

Fall 2021
PSYC 220 - Introductory Statistics in Psychology, Section 40/41A
Thursdays 10:00am – 11:50am

Instructor: Daniel R. Berry, PhD
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Pronouns: he/him/his

Course Website: ([Website Link](#))
Office Hours: Tuesdays 10:00am-1:00pm
[Office Hours Link](#)

COURSE OVERVIEW

Welcome to Introductory Statistics in Psychology! In psychology, “statistics” refers generally to a wide variety of procedures for displaying, summarizing, and analyzing data. Basic knowledge of statistics is critical for conducting research in psychology, in addition to understanding and evaluating research reported by others. The main emphasis of this course will be conceptual in nature—you will have to use logic to think through problems and base statistical inferences on their outcome. You will do math, but it will be a secondary focus. Keeping in mind that there’s more to life than what you formally study in any given semester, understanding general statistical procedures and methods is practical in terms of being an intelligent consumer of all the information that we are bombarded with in our society. Therefore, this course will help you in both future psychology courses and your daily life.

TEXT AND CHAPTER OUTLINES:

*There is no text required for this course. You may save all lecture material and resources that are provided to you!

If you do wish to buy a book, I base this class on the following book:

Jaccard, J., & Becker, M. A. (2010). Statistics for the behavioral sciences (5thed.). Belmont, CA: Wadsworth.

*The fourth edition of this text has some major differences, but can be purchased instead of the fifth edition.

COURSE REQUIREMENTS:

(1) A calculator, pencil; texts should be brought to labs

PROGRAMMATIC STUDENT LEARNING OUTCOMES:

BACHELOR OF ARTS IN PSYCHOLOGICAL SCIENCE

PSLO 2: *Describe the scientific approach to psychology and apply basic research methods in psychology, including research design, quantitative analysis, interpretation and reporting in APA format.*

BACHELOR OF ARTS IN CHILD AND ADOLESCENT DEVELOPMENT

PSLO 4: *Locate, interpret and critically evaluate scholarly articles in developmental psychology.*

PSLO 6: *Demonstrate effective written communication skills in a variety of formats and for a variety of audiences, using APA format when appropriate*

INSTRUCTOR'S COURSE STUDENT LEARNING OUTCOMES:

By the end of this course students will be able to:

1. convey the importance of research and statistical analysis to people unfamiliar with statistics. While many disciplines study human behavior and ways to help people, one thing that separates psychology from these other fields is psychology's emphasis on the scientific method in forming and evaluating theories and treatments.
2. select and describe the appropriate inferential statistics to test hypotheses
3. use computer operations and/or statistical formulas necessary to carry out the appropriate statistical procedure to answer a given research question.
4. understand and interpret the results of statistical tests and be able to use the results of such tests to answer research questions and understand more about psychology. In short, a major goal of this course is that students be able to express (in writing) what a statistical result means to a person interested in psychology.

WHAT YOU CAN EXPECT FROM CLASS

CLASS FORMAT:

About one half of class meetings will be asynchronous video-recorded lectures and the other half will be virtual activities and labs using SPSS. During video-recorded lectures, the instructor will cover key concepts in the course. These recorded lectures will be posted for Tuesdays but will be posted ahead of time. You may engage with them at a time that is convenient for you. However, this does not mean that this class can be done at your own pace. To keep you on pace, you must complete a Quiz on Wednesdays after each posted recorded lecture day. The labs will be held synchronously on Thursdays. During synchronous labs, I will invite students to ask questions and engage in learning activities. Activities will give you the opportunity to work on class assignments with the help of the instructor. So missing class is not a good strategy! Labs will be accompanied by a guided lab handout to work through in pairs or groups. It is especially important for you to engage with these "hands-on portions" of the course; although participation is not graded in this course, active participation is required to perform well on assignments. Note: I understand that these are unusual times, and as such you may not be able to attend live lectures. Thus, I will also record and post our lecture from that day. The issue is that this course will feel very new to many of you, and most of your learning in lab is self-directed. In the past, students have used this time to work in groups to check their phrasing and logic on assignments. The instructor is available for questions during this time. Therefore, I recommend attending these labs and only using the recording for reviewing notes prior to exams. **This course requires an average of 8-9 hours of work per week outside of class. In previous semesters, most students have reported that they spent 8-9 hours per week outside of class on readings, completing assignments, and reviewing notes. More than one quarter of students reported spending more than 10 hours per week on these tasks. Also, you instructor has taught over three dozen sections of this course in the past 9 years, totaling over 1000 students—review of course grades in this instructor's classes reveals that the best predictor of student success is attending and participating in class!**

CLASS EXPECTATIONS:

Come prepared. Complete all recorded lectures and come to lab after thinking about the material. Be prepared to take notes. Check Cougar Courses regularly.

Contribute. Come to class prepared with questions from the recorded lecture. All questions will be respected. Please, share your unique perspective with the class! It is an opportunity to demonstrate your competence, help clarify the material for others, and promote an engaging classroom environment.

Be respectful. People relate to psychological theories and concepts in different ways. Please remain open and respectful to alternative perspectives of the course material. I expect you to challenge ideas. Use reason and

evidence to challenge ideas presented in this class. Hate speech, cyberbullying, and forms of speech that are not protected by the First Amendment will not be tolerated in this course. CSUSM has outlined [Definitions of Free Speech Here](#). Your peers may also learn difficult content at a different pace than you. Please be respectful of peer's questions for clarification and feel welcome to offer your perspective if you believe that you can help clarify or answer a peer's question.

