

## Psychology 301-02 & 301-2L, 301-3L – Psychological Research & Statistical Methods II

Spring 2022

**Instructor:** Dr. Peter A. Krause ([peter.krause066@csuci.edu](mailto:peter.krause066@csuci.edu))  
**Office Hour:** Tue 2:00 – 5:00 PM, Madera Hall 2702 (Week 3 onward, COVID permitting)  
& at <https://csuci.zoom.us/j/4502137619>  
**Lecture:** Asynchronous, in the form of recorded videos  
**Lab:** 2L: Tue 10-11:50 AM  
<https://csuci.zoom.us/j/86036891168> (first 2 weeks, and after as needed)  
Sierra Hall 3344 (Week 3 onward, COVID permitting)  
3L: Tue 12-1:50 PM  
<https://csuci.zoom.us/j/86083948619> (first 2 weeks, and after as needed)  
Sierra Hall 3344 (Week 3 onward, COVID permitting)

### OVERVIEW AND AIMS

#### Catalog Description:

Hours: Three hours lecture and three hours lab per week

Prerequisite: PSY 300 with grade C or better

Description: A continuation of PSY 300. Students will develop advanced skills in research methodology and statistics within empirical framework of behavioral sciences. Topics include application of scientific method within field of psychology and social sciences, including ethical guidelines and issues related to research in, and practice of, psychology. Students will develop skills in experimental methods and analysis, and will prepare written reports according to stylistic conventions of American Psychological Association. Coursework on inferential and descriptive statistical methods will build on material from PSY 300.

#### Learning Outcomes:

- Students who complete this course can articulate the basic tenets of the empirical method in psychology.
- Students can verbalize basic statistical concepts and techniques, including when to use and when not to use different types of statistical procedures. Also, students can describe the assumptions and explain the limitations underlying the different methods.
- Students can read, understand, and critically review and evaluate research reports published in psychological journals on the basis of its validity (e.g., construct, internal, external, statistical) and conformity to the ethical principles for psychologists as defined by the American Psychological Association (APA).
- Students can apply the experimental method to answer questions about behavior through participation in laboratory exercises and experiments.
- Students can develop necessary skills for an efficient review of the psychological literature using a computerized index (e.g., PsycINFO; PubMed/MEDLINE).
- Students can write a research proposal.
- Students can understand the meaning of informed consent and learn how to obtain approval for a research project.
- Students can design and conduct well-controlled experiments.

- Students can determine the appropriate statistical technique for use with specific research questions (i.e., match design and analysis to study aims).
- Students can utilize basic statistical software, such as SPSS, for data analyses.
- Students can understand and interpret computer printouts.
- Students can present findings and write up a research manuscript according to the stylistic conventions of the APA.

## **TEXTBOOK AND MATERIALS**

### **Textbook:**

Research Methods and Statistics: A Critical Thinking Approach (5<sup>th</sup> Edition), by Sherri L. Jackson

### **Required Software:**

SPSS v.28 (IBM)

You **must** obtain a copy of SPSS to use for the course. The University provides students with a free license. Contact IT for assistance installing SPSS onto your personal machine.

If you use a machine such as a netbook that cannot run the software, you can instead use SPSS in a virtual desktop provided by the University. This can be accessed here: <http://go.csuci.edu/vdi>

### **Canvas:**

This course uses a Canvas portal for announcements, resources such as homework readings and lecture slides, and grade reporting. If you have difficulty accessing the Canvas portal, please let me know immediately. **I use a single Canvas portal for both lecture and lab components.**

**There is no separate laboratory portal.**

### **Format:**

Hybrid virtual and in-person instruction. Lectures are pre-recorded videos. Many lectures have Laboratory Worksheets associated with them, that allow for practice of the related skills/content. (More info below). Each week, students should complete all the lecture videos and/or laboratory worksheets appearing in that week's Canvas Module. Laboratory sessions, by contrast, are held live and in-person (excepting the first two weeks of the course).

