Research Design PSYC-3341-003

SPRING '24

Professor Information:

Name: Dr. Nathan Sparkman, Ph.D.

Department: Psychology

Office: ED 215P

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

e-mail: sparkmannl@sfasu.edu or D2L mail

Office Hours: MW 10-12; R 11-12 or by appt

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

Required (Recommended) Text:

Research Methods for the Behavioral Sciences -- Gravetter and Forzano

4th edition or newer

Course Description:

Psychology 3441: 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.

PSYC 3441 “Research Design” (3 credits) is a writing-intensive course which is designed to introduce students to research design in psychology by covering the application of 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. The course typically meets 150 minutes a week in two 75-minute segments or three 50-minute segments for 15 weeks, and also meets for a 2-hour final examination period. The online course section will have recorded lectures, reading and work that are approximately equivalent. Students typically have significant weekly
reading assignments, writing assignments, are expected to take regular tests, and a final examination. These activities average at a minimum 8 hours of work each week to prepare outside of classroom hours. Online course sections contain extensive written content that includes the same information students in a face-to-face lecture sections receive, requiring students to engage the online modules for at least four hours per week. For every hour a student spends engaging with the online content, he/she spends at least two hours completing associated activities and assessments.

Program Learning Outcomes:

The student will understand and apply basic research methods in psychology, including research design, data analysis, and interpretation

Proficiency Level : Mastery

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.

Proficiency Level : Mastery

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

Proficiency Level : Mastery

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: General Psychology, Scientific Literacy and Psychological Statistics

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:

COURSEWORK PERCENTAGE

3 Unit Tests (50%)

Quizzes (3%)

Assignments, Drafts & Reports (47%)

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 unit tests. Each test is comprised of material from the lectures and assigned readings/media/activities and assignments. Each exam is of equal weight. Exams are timed and student should be well-prepared. These are exams a primarily multiple choice, but may also include short answer or essay.

**Assignments, Papers, & Discussions:** Assignments will be weighted in accordance with assignment length and required effort. All work is expected to reflect that appropriate for a university setting and reflect the appropriate level of critical thinking and focus on well-crafted scientific writing. All work is required to be the original work of the student and demonstrate the cumulative knowledge of the curriculum including Scientific Literacy and Statistics. AI-generated, plagiarism, collusion are strictly forbidden and use of such will be subject to university policies.

Papers may 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

**Research Proposal:** Each student over the course of the 2nd half 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.

**Mastery Quizzes:** Each unit has a mastery Quiz. These are short, untimed quizzes that you may take twice. You will receive the grade for the higher of your two attempts. All quizzes are weighted equally.

**Guidelines for the Course**

*Late and Make-Up Test/Work Policy*
Late work will not be accepted; however, you should communicate with the professor regarding any missed work.

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.

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.

Academic Integrity (4.1)

The Code of Student Conduct and Academic Integrity outlines the prohibited conduct by any student enrolled in a course at SFA. It is the responsibility of all members of all faculty, staff, and students to adhere to and uphold this policy.

Articles IV, VI, and VII of the new Code of Student Conduct and Academic Integrity outline the violations and procedures concerning academic conduct, including cheating, plagiarism, collusion, and misrepresentation. Cheating includes, but is not limited to: (1) Copying from the test paper (or other assignment) of another student, (2) Possession and/or use during a test of materials that are not authorized by the person giving the test, (3) Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters without permission of the Faculty member, (4) Substituting for another person, or
permitting another person to substitute for one’s self, to take a test, (5) Falsifying research data, laboratory reports, and/or other records or academic work offered for credit, (6) Using any sort of unauthorized resources or technology in completion of educational activities.

- **Plagiarism** is the appropriation of material that is attributable in whole or in part to another source or the use of one’s own previous work in another context without citing that it was used previously, without any indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course or degree requirements.
- **Collusion** is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam.
- **Misrepresentation** is providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual or to injure another student academically or financially.
- Unauthorized use of AI tools may represent both plagiarism and/or collusion and are forbidden for this course.

**Withheld Grades Semester Grades Policy (5.5)**

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 coursework 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 to compute the grade point average. For additional information, go to [https://www.sfasu.edu/policies/course-grades-5.5.pdf](https://www.sfasu.edu/policies/course-grades-5.5.pdf).

