri., Nov. 16	Base rates and improving on heuristics	12:392-408
Mon., Nov. 19	Reasoning and logic	13: 409-422
Nov. 21-23	<b>Thanksgiving Break (no class)</b>	---
Mon., Nov. 26	Decision making and mental models	13: 422-433
Wed., Nov. 28	Maximizing and reason-based approaches	13:433-443
Fri., Nov. 30	Problem solving	14: 444-461
Mon., Dec. 3	Defining problems and creativity	14:461-477
Wed., Dec. 5	<b>Leftover material and review for Midterm 3</b>	---
Fri., Dec. 7	<b>Review for Final Exam</b>	<b>All of it</b>
Fri., Dec. 14	<b>Final Exam, 12:30 p.m. – 2:30 p.m., McD 208</b>	<b>All of it</b>

## Syllabus Appendix

This appendix is a required part of your syllabus. You are responsible for reading and understanding this part of the syllabus, just as you are required to read and understand the other portion of the syllabus.

### Important Dates for Dixie State College Students, Fall 2012:

Monday, August 20, 2012: Semester classes begin

Thursday, August 23, 2012: Last day to wait list

Friday, August 24, 2012: Last day to add classes without instructor signature

Monday, August 27, 2012: Drop/audit fee begins (\$10 per class)

Monday, September 3, 2012: Labor Day (no classes)

Tuesday, September 4, 2012: Financial charge of \$50 late registration/payment fee

Monday, September 10, 2012: Last day for refund of tuition and fees

Monday, September 10, 2012: Pell Grant Census

Monday, September 10, 2012: Last day to drop without receiving a “W” grade

Tuesday, September 11, 2012: Students dropped from classes for non-payment  
Friday, September 14, 2012: Last day to add/audit classes  
Monday, October 1, 2012: Graduation application deadline for Fall 2012  
Thursday-Friday, October 11-12, 2012: Fall Semester Break (no classes)  
Monday, October 15, 2012: Last day to drop/audit classes  
Thursday, November 1, 2012: Graduation application deadline for Spring 2013  
Friday, November 9, 2012: Last day for complete withdrawal  
Monday, November 12, 2012: Registration open for Seniors (90+ credits)  
Tuesday, November 13, 2012: Career day (most classes are cancelled)  
Tuesday, November 13, 2012: Registration open for Juniors (60+ credits)  
Wednesday, November 14, 2012: Registration open for Sophomores (30+ credits)  
Thursday, November 15, 2012: Open registration  
November 21-23, 2012: Thanksgiving Holiday (no classes)  
Friday, December 7, 2012: Last day of classes  
December 10-14, 2012: Final Exams scheduled

**Student Services:** Dixie State College (DSC) provides a variety of services to assist students in managing their academic progress while attending DSC. Among these services are:

**Tutoring Center:** See the Web site at <http://dsc.dixie.edu/tutoring/index.htm> for information regarding tutoring services available at DSC. Unfortunately, no tutoring services are available for Psychology courses, except for Statistical Methods (some semesters).

**Testing Center:** See their Web site at <http://new.dixie.edu/testing/> for information about how the testing center operates, including hours of operation. The Testing Center is located in the North Plaza (make sure you know how to find it). You will take all your midterm exams through the Testing Center in this course. You should know that there are a limited number of computers in the Testing Center and rules for how and when you can take exams. **If, for any reason (including waiting for a computer), an exam is not completed before the time it is due you will receive a grade of 0 for that exam.**

**Writing Center:** See their Web site at [http://new.dixie.edu/english/dsc\\_writing\\_center.php](http://new.dixie.edu/english/dsc_writing_center.php) to learn about the Writing Center services. The Writing Center is located on the 4<sup>th</sup> floor of the new Holland Centennial Commons.

**Disability Services:** Students with medical, psychological, learning or other disabilities desiring reasonable academic adjustment, accommodations, or auxiliary aids to be successful in this class will need to contact the DISABILITY RESOURCE CENTER Coordinator (Baako Wahabu) for eligibility determination. Proper documentation of impairment is required in order to receive services or accommodations. The DRC is located next door to the Testing Center. Visit or call 652-7516 to schedule appointment to discuss the process. DRC Coordinator determines eligibility for and authorizes the provision of services.

Computer Labs: DSC provides a variety of computer labs for students to use. Please see the Information Technology website at <http://www.dixie.edu/reg/info-technology.html> for information regarding these services. If you do not have access to your own computer, these computer facilities will be very helpful so you can access course materials that are made available only through Blackboard Vista, and so you can access your Dmail account.

Computer Printers: In addition to established computer labs, there are computer stations located at various locations throughout campus where students can print documents and access other computer functions. These computer stations require users to stand up, so they are best used for brief computer functions, but they can be very handy. One is located on the 2<sup>nd</sup> Floor of the McDonald building.

Library: The DSC Library is located in the new Holland Centennial Commons. Their website, which lists hours of operation and has links to electronic resources and the course catalog, is at <http://library.dixie.edu/>.

Health and Wellness Center: The Health and Wellness Center is located slightly off campus—34 N. 600 E., just north of the cemetery on 600 East. The center has professional medical facilities, including four on-site mental health counselors. They can provide some care on site and can offer referrals for other medical or psychological problems. Students are charged \$10 for a visit, which includes lab work.

Dmail: “Important class and college information will be sent to your Dmail account. This information includes your DSC bill, financial and/or scholarship notices, notification of dropped classes, reminders of important dates and events, and other information critical to your success in this class and at DSC. All DSC students are automatically assigned a Dmail account. If you don’t know your username and password, go to [www.dixie.edu](http://www.dixie.edu) and select ‘Dmail,’ for complete instructions. You will be held responsible for information sent to your Dmail, so please check it often.”

**Academic Integrity**: Cheating of any kind is not tolerated. **You may not give information about quiz or exam questions to other students.** 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**: I expect you to attend class because I know it will help you in learning the material and obtaining a good grade, but I will not enforce this expectation other than requiring attendance at least once during the first week of school.