### **Lecture Slides:**

Each week, the asynchronous lecture will be broken into 1-5 mini-lectures organized by topic. These mini-lectures appear as embedded YouTube videos, posted in the "Modules" section of Canvas. Note that if accessibility is a concern, you can turn the closed captions on for these videos. I will also post an abbreviated form of each lecture (sans audio) as a PDF file under Files>Lecture Slides. Reading the abbreviated slides is no substitute for watching the videos with my commentary. Failing to watch the videos is akin to skipping lecture during non-pandemic times. You will not be likely to pass the class if you adopt this habit.

### Laboratory Meetings:

Unlike lectures, laboratory meetings are held live and in person. Attendance is mandatory. Lab is where a lot of the group work happens, and you let your partners down when you don't show up.

### EVALUATION

#### Breakdown:

|   |     |  |
|---|-----|--|
| Exams (2)   |     | 30% total                                      |
| Midterm   | 15% |  |
| Final   | 15% |  |
| Research Manuscript   |     | 20%  |
| Preliminary Paper Sections  |     | 10% total                                      |
| Method  | 5%  |  |
| Introduction  | 5%  |  |
| Poster and Presentation   |     | 10%  |
| Weekly Exit Polls (13)  |     | 8%   |
| Laboratory Worksheets (7)   |     | 7%   |
| Qualtrics Project Implementation  |     | 5%   |
| IRB Proposal  |     | 3%   |
| CITI paperwork  |     | 2%   |
| Meetings with Instructor (2)  |     | 2%   |
| Annotated Bibliography  |     | 2%   |
| Group Peer Evaluation   |     | 1%   |
| Extra Credit for workshopping research proposal and/or research manuscript at the WMC |     | 1%   |
| Extra Credit for instructor evals   |     | 1% <b>if overall response rate exceeds 75%</b> |

#### Exams:

This course includes two exams (one midterm and one final). Exams have a multiple-choice component and a written component. The multiple-choice component will be completed as an online Canvas quiz. **For the multiple-choice component, no reference materials are permitted.** To enforce this rule, the quiz uses a shuffled order for questions and responses, as well as a tight time limit. The written components are also Canvas quizzes, but allow numeric entry. They have no time limit and can be completed over a two-day period (see schedule). **For the written component, students may use any and all reference resources except for another human, and *must* use SPSS to complete some of the problems.**

#### Poster and Presentation:

In their research groups, students will generate research Posters summarizing their projects. They will orally present these posters to their laboratory sections in the final week of instruction. A template to guide construction of this poster, as well as examples of completed posters, are available in the course Canvas.

### **Weekly Exit Polls:**

Once a week in lab, students will be asked to complete an a brief exit poll, in which they write down a brief question, concern, or observation about that week's material. This poll shall serve as evidence of attendance. ***I absolutely do not want students coming to class sick!*** That being the case, if you were unable to attend class due to illness, car trouble, etc., I will allow you to email me an excuse, and will still credit you for the poll, **up to 3 times** with no further questions asked. However, this course is nonetheless designed with your attendance (and attention) in mind, and in part these exit polls reflect that expectation.

### **Laboratory Worksheets:**

Some weeks, students will be required to complete worksheets related to laboratory work. These serve two purposes. Many of them provide a gradual scaffolding of the final research project, forcing students to carefully space out the time they spend on designing their study and reviewing the literature. Many of them also provide practice calculating the statistical tests learned throughout the course. Laboratory worksheets are posted in the "Modules" section, grouped with the lecture videos to which they relate. The laboratory worksheets are implemented as Canvas "quizzes," but they are *not* exams, they are homework. You are *permitted* to get help on LWs at the tutoring center (show this part of the syllabus if questioned). LWs can be started, stopped, and re-opened without any penalty. If you want to work on a worksheet over multiple days, simply don't "submit" the quiz until it is finished. If you close it and come back your progress will be automatically saved.

