

Advanced Topics in Cognitive Science: Cognitive Processes

Instructor Information

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Email: *Please email the instructor ONLY via the course CANVAS site.* It will make a more direct and organized method of communication between the instructor and the students enrolled in this course, in that such email shows the course title as the subject. **The instructor will only reply to emails that originate from Canvas.** Once logged into this course, click on “Inbox” from the left menu, then find the course, and send to “Teachers” (which will send email to both Instructor and TA) or find my name directly (to send just to me).

Course Information

Section Information: Psyc 4431-001

Time & Location:

Lecture: Tues/Thurs 12:30 – 1:50

Lab: Thurs 2:00 – 3:50

Location: Online via Teams and LS 420

Course Description:

This course is designed to be a survey of core topics of Cognitive Psychology, such as attention, memory, and problem solving. This course will be a combination of lecture and presentation/discussion format. The instructor will provide an overview of a topic (e.g., Tuesday) and students will present assigned articles (e.g., Thursday). To promote classroom discussion, students who are not presenting will be required to submit one substantial discussion post per article via Canvas one day prior to the presentation.

Learning Outcomes: We have several goals to achieve in the class. The first goal we will have is to explore and understand cognitive research ranging from early classics to contemporary work. Our second goal will be to develop an appreciation for methods of research used by cognitive psychologists and to implement this methodology while conducting your own research study. Our final goal is to think more critically about what we read and hear, with the aim of critiquing new research in our own areas of research and application. We will accomplish this through a variety of activities including demonstrations, group discussions, presentations, etc. The ultimate goal is for you to not only gain a fundamental understanding of the cognitive processes that shape our everyday interactions with the world, but also to develop skills that will be applicable outside of the classroom environment (e.g., critical thinking, programming, writing, cooperative group work, public speaking).

Course Materials: There is no *required* textbook for this class, but it is suggested to read the optional textbook. All supplemental course readings (published articles) will be provided through Canvas.

Textbooks (Recommended) – suggested for those interested in the topic or are having difficulties in understanding the lecture material.

1. [Anderson, J.R. \(2015\). *Cognitive psychology & its implications*. Macmillan. 8th Edition](#)

-The instructor will lecture from this book one day a week. Email instructor for details prior to purchase.

Published Articles (Required): One to two published papers will be provided for each week of the course and we will discuss these papers in class. All course readings will be posted on Canvas. These readings will include citation classics and/or more contemporary papers that adopt innovative approaches or methodology to bring more theoretical depth to the topic.

Meeting Format: The course will be a mix of synchronous (in-person) and asynchronous (recorded) learning. Lecture material will be pre-recorded and posted online for students to view prior to the in-person meetings. This information will provide the relevant foundation for the assigned articles. The synchronous meetings at the regularly scheduled class time to discuss articles. However, the class will be split in two smaller groups to facilitate these in-class discussions, with one group meeting on Tuesday and the other group meeting on Thursday.

Grading Information

Major Assignments & Examinations: There will be three non-cumulative exams. Students are also required to give presentations based on assigned readings, post discussion questions online, and to actively participate in class discussion. In addition, as part of the lab students will be asked to present their own research project during class and submit a final APA style manuscript. Students are expected to attend class, complete weekly readings before class, and prepare questions for discussion of relevant topics during class.

Course Assessments:

1. Attendance (6%): Students must attend all classes on the day your group is assigned (e.g., Group 1 meets Tuesdays). Your participation for the class is *critical* for your progress in this course. Attendance will be taken randomly on 4 of the 9 live course days and 2 of 3 final project days. Additionally, each day in class there is a graded assignment. This means that if you are not present, you will receive a zero on those assignments. Therefore, attendance is expected. Tardiness will also not be accepted. Arriving late is disruptive and disrespectful. If you are late, you will only receive a maximum of half credit on the daily assignment and for the attendance points. Each attendance check is worth 10 points, totaling 60 points.

2. Pre-lecture Quizzes (0%): Testing your knowledge prior to study, even if incorrect, has been shown to be an effective way to facilitate subsequent learning. Thus, prior to each lecture, there will be an *optional* brief quiz on the lecture material. The quiz should be taken before you view the lecture, but will be available for the entire week. These are ungraded and for your benefit only.

3. Lecture Quizzes (8%): Retrieval practice has been shown to be an effective way to promote long-term retention of learned information. Thus, at the end of each lecture, there will be a brief quiz on the lecture material. The quiz will be due at 5 pm the day before your live class. So, if you are in Group 1 your quiz will be due on Monday at 5 pm and if you are in Group 2 your quiz will be due Wednesday at 5 pm. *You should view the lecture before reading the article, so plan ahead!* There will be 9 quizzes, with the lowest grade dropped. Each remaining quiz is worth 10 points, totaling 80 points.

