



San José State University  
Department of Psychology  
PSYC 118-10

Advanced Research Methods (44108), Fall 2024

**Instructor:** Trevor Basil, PhD

**Email:** trevor.basil@sjsu.edu

**Drop-In Hours:** Monday to Thursday, 8:30 am – 9 am and by appointment

**Office Location:** DMH 232

**Class Days:**

- **Lecture:** Monday and Wednesday 9:00 am – 9:50 am
  - **Location:** Clark 117
- **Lab:** 118-11, Monday 10:15 am – 12:15 pm
  - **Location:** DMH 236
- **Lab:** 118-12, Wednesday 10:15 am – 12:15 pm
  - **Location:** DMH 236

### **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 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.

### **Prerequisite**

**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 Goals and Student Learning Outcomes (CLOs)

Upon successful completion of this course, Psych 118 students will be able to:

- **CLO 1:** Understand how psychology is a science in which people seek to gain knowledge about behavior and mental processes by running experiments and other types of studies. Assessment for this CLO will be in class activities, review of literature, and Research Report.
- **CLO 2:** Understand how the scientific method is used in psychological research. Assessment for this CLO will be assessed by class activities, and participation in the research process.
- **CLO 3:** Understand the differences between the different types of studies and different types of research designs used in psychological research. Assessment for this CLO be in class activities, review of literature, assignments, and midterm.
- **CLO 4:** Understand why different research methods are needed for different research situations. Assessment of this CLO will be conducted with preparation assignments, class activities, and research proposal.
- **CLO 5:** Understand and know the advantages and disadvantages of specific research methods. Assessment of this CLO will be conducted class activities.
- **CLO 6:** Understand and know the vocabulary associated with psychological research methods. Assessment of this CLO will be class and laboratory activities.
- **CLO 7:** Understand how to treat research participants ethically and why the ethical treatment of participants is important and necessary. Assessment of this CLO will be class and lab activities, and midterm.
- **CLO 8:** Understand the factors that can affect the ability of a research study to provide a sound answer to a researcher's question and how to reduce or eliminate these factors. This CLO will be assessed by class assignments, research proposal, and research report.
- **CLO 9:** Understand why statistics are important and needed in psychological research. Assessment of this CLO will be assessed by class assignments, research development, and midterm.
- **CLO 10:** Understand the meaning of statistical significance. Assessment of this CLO will be class activities, research process, and the Final Exam.
- **CLO 11:** Conduct statistical analyses and interpret the results. This CLO will be assessed by laboratory assignments, class activities, research report, and APA poster.
- **CLO 12:** Understand the limitations of the results of studies and draw appropriate conclusions from the results of research studies. This CLO will be assessed by laboratory assignments, the research report, and APA poster.

- **CLO 13:** Carry out a research study from beginning to end (including writing a research report). This CLO will be assessed by the research report and APA poster.

### **Program Learning Outcomes (PLOs)**

Upon successful completion of the psychology major requirements, students will be able to:

- **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- 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 APA style poster.

### **Accessing Course Canvas site**

To access the Canvas site go to <https://sjsu.instructure.com/>

Username = SJSU 9-digit ID

Password = your current SJSUOne password

For additional information or help with logging in:

Canvas Student Tutorial: <http://www.sjsu.edu/at/ec/canvas/>

It is strongly recommended that students use the Chrome Web Browser when using Canvas. Using the latest version of Chrome will decrease the number of glitches and errors you experience, as Canvas was developed using the Chrome platform. Note: clearing your cache may help if you have trouble logging into the site.

In addition, update your Canvas setting to receive messages from this course, as announcements are sent out on a regular basis.