### **Qualtrics Project Implementation**

Groups are responsible for setting up their own research projects in the Qualtrics system. A tutorial for how to use Qualtrics is assigned during the Canvas Module for Week 2. (I originally recorded this for the benefit of CI faculty, but have since decided to provide it to my students as well.) I am available for assistance in getting the Qualtrics set up, if you schedule outside meetings early enough in the semester. When your group starts the implementation, you will record its URL in this Google Sheet, so that I may monitor its progress:  
[https://docs.google.com/spreadsheets/d/1Ie51KshlLWO\\_adboT\\_U2dCd0xN3XIQQR11HJC\\_s3eFo/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1Ie51KshlLWO_adboT_U2dCd0xN3XIQQR11HJC_s3eFo/edit?usp=sharing). To ensure that all groups are on task, the Qualtrics implementation must be completed by **Friday, March 4<sup>th</sup>**.

### **IRB & CITI Paperwork:**

In their groups, students will complete mock IRB proposals for the projects they are pursuing. Individually, students must provide proof of completing the CITI training for conducting research with human participants. If you completed this training last semester, there is no need to re-train; simply turn in a copy of the certificate earned last semester.

### **Instructor Meetings:**

You will be required to meet with me individually at **2** points during the semester. These meetings can either occur at my regular office hour (see top of this syllabus) or by appointment at my personal meeting ID: 450 213 7619 (<https://csuci.zoom.us/j/4502137619>). To receive credit for the meeting, you *must* come prepared with **at least one question or concern**. Meeting 1 can take place anytime in the first seven weeks of the course, but must occur before the end of the week of March 11<sup>th</sup>. Meeting 2 must occur sometime during the bottom eight weeks of instruction, and *prior to* Finals Week. **Instructor meetings can never be made up after the fact, nor can they occur prior to their window.** If my office hour does not fit your schedule, you may schedule an outside appointment using this sign-up sheet:

<https://docs.google.com/spreadsheets/d/11Xcc9gS3Q1r6r8TGvdZu8Z1x2CYBkcMQVILAuO-WvX8/edit?usp=sharing>

### **Annotated Bibliography:**

Students will complete an annotated bibliography in which they summarize 10 references to be used in their final Research Manuscript and describe the relevance of these references to the study they are pursuing. A form for this AB has been implemented as an untimed Canvas Quiz, similarly to the Laboratory Worksheets described above.

### **Group Peer Evaluation:**

Students will complete an evaluation of their group members at the halfway point in the course. This will afford me the opportunity to adjust issues that are occurring within groups, gives me another means of detecting which students might be “fading away” from the class.

### **Extra Credit:**

Students may receive 1% extra credit if they provide documentation that they worked with the Writing and Multiliteracy Center on their Research Proposal and/or their Research Manuscript. **All students** will receive 1% extra credit if **more than 75%** of the class completes their online instructor evaluation.

### **MAJOR WRITING ASSIGNMENTS:**

The three writing assignments described below will document the group research project that you complete over the semester. You will first write preliminary Method and Introduction sections, *before* having completed data collection. Your final paper in the class is a Research Manuscript, written once data collection is complete and incorporating my feedback from your two preliminary papers. Detailed rubrics for all three assignments are available in Files>Paper Rubrics, which also contains a model paper for the final manuscript.

**Although this is a group research project, *all* writing in these three assignments is individual. No overlap with the writing of your groupmates is permitted.**

Further, *any* direct copying of any kind from prior work, **even if it is cited**, will be considered plagiarism. **Citing work does not give you the ability to copy it. You must paraphrase.** To prevent any confusion on this point, **I will not accept any direct quotations** from cited work. Paraphrased content *only*.

