

# Introduction to Cognitive Psychology (PSYC 230)

## Fall 2018

### General Information

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#### Instructor

Dr. Kendra Seaman

Contact Info: [kendra.seaman@unc.edu](mailto:kendra.seaman@unc.edu)

Office Hours: Tuesday, Thursday 11:00 AM – 12:00PM (and by appointment) | Davie 228

#### Teaching Assistants

Fanting Kung | Contact Info: [fanting@live.unc.edu](mailto:fanting@live.unc.edu)

Kayleigh Nemuth | Contact Info: [kayjn@live.unc.edu](mailto:kayjn@live.unc.edu)

**Meeting Time:** Tuesday/Thursday 9:30 -10:45 AM, Murphey 116

**Prerequisites:** Psychology 101

### Course Overview

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**Course Overview.** Cognitive psychology is the study of how we sense and interpret information from the world around us, incorporate this new information with our prior experiences, and determine how to respond to an ever-changing environment. While the main purpose of this course is to introduce you to the scientific study of the mind, you will also begin to understand the central role cognition plays in our everyday lives.

The course will proceed in three distinct modules: Attention and Perception, Learning and Memory, and Higher Cognitive Function. Each module will end with a module exam and there will be a cumulative final exam. Written work will include both formal and informal writing assignments. You will also be expected to carry out several demonstration experiments from the on-line *MindTap/CogLab* library and participate in class polls and discussions.

**Course Learning Objectives.** Upon completing this course, students should be able to:

- Analyze, evaluate, and compare major theories in cognitive psychology and relate new experimental results to these theories.
- Critically evaluate the quality of cognitive research and formulate logical arguments on the basis of theoretical or empirical analyses.
- Understand research methods in cognitive psychology, the strengths and weaknesses of these methods, and how these methods are being integrated with neuroscience to further our understanding of how the mind and brain function.
- Explain some of the broader implications of cognitive research for society.

#### Required Text:

Goldstein, B. (2018). *Cognitive Psychology: Connecting Mind, Research and Everyday Experience*, 5<sup>th</sup> Edition. Wadsworth Cengage Learning.

- An online version of textbook is available for purchase at <https://www.cengage.com/unlimited>.

#### Required Journal Articles:

Acar, O. A., & van den Ende, J. (2016). Knowledge Distance, Cognitive-Search Processes, and Creativity: The Making of Winning Solutions in Science Contests. *Psychological Science*, 27(5), 692–699. <https://doi.org/10.1177/0956797616634665>

Akhtar, S., Justice, L. V., Morrison, C. M., & Conway, M. A. (2018). Fictional First Memories. *Psychological Science*, 095679761877883. <https://doi.org/10.1177/0956797618778831>

Witt, J. K., Tenhundfeld, N. L., & Tymoski, M. J. (2018). Is There a Chastity Belt on Perception? *Psychological Science*, 29(1), 139–146. <https://doi.org/10.1177/0956797617730892>

## Trade Paperbacks:

**(Only 3 of these texts will be required per student; Specific assignments will be during Week 2)**

All of the following books will be on reserve at the library for students to check out for 2-hour periods.

- Blakemore, S.-J., & Frith, U. (2005). *The Learning Brain: Lessons for Education*. Hoboken: Wiley-Blackwell.
- Baumeister, R. F., & Tierney, J. (2011). *Willpower: Rediscovering the greatest human strength*. New York: Penguin Books.
- Beilock, S. (2015). *How the Body Knows Its Mind: The Surprising Power of the Physical Environment to Influence How You Think and Feel*. New York: Atria Books.
- Chabris, C., & Simons, D. (2009). *The invisible gorilla: How our intuitions deceive us*. New York: Crown.
- Duckworth, A. L. (2016). *Grit: The Power of Passion and Perseverance*. New York: Schribner.
- Ericsson, K.A., & Pool, R. (2016). *Peak: Secrets from the New Science of Expertise*. New York: Eamon Dolan/Houghton Mifflin Harcourt.
- Foer, J. (2011). *Moonwalking with Einstein: The art and science of remembering everything*. New York: Penguin.
- Gopnik, A., Meltzoff, A. N., & Kuhl, P. K. (2000). *The Scientist in the Crib: What Early Learning Tells Us About the Mind*. New York: William Morrow Paperbacks.
- Iyengar, S. S. (2011). *The Art of Choosing*. New York: Twelve Books.
- Loftus, E. F., & Ketcham, K. (1994). *The Myth of Repressed Memory: False Memories and Allegations of Sexual Abuse*. New York: St. Martin's Griffin.
- McWhorter, J. (2016). *Words on the Move: Why English Won't - and Can't - Sit Still (Like, Literally)*. London: Picador.
- Mullainathan, S., & Shafir, E. (2013). *Scarcity: Why having too little means so much*. New York: Times Books.
- Pennebaker, J. W. (2011). *The secret life of pronouns: What our words say about us*. New York: Bloomsbury Press.
- Sharot, T. (2017). *The Influential Mind: What the Brain Reveals About Our Power to Change Others*. New York: Henry Holt and Company.
- Shaw, J. (2016). *The Memory Illusion: Remembering, Forgetting, and the Science of False Memory*. London: Random House UK.
- Stone, A. (2013). *Fooling Houdini: Magicians, Mentalists, Math Geeks and the Hidden Powers of the Mind*. New York: Harper Paperbacks.
- Tarvis, C., & Aronson, E. (2007). *Mistakes Were Made (but Not by Me): Why We Justify Foolish Beliefs, Bad Decisions, and Hurtful Acts*. Wilmington: Mariner Books.
- Thaler, R. H., & Sunstein, C. R. (2009). *Nudge: Improving Decisions About Health, Wealth, and Happiness*. London: Penguin Books.