**Students with Disabilities**
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 promptly may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

Student Wellness and Well-Being

SFA values students’ overall well-being, mental health and the role it plays in academic and overall student success. Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, emotional well-being, alcohol and other drugs, identities, finances, etc.

If you are experiencing concerns, seeking help, SFA provides a variety of resources to support students’ mental health and wellness. Many of these resources are free, and all of them are confidential.

**On-campus Resources:**

**The Dean of Students Office** (Rusk Building, 3rd floor lobby)

[www.sfasu.edu/deanofstudents](http://www.sfasu.edu/deanofstudents)

936.468.7249

dos@sfasu.edu

**SFA Human Services Counseling Clinic** Human Services, Room 202

[www.sfasu.edu/humanservices/139.asp](http://www.sfasu.edu/humanservices/139.asp)

936.468.1041
The Health and Wellness Hub “The Hub”

Location: corner of E. College and Raguet St.

To support the health and well-being of every Lumberjack, the Health and Wellness Hub offers comprehensive services that treat the whole person – mind, body and spirit. Services include:

- Health Services
- Counseling Services
- Student Outreach and Support
- Food Pantry
- Wellness Coaching
- Alcohol and Other Drug Education

www.sfasu.edu/thehub
936.468.4008
thehub@sfasu.edu

Crisis Resources:

- Burke 24-hour crisis line: 1.800.392.8343
- National Suicide Crisis Prevention: 9-8-8
- Suicide Prevention Lifeline: 1.800.273.TALK (8255)
- johCrisis Text Line: Text HELLO to 741-741

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 inclass activities and homework.

*Note: All dates and assignments are tentative and the professor reserves the right to change them. To stay up to date on topics and due dates you should be checking D2L daily.*
Lecture Topic/Chapter (Research Methods for the Behavioral Sciences - Gravetter and Forzano)

1 Getting Started/Introduction, Acquiring Knowledge, and the Scientific Method.

- Read Associated Chapter/Review Online Materials
- Complete Assignments/Discussion
- Take Mastery Quiz

2 Research Ideas and Hypotheses

- Read Associated Chapter/Review Online Materials
- Complete Assignments/Discussion
- Take Mastery Quiz

3 Defining and Measuring Variables

- Read Associated Chapter/Review Online Materials
- Complete Assignments/Discussion
- Take Mastery Quiz

4 Correlations

- Read Associated Chapter/Review Online Materials
- Complete Assignments/Discussion
- Take Mastery Quiz

5 Selecting Research Participants

- Read Associated Chapter/Review Online Materials
- Complete Assignments/Discussion
- Take Mastery Quiz

Exam 1

6 The Experimental Research Strategy.

- Read Associated Chapter/Review Online Materials
- Complete Assignments/Discussion
- Take Mastery Quiz
7  Factorial Designs

8  Factorial Designs
Read Associated Chapter/Review Online Materials
Complete Assignments/Discussion
Take Mastery Quiz

9  Ethics
Read Associated Chapter/Review Online Materials
Complete Assignments/Discussion
Take Mastery Quiz

10 Experimental Designs: Between-Subjects Designs.
Read Associated Chapter/Review Online Materials
Complete Assignments/Discussion
Take Mastery Quiz

11 Experimental Designs: Within-Subjects Designs.
Read Associated Chapter/Review Online Materials
Complete Assignments/Discussion
Take Mastery Quiz

12 Descriptive Research
Read Associated Chapter/Review Online Materials
Complete Assignments/Discussion
Take Mastery Quiz

13 Research Strategies and Validity
Read Associated Chapter/Review Online Materials
Complete Assignments/Discussion
Take Mastery Quiz
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<td>The Nonexperimental and Quasi-Experimental Strategies: Nonequivalent Group, Pre–Post, and Developmental Designs.</td>
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<td>Read Associated Chapter/Review Online Materials</td>
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<td>Take Mastery Quiz</td>
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<td><strong>Single Subject Design</strong></td>
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<td><strong>COMPLETED RESEARCH PROPOSAL DUE</strong></td>
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