**Failure to abide these rules, such as by sharing writing between group members or by directly copying any content from existing work, will result in a failing grade for the assignment and possibly for the course. Repeated violations will result in the Dean of Students being notified.**

**Preliminary Method Section:**

Students will individually turn in a preliminary version of the Methods section of their final paper. Although I will comment on this paper and ask for changes in the final submission, this is *not* a draft but a complete assignment. I will provide detailed feedback on this proposal that should be incorporated into the final Research Manuscript. **If a student fails to incorporate feedback from this proposal into their final Manuscript, penalties to the final Manuscript grade will result. Although I often accept late work (see Course Policies), preliminary papers may never be submitted any closer than two weeks prior to the due date for the final Research Manuscript.**

**Preliminary Introduction Section:**

Students will individually turn in a draft of the Introduction section of their final paper. This draft Introduction should make use of at least 10 peer-reviewed references. Although I will comment on this paper and ask for changes in the final submission, this is *not* a draft but a complete assignment. I will provide detailed feedback on this proposal that should be incorporated into the final Research Manuscript. **If a student fails to incorporate feedback from this proposal into their final Manuscript, penalties to the final Manuscript grade will result. Although I often accept late work (see Course Policies), preliminary papers may never be submitted any closer than two weeks prior to the due date for the final Research Manuscript.**

**Research Manuscript:**

Students will individually complete 10- to 12-page APA-style Research Manuscripts describing their research projects. This manuscript should make use of at least 10 peer-reviewed references. As mentioned above, the Research Manuscript should incorporate feedback from the Preliminary Method and Introduction Sections. This Manuscript must include final Results and Discussion sections, as well as at least one figure.

The research reported in the manuscript will be conducted in small groups. Because first-semester projects tend to be focused on individual differences (correlation), I require projects in PSY301 to be **experimental studies**. These involve comparisons across the conditions of an independent variable that the researchers manipulate. ***Correlational studies are not permitted, nor are conceptually adjacent designs such as quasi-experiments.*** Participants will be recruited from the CI participant pool using the SONA system. I will administer the SONA system on students' behalf. Study designs must be implemented using the Qualtrics system. This allows participants to complete studies at their leisure from any location. Qualtrics is quite full-featured and provides tools for things like random assignment, timed questions, and display of pictures/video.

## **Final Letter Grades:**

|           |    |
|-----------|----|
| 97 - 100% | A+ |
| 93 - 96%  | A  |
| 90 - 92%  | A- |
| 87 - 89%  | B+ |
| 83 - 86%  | B  |
| 80 - 82%  | B- |
| 77 - 79%  | C+ |
| 73 - 76%  | C  |
| 70 - 72%  | C- |
| 67 - 69%  | D+ |
| 60 - 66%  | D  |
| <60%      | F  |

## **COURSE POLICIES**

### **Submission of Assignments:**

All course assignments are turned in electronically on Canvas.

I reserve the right to penalize late submissions by 10% for each day they are late, at my discretion. However, I am acutely aware of how difficult the current situation is on managing life responsibilities. If you reach out to me to ask for extensions, they will almost certainly be granted. **If you have allowed a due date to pass by, please do not let this deter you from reaching out after the fact.** The most important thing is that we connect and get on the same page.

### **COVID-19 Safety:**

CSUCI is following guidelines from the California Department of Public Health and Ventura County Department of Public Health to promote safety during the COVID-19 pandemic for CSUCI students, employees, and visitors on the campus, to help prevent and protect oneself and others from the spread of the virus. Students are required to adhere to all health and safety requirements outlined on the University's website regarding COVID-19.

### **Contingency Planning:**

Should access to campus be compromised after the first two weeks of the semester, due to COVID-19 or some other reason, we will return to meeting over Zoom, using the links given at the top of this syllabus.

### **Disability Accommodations:**

If you are a student with a disability requesting reasonable accommodations in this course, please visit Disability Accommodations and Support Services (DASS) located on the second floor of Arroyo Hall, or call 805-437-3331. All requests for reasonable accommodations require registration with DASS in advance of need. You can [apply for DASS services here](https://www.csuci.edu/dass/students/apply-for-services.htm): <https://www.csuci.edu/dass/students/apply-for-services.htm>. Faculty, students and DASS will work together regarding classroom accommodations. You are encouraged to discuss approved accommodations with your faculty.