## Other Required Material:

**CogLab/MindTap:** This online library of demonstration experiments will be used to illustrate the methods of cognitive psychology. It comes bundled with the textbook.

**Poll Everywhere:** This web-based polling system will be used for class participation. Students must register for a student account and can respond to poll either via a web browser or mobile app. Instructions for account registration and Student FAQs can be found at <https://poll.unc.edu/>. Please see instructor or TAs if you do not have access to an appropriate device in order to make alternative arrangements.

## Course Requirements

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**Exams (45% of grade).** Three exams will be given in class as indicated on the "Course Schedule" below and each exam will be worth 15% of the final grade. Module exams will cover the readings, lectures, and discussions relevant to that module of the course. They will contain a combination of multiple-choice, true-false, identification and short response questions. Taking these exams is not optional; the only exception is an emergency for which you have an acceptable excuse. There will also be a mandatory comprehensive final exam administered during the final exam period. For students who miss a regular term exam FOR ANY REASON, the grade on the final will substitute for the missing exam. For students who have taken all three regular term exams, their lowest exam score (of the module exams and the final exam) will be dropped.

**Writing Assignments (40% of grade).** There will be several formal and informal writing assignments throughout the course, described in detail below. All writing assignments, formal and informal, should be carefully prepared and proofread. They are due at the beginning of class on the dates indicated below on the "Course Schedule." It is essential that all writing assignments reflect your own original work (see note on academic

integrity below) and should contain little or no quotations from other sources. Specific guidelines for each type of writing assignment, including the rubrics that will be used for evaluation, are posted on Sakai.

All writing assignments should be saved as Microsoft Word documents (.docx) and be named with the student's last name and assignment, i.e. "<Your Name>\_<Assignment Name>.docx." All writing assignments will be submitted via Sakai as detailed below; no writing assignments will be accepted via email. Word limits have been indicated for all formal writing assignments. These are firm limits. Please do a word count. If your answer appears to exceed the limit, we will do a word count. If it exceeds the limit by more than a few words, we will not read the assignment and you will receive no credit. So please be precise and concise in your writing.

*Book Evaluations (18% of grade).* Each module you will be assigned a trade paperback book to read and critically evaluate in 500 words or less. For each evaluation (6% of your grade), you will be responsible for *briefly* summarizing the main psychological ideas of the book and describing whether or not the authors' presentations are consistent with scientific literature. Each evaluation *must* be submitted via Sakai and will be graded using a 6-point scale considering both the clarity and content of your writing.

*Article Responses (12% of grade).* Each module you will also read and respond to an original research article in 250 words or less. For each paper (4% of final grade), you will be required to *briefly* summarize the research reported in the article and provide a personal response to the article. Each response *must* be submitted via Sakai and will be graded on a 4-point scale considering both the clarity and content of your writing.

*Forum Assignments and Commentary (9% of grade).* During each module of the course, you will be expected to create at least one forum post related to the theme of that module. Each forum post must include either an attachment or a link containing a pertinent article, website, or audio or video resource along with an original written description. You may not use any resource referenced in the textbook, in lecture, in the general class forum, or by another student in your discussion group. Each post will be graded on a 2-point scale considering both your writing as well as the relevance of the resource to the module topic. In addition to the resource, each forum post should include:

- A brief description of the resource provided by the post.
- A short definition of the related cognitive construct.
- A brief discussion of how the resource is related to this construct.

In addition, you will be required to read and provide substitutive comments on the other posts made by those in your discussion group. You should read and comment on *at least two* other forum posts in each module of the class. These comments will be worth 1 point for each module. Thus, for each module forum you will need to make a minimum of one post and two comments and your contribution to each module's forum will be worth 3% of your final grade.

