

Cognitive Neuroscience: NSC/ PSY/CGS 4359

Spring Term 2016

Tuesday & Thursday 10:00 am-11:15 am

2.106 JSOM Building

Professor Information

Dr. Karen M. Rodrigue, PhD
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Phone: (972) 883-3738
Office Hours: by appointment

Teaching Assistant Information

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Office Hours: Thurs 11:30-12:30pm

Prerequisites: Introduction to Psychology PSY 2301

Course Description: In this course we will examine how modern cognitive neuroscientists are exploring the neural underpinnings of basic and higher cognitive functions (including perception, memory, attention, language, and emotion). We will investigate how the brain-bases of these functions are being uncovered by ingenious observation of clinical populations (including brain-damaged and schizophrenic patients), animal and human electrophysiological techniques, and the powerful new tools of functional neuroimaging.

Course Objectives:

- To identify the intellectual underpinnings and history of the concepts of cognitive neuroscience
- To develop a working knowledge of the central nervous system and the basic functions which underlie human behavior
- To understand the behavioral and neuroscientific methods that are applied to the study of cognition and brain function.
- To explain the major theories and models of fundamental cognitive processes and explore current thinking on how such models guide the study of the functioning human brain.

Required Materials:

Gazzaniga, M.S., Ivry, R.B., Mangun, G.R. (2013). *Cognitive Neuroscience: The biology of the mind* (4th Edition). NY: W.W. Norton and Co.

Attendance: Attendance is highly encouraged, as you will be missing out on important information if you do not attend class regularly. You will be responsible for material presented both in class and in the text, so it is in your best interest to attend class.

Class Policies: Be respectful to others: the classroom should be a comfortable environment for everyone. Individuals who disrupt class will be asked to leave. Come to class prepared: Read the material before coming to class and arrive on time.

Grading Policy: Grades will be based on your performance across 3 of the 4 exams over the semester. The three highest grades for each student will be averaged to calculate the final grade. Exams will include a combination of multiple choice and short answer questions and will total 100

maximum points. The final exam is not cumulative. Overall class performance will be taken into consideration and if appropriate, exams may be graded on a curve.

Grading Scale

A: 100-90% B: 89-80% C: 79-70% D: 69-60% F: 59% or below

Final grades that fall at .45 or higher will be rounded up to the next point (e.g., 89.45 = A).

DO NOT MISS AN EXAM! In general, make-up exams will NOT be allowed in the class. The purpose of calculating final grades based on the three highest scores is to offset the impact of missed exams due to minor illnesses, scheduling issues, multiple exams on this same day, etc. Make-up exams will only be considered in truly exceptional circumstances (e.g., surgery, detainment, funerals, etc.) and verifiable documentation must be presented.

Faulty Exam Questions: Occasionally, we write faulty exam questions. If you encounter such a question, let me know immediately after the exam period. I will consider arguments before grading the exams and, if necessary, throw out the question for everyone. As a regular practice, I conduct item analysis of class performance on all exams and may throw out questions when there is clear evidence of a problem with an exam question.

Extra Credit. Every student has an opportunity to earn extra credit in the course by writing short papers. I will allow each student to write up to 5 extra credit papers over the semester. Students may choose suggested readings from the textbook (found at the end of each chapter) and write a 2 page paper explaining why you chose that particular paper, summarizing that article (e.g., what they researchers did and why they did it, what they found) and most importantly, what you learned from the reading beyond the textbook/lecture coverage of that topic. These papers will be worth 2 points each for a total of 10 maximum points added to the total number of points in the course if you do all 5. **No additional extra credit options will be considered.** Please note that these 10 points will not alter your grade drastically, but may bump you up to the next letter grade if you are near the top of a letter grade.

COURSE OUTLINE

<u>Date</u>	<u>Topic</u>
1/12	Overview of Course
1/14	<i>No class:</i> Human Amyloid Imaging Conference
1/19	Chapter 1: Historical Perspectives
1/21	Chapter 2: Structure and Function of the Nervous System I
1/26	Chapter 2: Structure and Function of the Nervous System II
1/28	Chapter 3: Methods of Cognitive Neuroscience I
2/2	Chapter 3: Methods of Cognitive Neuroscience II
2/4	Catch-up day/ Review
2/9	Exam 1
2/11	Chapter 4: Hemispheric Specialization II
2/16	Chapter 4: Hemispheric Specialization II
2/18	Chapter 5: Sensation and Perception I
2/23	Chapter 5: Sensation and Perception II

2/25	Chapter 6: Object Recognition I
3/1	Chapter 6: Object Recognition II
3/3	Exam 2
3/8	Chapter 7: Attention and Consciousness I
3/10	Chapter 7: Attention and Consciousness II
3/15	<i>NO CLASS – Spring Break</i>
3/17	<i>NO CLASS – Spring Break</i>
3/22	Chapter 8: Action I
3/24	Chapter 9: Memory I
3/29	Chapter 9: Memory II
3/31	Catch-up day/Review
4/5	Exam 3
4/7	Chapter 10: Emotion I
4/12	Chapter 10: Emotion II
4/14	Chapter 12: Cognitive Control I
4/19	Chapter 12: Cognitive Control II
4/21	Chapter 13: Social Cognition I
4/26	Chapter 13: Social Cognition II
4/28	Exam 4

Student Conduct & Discipline

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Email Use

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the

security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grade Policy

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of **F**.

Disability Services

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is:

The University of Texas at Dallas, SU 22

PO Box 830688

Richardson, Texas 75083-0688

(972) 883-2098 (voice or TTY)

Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.

It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.