## Required Learning Tools

There will be no required textbook for this course

## Library Liaison

The SJSU library has a librarian who specializes in psychology (and other social sciences), and this librarian can serve as a very valuable resource for helping you to develop research ideas and locating appropriate research materials. The library also has an abundance of resources for doing psychology research: Christa Bailey, 408-808-2422, [christa.bailey@sjsu.edu](mailto:christa.bailey@sjsu.edu), <http://libguides.sjsu.edu/psychology>

## Classroom Protocol

Students are expected to always maintain a level of professional and courteous behavior. You are required to put your cell phone and other distractions away before the beginning of class. I expect you to be respectful of your fellow classmates and to receive the same respect in return. This includes introducing distractions and unrelated comments during class. Students not abiding by these policies will be asked to leave the class.

## Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester's catalog, <https://catalog.sjsu.edu/>, policy section. The Late Drop Policy is available at <https://www.sjsu.edu/aars/policies/latedrops/policy/>. This semester the last day to add a class or drop a class without a "W" is September 17th.

## Attendance

Students are expected to attend all meetings for the courses in which they are enrolled as they are responsible for material discussed therein, and active participation is frequently essential to ensure maximum benefit to all class members. If you miss two or more lab sections, you may be dropped from class.

*According to University Policy F15-12, "Students are expected to attend all meetings for the courses in which they are enrolled as they are responsible for material discussed therein and active participation is frequently essential to ensure maximum benefit to all class members. In some cases, attendance is fundamental to course objectives; for example, students may be required to interact with others in the class. Attendance is the responsibility of the student. Participation may be used as a criterion for grading when the parameters and their evaluation are clearly defined in the course syllabus and the percentage of the overall grade is stated."*

## Assignments and Grading Policy

SJSU classes are designed such that to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in University Policy S12-3 at <http://www.sjsu.edu/senate/docs/S12-3.pdf>.

In lectures we will learn advanced research methods using in-class activities, question-and-answer periods, demonstrations, and films. During the laboratory section we will be learning how to apply the principles of advanced research methodology directly into a complete research experiment, write-up, and presentation. Attendance is critical for success in this course. If you miss a class, you

are responsible for the information from that class. It is vital that you complete all scheduled readings and assignments before each class.

The primary methods of assessment for this course will be a completed research report, research proposal, class presentation of research project, participation in peer review, one quiz, and final exam. The point value for each of the assignments can be found in the grading policy. Information about dates is included in the Course Calendar. Please note that the course calendar is tentative course calendar and “subject to change with fair notice” including assignment due dates, exam dates, date of final exam; you might want to include as well. I promise you, no surprises!

### **Laboratory**

Lab attendance is critical to the successful completion of this course. The computer lab will provide access to computers during lab periods, so you do not need to bring your own device. If you do not have a laptop, you may borrow one from the Student Computing Center in the SJSU library. We will be using different software during this course. It will provide you with experience in software and programming that will help you in your next step beyond college. (1) Qualtrics is available through e-campus. We will use the (2) RStudio program to review for our statistical analysis and learn a little coding. We will also use (3) Excel which is open to all SJSU students, for data management and analysis.

Students will complete most of the project in collaboration with another student. Researchers meet during lab time in addition to meeting outside of class. Research groups will be connected in CANVAS using Google Collaboration to support group work. As a reminder, your research group will evaluate you at the end of the semester.

Each laboratory assignment prepares you to complete your research proposal, study, and report—grading lab work 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.) Group evaluations will assess participation at the end of the semester. Researcher evaluations, at the end of the semester, may influence your grade by an entire letter grade. This policy should not be confused with “life,” the day-to-day challenges we all experience.

**If you know you cannot commit to attending every laboratory meeting, do NOT take this class.** If you have concerns about making this commitment, please see me.

### **Sources of Evaluation**

#### Quizzes

There will be several (safe to count on weekly) quizzes throughout the semester to ensure that all students have a solid understanding of the material being covered.

#### Research Project

You and 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. The paper will be a minimum of 12 pages in length (not including references, double-spaced, typed, 12-point font) and include a minimum of 15+ 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 the other responsibilities involved in completing the project). The research proposal is a shared project.

Your final report will include shared group work and individual work. The title page, abstract, and discussion of your final paper submission must be your own independent work. The introduction, methods, and results may be shared with your group members.

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 use quotations when you are directly quoting information from a source.