*Personal Introduction (1% of grade).* At the beginning of the course, you will write a *brief* personal introduction that should be no longer than 100 words. This assignment will allow you to introduce yourself to the instructor and ensure that you can correctly use Sakai.

**Class Participation (10% of grade).** My intent is for this course to be an engaging experience for you. To facilitate this interaction, we will be using the Poll Everywhere website. Lectures will contain questions and statements that you will need to respond to with your device (smartphone, tablet, or computer). Your interaction may allow you to earn points for correct responses or for general participation. Thus, you will need to bring an internet-connected device with you to each class each day.

**CogLab Experiments (5% of grade).** You are required to complete 5 on-line demonstration experiments from the *CogLab* library. Please complete the assignment prior to the class on which it is assigned. Students will receive 1 point for each experiment completed on time and group results from these experiments will be discussed in class. Instructions for how to get started with *CogLab* are posted on Sakai; please complete all steps as soon as possible so that I can be sure you registered for our class.

Please do not read the explanation of the predicted results in the *CogLab* Manual or online until *after* you have completed the activity. Instead, follow the directions given on screen as if you were a participant in a research study. This will allow you to approach the experiment as a naïve participant, increasing the chances that the task will more accurately measure your cognitive performance. After completing the experiment, read the introductory materials you skipped, examine your own data in light of the explanation, and come to class ready to discuss. Once you have completed an experiment, *CogLab* will automatically record it, so you don't need to notify us separately. If you want to verify that your work has been recorded, you can go to "account access" and a list of all completed experiments will be shown there. If you complete an experiment after the deadline, it will still appear on this list, but as described below, you will not receive credit for it.

## Course Policies

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**Grading.** As alluded to above, your final grade will be based on exams (45% of final grade), written assignments (40% of final grade), Class Participation (10% of grade), and *CogLab* Experiments (5% of final grade). Grades of individual assignments will be based on absolute performance, not on the relative performance of others in the class (i.e. there will not be a curve). At the end of the semester, final grades will be computed by taking the proportion of the points earned for the course requirements. If your final score has a fractional part that is exactly .5 or greater, I will round up to the nearest whole number. If your score has a fractional part lower than .5, I will round down. Your final letter grade will be based on the following grading scale: A 93-100%; A- 90-92; B+ 87-89; B 83-86; B- 80-82; C+ 77-79; C 73-76; C- 70-72; D+ 67-69; D 63-66; D- 60-62; F <60.

**Feedback.** All grades will be posted on the course website as soon as they are available. We will make every effort to keep an up-to-date and accurate reflection of your course grade on Sakai. Occasional grading errors may occur, so please bring any concerns about your grade to our attention (privately) as soon as possible.

**Late assignments.** All assignments are due at the beginning of class (9:30 AM) on the day given in the "Course Schedule" below. Formal writing assignments turned in on the due date, but after the beginning of class, will have 1 point deducted. Each additional day the paper is late, 1 more point will be deducted. Informal forum posts must be turned in on the day they are due to receive any credit; posts made after the beginning of class will have 1 point deducted from the final score. If you complete a *CogLab* demonstration experiment after the deadline, then you will not receive credit for that experiment.

**Missing Exams.** Everyone is expected to take the exams as scheduled and individual makeup exams will not be given; no exams, module or final, will be given on a different date. Occasionally, there are unforeseeable emergencies that prohibit students from taking an exam. Examples of acceptable excuses are personal illness or family emergencies, although other excuses may be acceptable. Regardless of the excuse, you must provide documentation of the reason you missed the exam and you will not be allowed to miss or make up another exam.

**Class Attendance.** Students are expected to attend class and are responsible for all material covered in class. Please be courteous to your instructor and classmates by arriving promptly for class and quietly excusing yourself if necessary. My intent is to create a classroom environment that is conducive to learning and I expect your cooperation in this endeavor. If for any reasons you must miss a class, you are responsible for the material presented and discussed that day. Copies of lecture slides will be provided on Sakai to facilitate thought and discussion during class. However, the slides only provide an outline of the material presented in lecture and should not be considered an adequate substitute for attending class.

**Reading assignments.** Reading assignments are listed on the "Course Schedule" below and come from the required textbook for the course, scientific journal articles that will be available on Sakai, or trade paperback books that are on reserve at the library. These assignments should be read prior to class and you should be prepared to discuss this material in each class period. Both readings and lectures will cover important concepts in cognitive psychology; there may be overlap between the readings and the lectures, but there will deviation between the two.

**Sakai.** This course will be organized using Sakai. On the course website you will find course announcements, lecture slides, and a copy of this syllabus. You will also turn in your written assignments and create your forum posts on Sakai. Sakai can be accessed at <https://sakai.unc.edu/welcome/> using your ONYEN and password.

