Research Design

PSY 341

TH 11am-1215pm

LAB T 12:30pm-1:45pm

Spring Semester 2019

Professor Information:

Name: Dr. Nathan Sparkman, Ph.D.

Department: Psychology

Office: ED 215P

Office Phone: 936-468-4402* - email is better

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Office Hours: MW 10-11:30 TH 12:30-1:30 and by appt

If you need an appointment outside office hours, please email me to set up a meeting.

Required Text:

Research Methods for the Behavioral Sciences -- Gravetter and Forzano

Thomson Wadsworth, 5th edition (4th ed is also okay)

Course Description:

Psychology 341: Research methods, emphasizing use of experimental control and analysis of data for reporting experimental results in the psychological study of human and non-human behavior.

Program Learning Outcomes:
The student will understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.

The student will respect and use critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to solve problems related to behavior and mental processes.

The student will value empirical evidence, tolerate ambiguity, act ethically, and reflect other values that underpin psychology as a science.

**STUDENT LEARNING OUTCOMES**

By the end of this course, students should be able to…

The main goal for this course is for you to become a better consumer of research. You can achieve this goal by mastering the following objectives:

- Develop critical thinking skills.
- Know the differences between scientific and nonscientific explanations of behavior.
- Know the different methods of acquiring knowledge.
- Understand ethics in experimental research.
- Identify independent, dependent, and confounding variables, operationally define them, and place them on their appropriate scale of measurement.
- Distinguish experimental and correlational research and use the appropriate statistical test for each.
- Describe groups using measures of central tendency and variability and interpret group differences in terms of statistical significance.
- Construct and analyze graphs.
- Know the differences between two types of research designs: between-subjects and within-subjects, and to determine the appropriateness of using a particular design.
- Learn how to critically evaluate articles found in scientific journals and mainstream magazines.
- Understand how construct validity, internal validity, external validity, reliability, and reactivity directly speak to the credibility and applicability of findings disseminated through scientific journal articles and popular media.

**Prerequisites:** Psy133 and Psy200, and Psy330, Minimum C in all courses

**COURSE REQUIREMENTS:**

**Grading Policy:**
Final grades for the course are based on the coursework described below. All grades will be posted in the D2L website.

**Evaluation and Grading:**

<table>
<thead>
<tr>
<th>COURSEWORK PERCENTAGE</th>
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<tbody>
<tr>
<td>3 Unit Tests (70%)</td>
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<tr>
<td>Completed Research Proposal (10%)</td>
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<tr>
<td>Assignments, Drafts &amp; Lab Reports (20%)</td>
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**Total 100%**

Grading Scale:

- **A =** 90%-100%
- **B =** 80%-89%
- **C =** 70%-79%
- **D =** 60%-69%
- **F =** 0%-59%

**Unit Tests:** There will be 3 closed-book unit tests. Each test is comprised of material from the lectures and assigned readings/media/activities and assignments. The tests will be taken during class time (and during the final exam time). Students will be given at least one-week notice of the exact test date. Each exam is of equal weight.

**Assignments, Lab Reports, & Presentations:** In class and lab assignments will be weighted in accordance with assignment length and required effort. Lab reports will consist of a short APA style report that includes an introduction to the topic (including the hypothesis), a result section with graphs and a short discussion with references. Additionally, students may be required to make a short presentation of data that they have collected and analyzed. These should be accompanied by the appropriate visual aids for the audience including a powerpoint presentation that includes an introduction, methods, results (graphs) and conclusion.
Research Proposal: Each student over the course of the semester will develop an APA style research proposal. The proposal will focus on designing a study based upon a sufficient review of the literature. Students will formulate a hypothesis and design the study that could test it. Additionally, students will discuss the implications of their anticipated study results; how it extends the literature, potential problems that may arise along with future directions.

Guidelines for the Course

1. Late and Make-Up Test/Work Policy

Late work will not be accepted.

If a student is so late for a test that another student has completed the test and left the room, the student will not be permitted to start the test at that time. If a student misses a test, makeup tests will be scheduled in the event that documentation is provided to the instructor showing that the student was incapacitated during the time in which the test was offered. Students must provide documentation of a University-recognized excused absence to be eligible to take a make-up test. Make-up tests must be completed within a week. In order to do this, the student must contact the instructor, provide documentation of a University-recognized absence, and schedule a time to makeup the test. It is the student’s responsibility to contact the instructor. If a student fails to do so or fails to meet with the instructor in a timely manner (1 week), he/she forfeits his/her opportunity to complete the work and grade of zero will remain in the grade book.

2. Withheld Grades - Semester Grades Policy (A-54)

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

3. Academic Integrity (A-9.1)

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism. All forms of academic dishonesty will be dealt with seriously
and immediately. Please respect SFASU, yourself and me enough not to participate in academic dishonesty.

**Definition of Academic Dishonesty**

Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at [http://www.sfasu.edu/policies/academic_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp)

**NOTE: ALL WORK IN THE COURSE HAS THE POTENTIAL TO BE ELECTRONICALLY CHECKED FOR PLAGARISM.** The check includes all known published works in the public sphere, as well as classmates’ and students’ work at other institutions.

### 4. Student Behavior

Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy 10.4). Students who do not attend class regularly or who perform poorly on coursework may be referred to the iCare Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

### 5. Students with Disabilities

These disabilities could consist of physical, psychiatric, and/or learning impairments. To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided.
Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

6. **Financial aid and student class attendance**

In compliance with federal regulations governing financial aid, instructors are required to report students who have never attended or participated in class. Attendance can be defined by physical attendance or participation in an academically related activity such as submission of an assignment, examination, or participation in group or online discussion. Instructors may use key assessment points such as projects, papers, discussions, etc. as benchmarks for participation. Students marked as never attended will be dropped from class if they receive financial aid. Federal laws for Financial Aid have dictated that any student who is not attending class will not receive financial aid. In order to comply, any student marked as never attended will be dropped and financial aid altered. Instructors will have to verify enrollment if a student is incorrectly marked as never attended upon request by the student.

**Course Schedule and Reading Assignments**

Schedule of topics covered and assignments are listed below. You are expected to have read and be familiar with assigned readings prior to class. Assignments will be made throughout the course and may include in class activities and homework.

*Note: All dates and assignments are tentative and the professor reserves the right to change them.*

**Lecture Topic/Chapter (Research Methods for the Behavioral Sciences - Week # - Gravetter and Forzano)**

1. 1. Introduction, Acquiring Knowledge, and the Scientific Method.

2. 2. Research Ideas.
   
   3. Defining and Measuring Variables.


5 5. Selecting Research Participants.

EXAM 1


8 7. The Experimental Research Strategy.


EXAM 2

11. Factorial Designs


14 4. Ethics

14. Single-Subject Research Designs

RESEARCH PROPOSAL DUE

15 14. Single-Subject Research Designs
EXAM 3