### **Academic Honesty:**

By enrolling at CSU Channel Islands, students are responsible for upholding the University's policies and the Student Conduct Code. Academic integrity and scholarship are values of the institution that ensure respect for the academic reputation of the University, students, faculty, and staff. Cheating, plagiarism, unauthorized collaboration with another student, knowingly furnishing false information to the University, buying, selling or stealing any material for an examination, or substituting for another person may be considered violations of the Student Conduct Code (located at <http://www.csuci.edu/campuslife/student-conduct/academic-dishonesty.htm>). **If a student is found responsible for committing an act of academic dishonesty in this course, the student may receive academic penalties including a failing grade on an assignment or in the course, and a disciplinary referral will be made and submitted to the Student Conduct & Community Responsibility office.** For additional information, please see the faculty [Academic Senate Policy on Academic Dishonesty](#), also in the CI Catalog. Please ask about my expectations regarding academic dishonesty in this course if they are unclear.

There are many subtle forms of plagiarism that are nonetheless grounds for disciplinary action. Lifting individual sentences from a pre-existing document is plagiarism. Lifting individual sentences and strategically changing two or three words is *still plagiarism*. Whether you are citing the paper in question is of no consequence. **Direct lifting of text is always plagiarism, even if the source is cited.** Self-plagiarism is a thing, and it is *still plagiarism*. Submitting a paper you wrote for another course, or trying to pass off a paper from this course in one of your other courses, is a violation of academic honesty. To keep things cut-and-dried, **I will never accept written work that directly quotes another source, even if that prior source is attributed. Cited sources must be paraphrased.**

### **STUDENT SUPPORT**

#### **Campus Tutoring Services:**

You are encouraged to make regular use of campus tutors and/or peer study groups, beginning in the second week of the semester. For campus tutoring locations, subjects and hours, go to: <http://go.csuci.edu/tutoring>.

#### **Civil Discourse Statement:**

All students, staff and faculty on our campus are expected to join in making our campus a safe space for communication and civil discourse. In 2016, CI faculty (through the Academic Senate) voted to approve [Resolution SR 16-01](#) titled, "Commitment to Equity, Inclusion, and Civil Discourse within our Diverse Campus Community." If you are experiencing discomfort related to the language you are hearing or seeing on campus (in or out of classes), please talk with a trusted faculty or staff member. Similarly, please consider whether the language that you are using (in person or on canvas) respects the rights of others to "engage in informed discourse and express a diversity of opinions freely and in a civil manner."



**Emergency Intervention and Basic Needs Statement:**

As CI's website points out, "a recent study commissioned by the CSU Chancellor's Office shows that nearly 25 percent of CSU students either regularly skip meals for financial reasons or lack access to toiletries and sufficiently nutritious food options. In addition, more than 10 percent are displaced from their homes due to things like an unexpected loss in income or personal safety issues." If you recognize yourself, or someone you know from this description, please know that there are resources on campus to help, including the Dolphin Food Pantry for students which offers free food, toiletries and basic necessities. The Dolphin Pantry is currently located in Arroyo Hall, Room 117 and is open Monday – Friday 8:30 – 4:30 (please check the website below for updates).

Emergency housing and funds are also available. More information on these, and other services available at CSUCI can be found at: <https://www.csuci.edu/basicneeds/>

