San José State University
Department of Psychology
PSYC 118-20, 21, 22
Advanced Research Methods, Fall 2025

Course and Contact Information

Instructor:	Sisi Dong
Office Location:	DMH 230
Telephone:	TBD
Email:	sisi.dong@sjsu.edu
Office Hours:	Mon Wed 12:00 - 1:00 pm
Class Days/Time:	Lecture PSYC 118 - 20: Mon Wed 1:30 – 2:20 pm
	Lab PSYC 118 - 21: Mon 3:00 - 5:00 pm
	Lab PSYC 118 - 22: Wed 3:00 - 5:00 pm
Classroom:	Lecture: Duncan Hall 250
	Lab: DMH 339

Prerequisites: lower division GE complete; PSYC 1; STAT 95; PSYC 100W with 'C' or better (or department approval); Upper Division; Psychology or Behavioral Science Major

Course Description

Descriptive, correlational, quasi-experimental, and experimental approaches: design, methodology, and analysis. Experience designing, conducting, analyzing, and presenting (verbal and written) research findings. Topics will include, hypothesis testing, validity, reliability, scales of measurement, questionnaire development, power, statistical significance, and effect size.

Course Format

This is an in-person course. You are expected to attend the lecture and the lab session in person.

CANVAS and MYSJSU Messaging

Copies of some course materials such as the syllabus, major assignment handouts, etc. may be found on Canvas. Messages to the class may be sent through Canvas or MYSJSU.

Course Learning Outcomes (CLO)

Upon successful completion of this course:

- CLO1 – Students will be able to design, implement, and communicate basic research methods in psychology, including research design, data analysis, and interpretations.
- CLO2 – Students will be able to use critical and creative thinking, skeptical inquiry, and a scientific approach to address issues related to behavior and mental processes.
- CLO3 – Students will value empirical evidence, tolerate ambiguity, act ethically, and recognize their role and responsibility as a member of society.

Upon successful completion of the SJSU baccalaureate degree program in Psychology:

- *PLO1 – Knowledge Base of Psychology* – Students will be able to identify, describe, and communicate the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology
- *PLO2 – Research Methods in Psychology* – Students will be able to design, implement, and communicate basic research methods in psychology, including research design, data analysis, and interpretations.
- *PLO3 – Critical Thinking Skills in Psychology* – Students will be able to use critical and creative thinking, skeptical inquiry, and a scientific approach to address issues related to behavior and mental processes.
- *PLO4 – Application of Psychology* – Students will be able to apply psychological principles to individual, interpersonal, group, and societal issues.
- *PLO5 – Values in Psychology* – Students will value empirical evidence, tolerate ambiguity, act ethically, and recognize their role and responsibility as a member of society.

The learning goals for this course fall into four categories that follow the construction of a research report. Learning outcomes for the first part of the course describes how the psychological sciences seek to gain knowledge about behavior and mental processes by running experiments and other types of studies. The second category will cover how scientific methods are used in psychological research. The third category will cover why statistics are important and needed in psychological research, choosing the appropriate statistical analyses, and interpret the results. The final goal is to apply our learning by carrying out a planned research experiment with a full research report and presentation.

Textbook

Bhattacherjee, A. (2012). *Social science research: Principles, methods, and practices.* (A free open educational resource available online in pdf: https://digitalcommons.usf.edu/oa_textbooks/3/)

American Psychological Association. (2009). *Publication manual of the American Psychological Association* (7th Ed.). Washington, DC: American Psychological Association. ISBN: 1433805618

Recommended Reading

Cozby, P.C., & Bates, S. (2020). Methods in Behavioral Research, 15th edition, McGraw Hill education. ISBN 9781260205589

Course Requirements and Assignments (Required - Delete the word "Required" in final draft)

Students are expected to attend all meetings for the courses in which they are enrolled as they are responsible for the material discussed therein, and active participation is frequently essential to ensure maximum benefit to all class members. Lab attendance is critical to the successful completion of this course. We will be using Excel and SPSS, available to all SJSU students, for data management and analysis.

Each laboratory assignment is designed to prepare you to successfully complete your research proposal, study, and report write-up. Lab work is graded as complete or incomplete, failure to participate in each step will interfere with your ability to complete the research project. Team participation in lab work is required. If you do not contribute to the project in a substantive way, you are taking advantage of others (hanger-on, cadger, freeloader, moocher, lounge lizard, etc.) Participation will be assessed by group evaluations at the end of the semester. Research group evaluations influence your course grade up to a full letter grade. If you know that you will be unable to consistently attend your scheduled laboratory section, do NOT take this class.

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course related activities, including but not limited to internships, labs, and clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.

Final Examination or Evaluation

Final Research Project

Your research team will develop an original research hypothesis guided by parameters set by the instructor. Project work will take place during lab, lecture, and outside of class time.

Each research group will submit a full research proposal, collect and analyze their group data, write a professional level APA-style research report and give a quality presentation of your research findings in class. The paper will be a **minimum of 8 pages** in length (not including references, double-spaced, typed, 12-point font) and include a minimum of **5+ peer-reviewed, scholarly references**. Each group will need to decide how to divide the writing of the proposal, recruitment, and data collection (along with deciding how to divide all of the other responsibilities involved in completing the project). The research proposal is a shared project.

Plagiarism of any kind will not be tolerated. Please refer to the section on Academic Integrity for information about the consequences of plagiarism. You must cite all the sources that your information comes from and also use quotations when you are directly quoting information from a source.