### APA Poster Creation

You will create an APA poster outlining your project and findings. Clear instructions will be provided on Canvas and reviewed in class. Your poster will be submitted in Canvas and into a Google Slide show. This will allow us to make a gallery of posters to share with the class.

### Research Partner Evaluation

Students will confidentially evaluate each of their group members for participation, cooperation, collaboration, work quality, and reflection. Students receiving low marks from their peers on this evaluation may have their final project grade reduced by a full letter grade. The group evaluation survey will be completed on the day of the final exam. Peer evaluations are considered part of the final project grade. Not completing peer evaluations will result in lost points.

### Make-up Quizzes and Late Assignments

Please check your schedule to ensure that you have no conflicts with due dates. If you need an extension, contact me as soon as possible so that we can create an alternative plan. Depending on the situation, documentation of the emergency or prior approval may be needed.

Assignment	Percent of Final Grade
Quizzes	15
APA Research Project	50
APA Poster	25
Lab Participation	10
Total	100

Percent	Letter Grade
100-94	A
93-90	A-
89-87	B+
86-84	B
83-80	B-

79-77	C+
76-74	C
73-70	C-
69-67	D+
66-64	D
63-60	D-
59 or below	F

### **Academic Integrity**

Academic integrity is essential to the mission of San Jose State University. As such, students are expected to produce their own work (except when collaboration is expressly permitted by the course instructor) without the use of any outside resources. Students are not permitted to use old tests, quizzes when preparing for exams, nor may they consult with students who have already taken the exam. When practiced, academic integrity ensures that all students are graded fairly. Violations to the Academic Integrity Policy undermine the educational process and will not be tolerated. It also demonstrates a lack of respect for oneself, fellow students, the course instructor, and can ruin the university's reputation and the value of the degrees it offers. The Student Conduct and Ethical Development is available at <https://www.sjsu.edu/studentconduct/>. Completing the library guides on avoiding plagiarism and paraphrasing will help you identify plagiarism and how to avoid it. If you have any questions, do not hesitate to ask me.

Submission through Turn-It-In is required for all written assignments. Turn-It-In is embedded into our Canvas course, so no need to go to a different website. Assignments not submitted using Turn-It-In, will not be graded until the problem is fixed. Work with IT to resolve any program issues that you may be having.

A reminder about academic integrity and AI/LLMs like ChatGPT: All cases of academic misconduct will be referred to the Office of Student Conduct. Academic Misconduct includes (but is not necessarily limited to) using ideas, words, images, or content in any other media that you did not create and presenting that content as if you were the creator.

Copying content that you have not created—either directly or in a modified form—without properly acknowledging the creator qualifies as academic misconduct, as does utilizing unauthorized digital tools such as artificial intelligence to create content. An assignment that is found to have been plagiarized or to have used unauthorized tools will automatically receive a zero and you will not be given an opportunity to repeat the assignment for a passing grade. Depending on the severity of the case, academic misconduct may result in a failing grade in the course. A simple guide to follow is, if more than four words are taken from another source, it must be cited.

**University Policies:** Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at <http://www.sjsu.edu/gup/syllabusinfo/>.

## Student Resources

### Student Computer Resources –

Computer labs and other technological resources for students can be found in various places on campus:

- For information regarding the loan of laptops, tablets, and other computer materials; <https://library.sjsu.edu/student-computing-services/student-computing-services>
- For IT Support visit - <https://www.sjsu.edu/it/support/service-desk/index.php>
- For a list of software available to all SJSU students visit - <https://library.sjsu.edu/student-computingservices/software-available>

### ACCESS Success Center

The Academic Counseling Center for Excellence in Social Sciences (ACCESS) Success Center “provides general education advising for undergraduate students majoring or intending to major in any of the departments in The College of Social Sciences.” Visit their webpage for more information and to schedule an online appointment,

<https://www.sjsu.edu/education/studentsuccesscenter/advising-and-tutoring.php>

### Accessible Education Center (AEC)

Ability Redefined - Please reach out to me as soon as possible in the beginning of the semester, for any support. “If you need course adaptations or accommodations because of a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with AEC to establish a record of their disability.