**SCHEDULE (SUBJECT TO CHANGE) Note: bolded items are items due on **Fridays at 11:59PM****

| <b>Lab Date:</b> | <b>Lecture Topic</b>  | <b>Reading</b> | <b>Submissions/Lab</b>  |
|------------------|---|----------------|---|
| 01/25            | Intro, Review of Inferential Stats Logic                        | Jackson Ch. 8  | Form groups and brainstorm topic, briefly introduce Qualtrics   |
| 02/01            | Between-Participants Experimental Design                        | Jackson Ch. 9  | SPSS: independent-samples t-test, <b>Lab Worksheet 1: Fundamentals Review</b>                         |
| 02/08            | Within-Participants Experimental Design                         | Jackson Ch. 10 | SPSS: paired-samples t-test, <b>Lab Worksheet 2: Critical Analysis/Independent-Samples T</b>          |
| 02/15            | Experiments with More than 2 Groups, One-Way ANOVA (Randomized) | Jackson Ch. 11 | SPSS: one-way randomized ANOVA, <b>Lab Worksheet 3: Project Variables/ Paired-Samples T</b>           |
| 02/22            | Experiments with More than 2 Groups, Post-hoc Tests             | Jackson Ch. 11 | SPSS: Tukey's HSD, <b>1) Lab Worksheet 4: One-Way Randomized ANOVA, 2) Preliminary Method Section</b> |

|       |   |                 |  |
|-------|---|-----------------|--|
| 03/01 | One-Way ANOVA (Repeated)                                      | Jackson Ch. 11  | SPSS: one-way repeated-measures ANOVA, Midterm Review, <b>1) Lab Worksheet 5: One-Way Repeated Measures ANOVA, 2) Qualtrics Project Implementation</b> |
| 03/08 | <b>Midterm Exam<br/>FINAL WEEK FOR<br/>MEETING 1!</b>         |                 | NO LAB<br><b>1) Annotated Bibliography, 2) Group Peer Evaluation</b>   |
| 03/15 | <b>SPRING RECESS</b>  |                 |  |
| 03/22 | Factorial Designs, Factorial ANOVA                            | Jackson, Ch. 12 | SPSS: two-way randomized ANOVA, <b>Preliminary Introduction</b>  |
| 03/29 | Quasi-Experimental and Single-Case Designs                    | Jackson, Ch. 13 | Launch studies, <b>IRB &amp; CITI Paperwork</b>  |
| 04/05 | Nonparametric Stats and Chi-Square                            | Jackson, Ch. 14 | Preliminary data check   |
| 04/12 | Nonparametric/Chi-Square Continued                            | Jackson, Ch. 14 | SPSS: chi-square tests<br><b>Lab Worksheet 6: Chi-Square Tests</b>   |
| 04/19 | Regression Models   | Jackson, Ch. 6  | SPSS: multiple linear regression   |
| 04/26 | Regression Models Continued                                   | Jackson, Ch. 6  | Work on Poster Drafting, <b>Lab Worksheet 7: Linear Regression</b>   |
| 05/03 | APA Communication Guidelines                                  | Jackson, Ch. 15 | Finalize poster, <b>Final Poster due by end of lab time</b>  |
| 05/10 | Review for Final Exam<br><b>FINAL WEEK FOR<br/>MEETING 2!</b> |                 | <b>Poster Presentations by Groups</b>  |
| 05/17 | <b>Final Exam</b>   |                 | <b>Research Manuscript</b>   |

## **PROJECT MILESTONE TIMELINE**

(All of the dates below also appear in the main schedule above. This timeline has been separated out in case you wish to get a sense of the scope of the main research project on its own.)

| <b>Milestone</b>                         | <b>Due Date</b>               | <b>Group or Individual?</b> |
|--|-------------------------------|-----------------------------|
| Lab Worksheet 3 (with project variables) | 02/18                         | Individual                  |
| Preliminary Method Section               | 02/25                         | Individual                  |
| Qualtrics Project Implementation         | 03/04                         | Group                       |
| Annotated Bibliography                   | 03/11                         | Individual                  |
| Preliminary Introduction Section         | 03/25                         | Individual                  |
| IRB Proposal                             | 04/01                         | Group                       |
| Poster (document)                        | End of your lab time on 05/03 | Group                       |
| Poster Presentation                      | In lab on 05/10               | Group                       |
| Research Manuscript                      | 05/20                         | Individual                  |