4. Exams (15%): There will be three non-cumulative exams over the course of the semester. All three exams will cover lecture material, which comes directly from the textbook, along with the weekly article readings. Thus, it is *not required* to read the textbook, but it will obviously help in learning the material. Each exam will be composed of the concepts covered in the quizzes so each evaluation builds upon one another and facilitates student learning. Additionally, there will be questions that address the main themes discussed in the articles (e.g., what was the theory, what was the main finding, etc.). Each exam must be completed by 11:59PM of the day it is scheduled. Exams will be 50 multiple choice questions. Once the exam is started, you will have 90 minutes to finish. Each exam is worth 50 points, totaling 150 points.

5. Research Article Presentation (5%): One research article will be assigned for each topic and the presentation of individually assigned articles will be evaluated. Should you want to present material other than the articles on the class reading list, you may do so with the instructor's permission (given at least two weeks advanced notice). One or two students will be paired to give a Powerpoint presentation of the target article and related research, as well as facilitate discussion among other students in the class. The total discussion should last approximately 1 hour in total. However, the Powerpoint presentation by the students should will last only **10 minutes**. The remaining 50 minutes will be spent answering questions regarding the presentation and facilitating discussion among the students in the classroom. A grading rubric for the presentation is available on Canvas. The specific presentation dates will be posted on the tentative schedule of presentations. Each student will present research articles once during the semester. Each presentation is worth 50 points.

6. Online Discussion (9%): Students are expected to participate in class actively. For each article assigned for class, students [except the presenters of the target article] should prepare 1 discussion response. The discussion posts will be submitted via Canvas and due *by 5 pm CST one day prior to the discussion* of the article in class. Additionally, you must make one "reply" to an existing post *by 12 pm CST the day of the presentation*. For example, if you are in Group 1 that meets on Tuesday, January 27, you should upload discussion post by 5 pm on Monday, January 26, and one "reply" to an existing post by 12 pm Tuesday, January 27. This is to give the presenters sufficient time to look over the questions to help facilitate classroom discussion. The tentative schedule and templates are available and should be used for preparation of the class. There will be 9 weeks for posting discussions. Each week is worth 10 points, totaling 90 points.

7. Classroom Discussion (10%): Students are expected to participate in class actively. This active discussion is to increase critical thinking skills and should promote thoughtful dialogue among students in the classroom. The purpose of the online discussion posts is to facilitate classroom discussion. Participation in discussion will be assessed through your active questioning and the involvement in discussion during presentation of target articles. The presenter may provide some talking points and it is your job to actively participate in those discussions. Moreover, you should be prepared to ask questions without provocation from the presenter. While the presenter is there to facilitate discussion, this is a group discussion so everyone should feel free to ask and answer questions. To get credit you must make *two* substantive comments during the discussion. This can be a question directly to the presenter, replying to another student asking a question, an interesting thought or comment that you had while reading the paper, etc. You must contribute to

the discussion during 8 of the 9 days of article presentations and during 2 of the 3 days of group presentations. Each contribution is worth 10 points, totaling 100 points.

8. Lab Activities (22%): The lab portion of the task is designed to teach you how to conduct your own cognitive research based on the methodological and theoretical principles learned during the lecture portion of the class. You will learn how to build an experimental program using QuestionPro (or a related survey software), come up with a research idea, collect and analyze data, and write up the results. This will be turned into the research manuscript (described above). The lab portion of the class will be worth 220 points (a separate syllabus is provided with all assignments for the lab).

9. Written Manuscript of Research Project (20%): As part of the lab, students will work together in groups of 2-3 to develop their own research study. Each group will write a manuscript describing the study that they conducted during the course of this class. The manuscript will conform to APA style and will present a study conducted on a topic in cognition. A grading rubric is available on Canvas. The manuscript will be worth 200 points.

10. Oral Presentation of Research Project (5%): As part of the lab, students will work together in groups of 2-3 to develop their own research study. Each group will give a formal presentation at the end of the semester of the completed research. The presentation should last approximately 12 minutes and should include background information, methods, results, and a discussion. There will also be 3-5 minutes for answering questions. This assignment will be worth 50 points.

Grading Policy: Grades are based on a percentage score and not a curve. All coursework must be completed by the last day of class for credit. Students are expected to keep track of their performance throughout the semester, which Canvas facilitates, and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels; see “Student Support Services,” below.

Percentage Score required to obtain each letter grade

100%-90% A	[1000 - 900 points]
89%-80% B	[899 - 800 points]
79%-70% C	[799 - 700 points]
69%-60% D	[699 - 600 points]
59%-less F	[<599 points]

Grades will be rounded to the nearest whole number. For example, if the final grade earned is a 89.49%, this will be rounded to an 89% (this is non-negotiable). Missed work including presentations or discussion will be accorded a grade of zero unless the student submits a valid written excuse recognized by the university's rules. The final grade will be calculated based on the sum scores of points 1 through 8 above.

Extra Credit: Extra credit opportunities will be provided from quizzes, extra presentations, and participating in research that is being conducted by researchers in the psychology department.