### SJSU Peer Connections

Peer Connections website “offers free mentoring, tutoring, and supplemental instruction services for students at SJSU. Peer Educators are students just like you; they understand the triumphs and challenges of being a student at San José State University.” If you have questions about services, contact the Peer Connections at 408-924- 2587 or email at [peerconnections@sjsu.edu](mailto:peerconnections@sjsu.edu), or visit their webpage for more information, <https://peerconnections.sjsu.edu/programs/tutoring/index.html>

### SJSU Writing Center

The SJSU Writing Center “offers a variety of resources to help students become better writers, and all of our services are free for SJSU students.” If you have questions about services, call the Writing Center at 408.924.2308 or email us at [writingcenter@sjsu.edu](mailto:writingcenter@sjsu.edu), or visit their webpage to make an online appointment <https://www.sjsu.edu/writingcenter/>

### SJSU Counseling and Psychological Services (CAPS)

SJSU Counseling and Psychological Services invites “all students to come into Counseling and Psychological Services, located at the Student Wellness Center, room 300B, for any support. If you have questions about services, contact CAPS at (408) 924-5910 or email at [counseling.services@sjsu.edu](mailto:counseling.services@sjsu.edu) or visit their webpage, <https://www.sjsu.edu/counseling/> Currently offered is a Therapist Assisted Online <https://www.sjsu.edu/counseling/students/TAO/index.html> “Therapy anytime, anywhere for anxiety and depression on your mobile device”.



## **Student Support Services**

Housing Assistance for students that lack stable and adequate housing

<https://www.sjsu.edu/sjucares/getassistance/housing.php>

## **Spartan Food Pantry**

Spartan Food Pantry is a walk-in full-service food assistance program for qualifying students.

<https://www.sjsu.edu/sjucares/get-assistance/spartan-food-pantry/index.html>

## **CalFresh Foods**

CalFresh Foods offers monthly cash assistance to pay for groceries. CalFresh has supported many students who are experiencing budget restraints.

<https://www.sjsu.edu/sjucares/get-assistance/calfresh.php>

## **Week-by-Week Topic Breakdown for Advanced Research Methods Course**

### **Week 1: Group Formation and Course Overview**

- Form research groups.
- Begin brainstorming potential research topics.
- Course overview, expectations, and grading criteria.
- Introduction to research ethics.

### **Week 2: Research Question and Literature Review**

- Refine research question and objectives.
- Conduct initial literature review.
- Start developing research design (e.g., experimental, correlational).

### **Week 3: Research Design and Data Collection Planning**

- Finalize research design.
- Develop data collection instruments (surveys, questionnaires, etc.).
- Consider pilot testing.
- Begin creating data collection plan.

### **Week 4: Data Collection Preparation and Ethics**

- Finalize data collection plan and instruments.
- Obtain necessary ethical approvals (if required).
- Create data entry template.
- Start recruiting participants.

### **Weeks 5-7: Data Collection**

- Distribute surveys or conduct interviews.
- Follow up with participants.
- Maintain detailed data collection records.

### **Week 8: Data Entry and Cleaning**

- Complete data collection.
- Begin data entry and cleaning.
- Verify data accuracy.

### **Weeks 9-10: Data Analysis**

- Choose appropriate statistical software (e.g., SPSS, R, Python).
- Conduct descriptive data analysis.
- Perform inferential statistical tests.

### **Week 11: Data Interpretation and Writing**

- Interpret data analysis results.

- Begin writing the results section of the paper.
- Start developing poster layout.

**Weeks 12-13: Writing and Revision**

- Write introduction and literature review sections.
- Complete results and discussion sections.
- Revise and edit paper.
- Finalize poster design.

**Weeks 14-15: Finalization and Preparation**

- Finalize paper and poster.
- Practice presentation.

**Week 16: Final Submission and Presentation**

- Submit final paper and poster.
- Deliver final presentation.