**Discussion Groups.** All students will randomly be placed into discussion groups for the course. These groups will be used for both in-class and online discussions via Sakai and will change for each module and activity. Dates for in-class discussions are listed on the “Course Schedule” below and participation in these in-class discussions will contribute to the overall participation grade.

**Communication.** This syllabus and the course website on Sakai will be the primary source of information for the course. Course announcements will also be made via email and posted on Sakai. For specific questions that are not answered in the syllabus or on Sakai, you are encouraged to post a question in the general forum on Sakai. If you chose to email the course Instructor or one of the TAs, please be sure to include your *name*. Our policy will be to return emails **within 48 hours**. Please do not wait until the last minute to send inquiries. Unanswered last minute inquiries will not excuse you from an assignment or exam. If you would prefer to talk to one of us directly, please utilize the office hours listed on the first page or email us directly to schedule an appointment.

**Help!** If you are struggling with the course material, it is imperative that you contact either the course Instructor or one of the TAs as soon as possible. We are happy to help you develop study skills and identify additional resources if you contact us in a timely matter; however, there is little we can do to help you right before an exam and even less we can do if you wait until the end of the course. Students who find themselves struggling with the writing assignments are encouraged to check out the resources at the Writing Center, <https://writingcenter.unc.edu/>.

**Academic Integrity.** Students must read, understand, and follow UNC’s Honor Code, which can be found at <https://advising.unc.edu/for-faculty/academic-policies-and-procedures/unc-honor-code/>. The University of North Carolina at Chapel Hill has had a student-led honor system for over 100 years. Academic integrity is at the heart of Carolina and we all are responsible for upholding the ideals of honor and integrity. The student-led Honor System is responsible for adjudicating any suspected violations of the Honor Code and all suspected instances of academic dishonesty will be reported to the honor system. Information, including your responsibilities as a student is outlined in the Instrument of Student Judicial Governance. Your full participation and observance of the Honor Code is expected. Cheating, plagiarism, or any other form of academic dishonesty will not be tolerated and the appropriate sanctions will be applied.

**Disability Support.** Any student who may need an accommodation based on the potential impact of a disability should contact the Accessibility Resources & Services department to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to: <https://ars.unc.edu/>.

**Extra Credit.** Please do not ask for any extra credit opportunities. No extra credit opportunities will be granted.

## Course Schedule\*

Week	Class	Topic	Reading/ Listening	CogLab Deadlines	Writing Deadlines
1	8/21/18	Introduction to Cognitive Psychology			
	8/23/18	History & Methods 1	Chapter 1		Personal Introduction
2	8/28/18	Cognitive Neuroscience & Methods 2	Chapter 2	Simon Effect	
	8/30/18	Vision 1	Chapter 3		
3	9/4/18	Vision 2			M1 Forum Post
	9/6/18	Mechanical and Chemical Senses	TedRadioHour: The Five Senses		
4	9/11/18	Attention			M1 Article Response
	9/13/18	Cognitive Control	Chapter 4		
5	9/18/18	<b>M1 Exam - Perception and Attention</b>			
	9/20/18	<b>M1 Book Discussion</b>			M1 Book Evaluation
6	9/25/18	Sensory Memory and STM	Chapter 5		
	9/27/18	Working Memory	Chapter 6	Operation Span	
7	10/2/18	LTM - Encoding and Retrieval	Chapter 7		
	10/4/18	LTM - Declarative Memory	TedRadioHour: Memory Games		
8	10/9/18	LTM - Non-declarative Memory		Statistical Learning	
	10/11/18	Knowledge	Chapter 9		M2 Forum Post
9	10/16/18	Everyday Memory Errors	Chapter 8		M2 Article Response
	10/18/18	<b>No Class - Fall Break</b>			
10	10/23/18	<b>M2 Exam - Learning &amp; Memory</b>			
	10/25/18	<b>M2 Book Discussion</b>			M2 Book Evaluation
11	10/30/18	Visual Imagery	Chapter 10	Mental Rotation	
	11/1/18	Language	Chapter 11		
12	11/6/18	Decision Making 1	Chapter 13	Risky Decisions	
	11/8/18	Decision Making 2			
13	11/13/18	Reasoning	Chapter 12		M3 Forum Post
	11/15/18	Problem Solving & Creativity	TedRadioHour: The Source of Creativity		
14	11/20/18	<b>M3 Exam - Higher Cognitive Function</b>			
	11/22/18	<b>No Class - Thanksgiving</b>			
15	11/27/18	Development and Aging			M3 Article Response
	11/29/18	Emotion and Motivation			
16	12/4/18	<b>M3 Book Discussion</b>			M3 Book Evaluation
	12/11/18	<b>Final Exam (8:00-11:00AM)</b>			

\*Course Schedule may be modified as needed throughout the semester. All changes will be announced and updated versions of syllabus will be posted on Sakai.