Grade Grievances:

Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current University Catalog

Grading Policy: <https://catalog.uta.edu/academicregulations/grades/#undergraduatetext>

Student Complaints: <http://www.uta.edu/deanofstudents/complaints/index.php>

Schedule **

Week	Day	Date	Lecture Topic	Topic Type
Week 1	Tues	18-Jan	Course Overview & Introductions	Everyone attend Teams
	Thurs	20-Jan		No class: read Godden & Baddeley (1975) in preparation for lab
Week 2	Tues	25-Jan	Science of Cognition	Group 1 Article Discussion
	Thurs	27-Jan		Group 2 Article Discussion
Week 3	Tues	1-Feb	Memory Encoding	Group 1 Article Discussion
	Thurs	3-Feb		Group 2 Article Discussion
Week 4	Tues	8-Feb	Memory Retrieval	Group 1 Article Discussion
	Thurs	10-Feb		Group 2 Article Discussion
Week 5	Tues	15-Feb	<i>Review and Exam</i>	<i>Review Session 1</i>
	Thurs	17-Feb		<i>Exam 1</i>
Week 6	Tues	22-Feb	Perception	Group 1 Article Discussion
	Thurs	24-Feb		Group 2 Article Discussion
Week 7	Tues	1-Mar	Attention	Group 1 Article Discussion
	Thurs	3-Mar		Group 2 Article Discussion
Week 8	Tues	8-Mar	Knowledge Representation	Group 1 Article Discussion
	Thurs	10-Mar		Group 2 Article Discussion
Week 9	Tues	15-Mar	<i>Spring Break</i>	
	Thurs	17-Mar		
Week 10	Tues	22-Mar	<i>Review and Exam</i>	<i>Review Session 2</i>
	Thurs	24-Mar		<i>Exam 2</i>
Week 11	Tues	29-Mar	Problem Solving	Group 1 Article Discussion
	Thurs	31-Mar		Group 2 Article Discussion
Week 12	Tues	5-Apr	Reasoning	Group 1 Article Discussion
	Thurs	7-Apr		Group 2 Article Discussion
Week 13	Tues	12-Apr	Decision Making	Group 1 Article Discussion
	Thurs	14-Apr		Group 2 Article Discussion
Week 14	Tues	19-Apr	<i>Review and Exam</i>	<i>Review Session 3</i>
	Thurs	21-Apr		<i>Exam 3</i>
Week 15	Tues	26-Apr	Final Presentations	Attendance Required (ALL)
	Thurs	28-Apr	Final Presentations	Attendance Required (ALL)
Week 16	Tues	3-May	Final Presentations	Attendance Required (ALL)
Finals	Thurs	5-May	Paper Due	

****Lecture content/Presentation dates are tentative and subject to shift according to the needs of an individual class. As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. Any revisions to this syllabus will be announced during class time. It is your responsibility to make a note of any changes in this syllabus.**

READING LIST AND PRESENTERS FOUND ON CANVAS WEBSITE!

Institution Information

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering.

Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wweb.uta.edu/aao/fao/>).

Disability Accommodations: UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA)*, *The Americans with Disabilities Amendments Act (ADAAA)*, and *Section 504 of the Rehabilitation Act*. All instructors at UT Arlington are required by law to provide “reasonable accommodations” to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the **Office for Students with Disabilities (OSD)**. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

The Office for Students with Disabilities, (OSD) www.uta.edu/disability or 817-272-3364(T).
Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or 817-272-3671(T).

Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX: The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos. For information regarding Title IX, visit www.uta.edu/titleIX.

Academic Integrity: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence. I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

Per UT System Regents' Rule 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University. Any violations to the academic integrity policy will be result in the course grade of 'F'.

Campus Carry: Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit <http://www.uta.edu/news/info/campus-carry/>

Active Shooter: The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by UTA Police regarding the options and strategies we can all use to stay safe during difficult situations. <https://police.uta.edu/activeshooter>

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick

Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at <http://www.uta.edu/universitycollege/resources/index.php>

The IDEAS Center (<https://www.uta.edu/ideas/>) (2nd Floor of Central Library) offers **FREE** tutoring and mentoring to all students with a focus on transfer students, sophomores, veterans and others undergoing a transition to UT Arlington. Students can drop in or check the schedule of available peer tutors at www.uta.edu/IDEAS, or call (817) 272-6593.

The English Writing Center (411LIBR): The Writing Center offers **FREE** tutoring in 15-, 30-, 45-, and 60-minute face-to-face and online sessions to all UTA students on any phase of their UTA coursework. Register and make appointments online at the Writing Center (<https://uta.mywconline.com>). Classroom visits, workshops, and specialized services for graduate students and faculty are also available. Please see Writing Center: OWL for detailed information on all our programs and services.

The Library's 2nd floor Academic Plaza (<http://library.uta.edu/academic-plaza>) offers students a central hub of support services, including IDEAS Center, University Advising Services, Transfer UTA and various college/school advising hours. Services are available during the library's hours of operation.

Librarian to Contact: Each academic unit has access to Librarians by Academic Subject that can assist students with research projects, tutorials on plagiarism and citation references as well as support with databases and course reserves.

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone), **2-3003** (campus phone). You may also dial 911. Non-emergency number 817-272-3381