

Research Design and Analysis

PSY 3392 Section 002

Fall 2015

T, TR 4:00pm – 5:15pm, GR 4.301

Instructor: Noah Sasson, Ph.D.
Phone: 972-883-2541
Office: GR 4.813
Office Hours: T 12:15 – 1:15pm
Or by appointment
Email: nsasson@utdallas.edu

TA: Vahid Montazeri
Office: GR 4.404
Office Hours: T 2:45 – 3:45pm
Or by appointment
Email: vxm108220@utdallas.edu

Course Description

Rigorous research practices are what define psychology as a scientific discipline. This course covers the scientific processes used by research psychologists to reach sound conclusions about the mind and behavior. Strategies for identifying meaningful hypotheses, implementing research practices, and interpreting and communicating research findings will be discussed.

Course Objectives (* denotes program-level objectives)

You will learn how to 1) describe and explain the nature of psychology as a scientific discipline*, 2) identify and frame a testable research question, 3) identify and explain different research methods used by psychologists*, 4) understand statistical analysis strategies for examining generated data, 5) use critical thinking to evaluate the appropriateness of conclusions derived from basic statistical analyses*, 6) report study findings in a proper format, and 7) use critical thinking to evaluate popular media, scholarly literature, and empirical reports*. Specific learning outcomes for students taking this course include:

1. On class exams, students will be able to identify components of the scientific method, differentiate sampling procedures, research designs and analytical approaches, interpret methods and findings from assigned research articles and discuss ethical considerations in psychological research.
2. On in-class exercises, students will be able to formulate research hypotheses, describe appropriate research designs, interpret research reports and write in proper APA style.

Prerequisites

You must have completed PSY 2317, PSY 3390 or STAT 1342 in order to take this course.

Course Materials

1. Required Textbook: Shaughnessy, J. J., Zechmeister, E. B., & Zechmeister, J. S. (2011). *Research Methods in Psychology, 9th Edition*, New York, NY: McGraw-Hill.
2. Four empirical articles from academic journals will be posted on e-learning.
3. Recommended: Publication Manual of the American Psychological Association (6th Edition)

Evaluation

Evaluation is based upon a combination of exams, in-class activities and class participation.

Exams: Material from both lectures and reading assignments, including assigned articles, will be covered on the exams. A total of four exams will be administered. The first three exams will each count as 100 points towards your final grade. ***Your lowest grade from these three exams will be dropped.*** The fourth exam will be a final exam that counts 200 points. Although the final exam is cumulative, it will heavily emphasize material covered since the previous exam. The material included on the final exam that does stem from earlier in the semester will be concepts and terms deemed by the instructor to be the most critical components of the course. Each exam will be a combination of multiple-choice, true-false, fill in the blank and short answer questions. Exams will not be returned. Make-up exams will NOT be offered. Missing one of the first three exams for any reason (e.g., illness, personal/family problems, etc.) will result in a grade of zero that may serve as your one dropped grade. In extremely rare cases, a makeup exam may be given at the instructor's discretion if verified documentation for legitimate absence (e.g., school-sponsored activity or religious observance) is provided.

Activities: In order to demonstrate mastery of concepts covered in the course, students will complete a series of in-class written activities throughout the semester. The dates of these activities are listed in the course schedule below. The activities will be completed in small groups, with one activity being turned in for each group. Each of the seven activities will be worth 30 points (for a total of 210 points), and each member of a group will receive the same grade on the activity. If you are not in attendance on a day in which an activity is occurring, you will receive a zero for that particular activity. If you arrive to class late and groups are already formed, you will complete the activity on your own. ***Your lowest activity grade will be dropped.*** No make-up activities will be offered.

Class Participation: You are expected to attend every class and to have completed assigned readings prior to your arrival. Material presented in class assumes that you have completed your readings, and failure to do so may impede learning from lectures. On several occasions, class attendance will be recorded, which will factor into your participation grade. Your participation grade will also be derived from a variety of factors heavily related to regular attendance: participation in class discussion, asking and answering questions, and in-class visibility. Additionally, because exams cover material presented in class that does not appear in the textbook, class attendance will enhance exam performance. Finally, I will not review material from missed lectures with students without a legitimate excuse.

<i>Possible Points</i>	
Requirement	Points
Exam 1	100
Exam 2	100
Exam 3	100
Final Exam	200
Activities	210
Participation	70
Total	780
Total (after subtracting lowest Exam and Activity grade)	650

Grades

<i>Letter Grades</i>	
Letter	Percentage
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	59 or lower

<p><i>No extra credit assignments will be offered.</i></p>
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Course Schedule

Month	Day	Topic	Chapter
August	25	Introductions / History of Psych. Research	1
	27	Scientific Method	2
September	1	Scientific Method, Ctd.	2
	3	<i>Activity 1</i>	
	8	Ethics	3
	10	<i>Activity 2</i>	
	15	Exam 1	Article 1
	17	Observational Designs	4
	22	Physical Trace and Archival Data	4
	24	Survey Research	5
October	29	Getting to Know Your Data	11
	1	<i>Activity 3</i>	
	6	Exam 2	Article 2
	8	Null Hypothesis Testing	12 (p. 384-90)
	13	P-values, Power, Effect Sizes, etc.	12 (p. 384-90)
	15	<i>Activity 4</i>	
	20	Experimental Designs	6
	22	Experimental Designs, Ctd.	6
	27	Repeated Measures	7
	29	<i>Activity 5</i>	
November	3	Exam 3	Article 3
	5	Complex Designs	8
	10	Complex Designs, Ctd.	8
	12	<i>Activity 6</i>	
	17	Small Sample Research	9
	19	Quasi-Experimental Designs	10
	24	Fall Break	
	26	Thanksgiving Holiday	
December	1	Communicating Research	13
	3	<i>Activity 7</i>	
	8	Applying What You Know	
	17	Final Exam 5:00PM	Article 4

I reserve the right to change lecture topics if more time is needed on a topic.

Research Exposure Credit Requirement (REC):

One requirement of all students enrolled in this class is completion of two research exposure credits. Details about this requirement can be found on a separate handout distributed on the first day of class, the BBS Information Center on eLearning or at <http://bbs.utdallas.edu/undergraduate/rec.html>. Research exposure credits must be completed by December 1st or your course grade will be lowered. For each credit you fail to complete, your course grade will be reduced by 1/3 of a letter grade (e.g., for 2 missing credits, a B+ will become a B-).

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, 972/8836391).

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 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.

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

These descriptions and timelines are subject to change at the discretion of the Professor.