You, or your research team will present a short slideshow outlining your project and findings. Clear instructions are provided on Canvas. Each student is responsible for submitting their own presentation slideshow. Late reports will not be accepted.

Final Exam

Every student needs to complete the final exam through Canvas on time.

*"*Faculty members are required to have a culminating activity for their courses, which can include a final examination, a final research paper or project, a final creative work or performance, a final portfolio of work, or other appropriate assignment."

Grading Information (Required - Delete the word "Required" in final draft)

Quiz: 5 * 2 points = 10 points
(Lab) Individual Activity: 5 * 1 point = 5 points
(Lab) Group Activity: 3 * 5 points = 15 points
(Lab) SPSS Activity: 2 * 3 points = 6 points
Paper Reading Practice: 2 * 2 points = 4 points
Assignment (Proposal): 1 * 10 points = 10 points
Presentation: 1 * 15 points = 15 points
Final Paper: 1 * 25 points = 25 points
Final Exam: 1 * 10 points = 10 points

Determination of Grades

- A statement of how grades will be determined for the course, including +/- grades if they are used.
- Extra credit options, if available.

- List of the percentage weight assigned to various class assignments.
- Any policies regarding late or missed work.

Below are a few samples of accessible grading scale in table and non-table format. You can use either one or create your own grading scale as long as it is accessible with logical reading order. Different screen readers may read texts differently. The "+/-" may not be read out loud. It is always a good practice to spell them out and spell out any abbreviations or make a reference of your abbreviation when used for the first time.

A = 93 to 100 points
A minus = 90 to 92.9 points
B plus = 87 to 89.9 points
B = 83 to 86.9 points
B minus = 80 to 82.9 points
C plus = 77 to 79.9 points
C = 73 to 76.9 points
C minus = 67 to 72.9 points
D = 60 to 66.9 points
F = 59.9 points or lower

PSYC 118 Advanced Research Methods

Fall 2025 Course Schedule

The schedule is subject to change with notice.

Course Schedule (Required - Delete the word "Required" in final draft)

	Meeting Type	Topics, Readings	Textbook Readings	Assignment
Week 1 8.20	Lecture Wed	Introduction, Syllabus & Calendar	Chapter 1: Introduction to Research	
	Lab	*N/A*		
Week 2 8.25 – 8.29	Lecture Mon	Introduction to Behavioral Research	Chapter 2: Thinking Like a Researcher	
	Lecture Wed	Research Questions, Hypothesis		
	Lab	Individual Activity 1: RQ brainstorming, and possible literature Group Activities assignment preference Library Reference		
Week 3 9.1 – 9.5	Lecture Mon	*Labor Day - No class*	Chapter 3: The Research Process	**Quiz #1**
	Lecture Wed	Research Fundamental		
	Lab	*N/A*		
Week 4 9.8 – 9.12	Lecture Mon	Ethics in Behavioral Research	Chapter 16: Research Ethics Chapter 6: Measurement of Construct	
	Lecture Wed	Measurement and Sampling I		
	Lab	Individual Activity 2: Ethical consideration Individual Activity 3: Possible Measure for your RQ		
Week 5 9.15 – 9.19	Lecture Mon	Measurement and Sampling II	Chapter 8: Sampling Chapter 13: Qualitative Analysis	**Quiz #2**
	Lecture Wed	Qualitative Research		
	Lab	Individual Activity 4: Coding qualitative data activities		
Week 6 9.22 – 9.26	Lecture Mon	Observational Studies	Chapter 9: Survey Research	**GA1 submission**
	Lecture Wed	Survey		
	Lab	Group Activity 1: Survey Activity		
Week 7 9.29 – 10.3	Lecture Mon	Correlational Research	Chapter 10: Experimental Research	**GA2 submission**
	Lecture Wed	Experimental Design		
	Lab	Group Activity 2: Research Question and Design matching activity.		
Week 8 10.6 – 10.10	Lecture Mon	Conducting Experiments	Chapter 5: Research Design	**Quiz #3** **Assignment 1: Research Proposal**
	Lecture Wed	Complex Experimental Design		
	Lab	Individual Activity 5: what is your project design?		

Week 9 10.13 – 10.17	Lecture Mon	Single-Case, Quasi-Experimental, and Developmental Research	Chapter 11: Case Research Chapter 7: Scale Reliability and Validity	**GA3 submission**
	Lecture Wed	Reliability and Validity		
	Lab	Group Activity 3: Article validity critique		
Week 10 10.20 – 10.24	Lecture	Understanding Results: Description and Correlation		
	Lab	SPSS: descriptive and correlation		
Week 11 10.27 – 10.31	Lecture	Understanding Results: Inferential		**Quiz #4**
	Lab	SPSS: T test, ANOVA		
Week 12 11.3 – 11.7	Lecture	Understanding Results: more		**SPSS Output**
	Lab	SPSS: Linear Regression		
Week 13 11.10 – 11.14	Lecture	Presentation		**Quiz #5**
	Lab	Presentation/Open lab Q&A		
Week 14 11.17 – 11.21	Lecture	Presentation		
	Lab	Presentation/Open lab Q&A		
Week 15 11.24 – 11.28	*Happy Thanksgiving! – No Class*			
Week 16 12.1 – 12.5	Lecture	Presentation		
	Lab	Presentation/Open lab Q&A		
Final Week 12.8 – 12.12	Lecture Mon	**Final Exam (Zoom)**		**Final Project**
	Lab			