Workload statement. This is a 16-week online course, and therefore, per CSUSM unit load policy, you can expect to spend a *minimum* of 8-9 hours per week on this course. This workload will include weekly lectures, writing assignments, reading, studying, etc. This course includes synchronous components. This means that the course meets as a group at specific times each week or at set times some weeks. Just as you are expected to attend and participate in classes that meet in person, you are expected to attend and participate in the virtual course. You should attend on time and stay in attendance for the duration of the class. We encourage you to have your camera on and actively engage in class sessions. In addition, you will have deadlines for your work that you must meet. The class is NOT self-paced. Make sure you have the dedicated time and resources to attend class, do all of the assigned work, and meet all deadlines. Learn more about the [CSUSM credit hour](#) policy for online courses.

COURSE POLICIES:

Academic honesty. Academic dishonesty is a bad scene; don't go there. Students will be expected to adhere to standards of academic honesty and integrity, as outlined in the [Student Academic Honesty Policy](#). All assignments must be original work, clear and error-free. All ideas/material that are borrowed from other sources must have appropriate references to the original sources. Any quoted material should give credit to the source and be punctuated accordingly.

You are responsible for honest completion and representation of your work. There will be zero tolerance for infractions. If you believe there has been an infraction by someone in the class, please bring it to the instructor's attention. The instructor reserves the right to discipline any student for academic dishonesty, in accordance with the general rules and regulations of the university. Disciplinary action will include assigning a grade of zero on assignments with infractions, and all cases will be referred to the Dean of Students Office.

Collaborative work. When completing lab homework, it will be useful (and in some cases necessary) to confirm your logic, phrasing, and formatting with classmates. You may not share or copy answers. Sharing answers or discussing assignments outside of this forum is prohibited. Collaboration on exams and lab homework is prohibited. Violations of this policy will be treated as an academic dishonesty. Please note that I will post a discussion forum for quizzes. You can share answers with your peers on Quizzes.

Meeting course requirements. Generally, the only reasons I consider legitimate for missing a class or lab assignment deadlines are medical illness or personal/family emergencies that require you to leave school. Oversleeping, heavy workload, forgetfulness, and lab assignment disappearance (e.g., computer meltdowns) will not be considered legitimate failures to meet course requirements. **Late lab assignments will be accepted with a 20% deduction from the point total, and should be turned in during the following class. Assignments turned in after this date will receive a grade of 0 and will not receive feedback from the instructor.** This standard is designed to prevent you from getting behind in your work. In general, I do not require documentation for the first missed assignment. I understand that getting sick is expensive and time consuming, and often it is inconvenient or financially risky for students to seek documentation for illnesses or family emergencies. If missed lab assignments become habitual, however, I will ask for documentation. At the point of a second late assignment at any time during the semester, I will request that you meet me in office hours to discuss this matter.

Make-up exams. You are expected to take each exam as listed on the schedule of topics. Make-up exams will be available only for those students with legitimate, documented excuses, with arrangements made prior to the scheduled exam date. An exception to this rule would be something like you got into an accident the morning of the exam that would preclude you from getting in touch with me in advance.

Email communication. Your instructor will respond to your emails and questions sent outside of class time within one business day. Please note that emails received after 5PM Pacific Standard Time are recorded as being received on the following business day. Thus, if you have an assignment due on Monday, and you email your instructor a question about it after 5PM on Friday, there is no guarantee that your instructor will respond to your email by Monday before the assignment is due. Emails received after 5PM on Fridays and before 5PM on Mondays will receive a response by 5PM on Tuesday. Emails received after 5PM on Thursday and before 5PM on Friday will receive a response by 5PM on Monday.

Class materials and Cougar Courses. Recorded lectures and lab handouts will be posted the week prior to the class meeting time. Lab homework will be posted one week or more prior to its due date. Exams will be posted for a limited time on the day that they are due. Typically, they are posted for the entire day.

Graded assignments. Graded assignments will be returned no later than one week after they are due. Please note that the instructor will grade your assignments, but the Graduate Assistant (Pooja Punjabi) will email you your grade. All grade inquiries should be sent to the instructor (see below)

Grade change inquiries and the 24-hour rule. In some circumstances, there may be errors in grading. These include, but are not limited to, scoring a correct answer as incorrect, assignment questions with no answer or ambiguous language, or assignment questions with multiple answers. I recognize that accepting feedback can be tough. It is normal to feel frustrated, angry, sad, guilty, etc. when one fails to meet their expectations. (It is also normal to feel proud or happy when you meet or exceed your expectations.) Thus, after returning grades, I require a 24-hour grace period for you to review my feedback before you can raise questions about the grade. Use this grace period to dwell on this feedback, and after 24 hours it is time for you to make a plan about how you are going to use the feedback. If you did particularly well on your assignment, you might plan to use the same study habits that helped you to earn the grade on the last assignment. If you thought you could do better, you might consult with peers or your instructor about study habits, for example. If you believe that you were graded unfairly, please tell the instructor. To inquire about a grade, please email the instructor and (1) list the question or questions that you believe were graded incorrectly or unfairly. (2) You should also tell the instructor why you thought the answer you gave was correct, with supporting evidence from lectures or class discussions. I take this feedback seriously and aim to treat everyone fairly in this course. Inquiries that are sent within 24 hours of the moment the assignment is returned, will not receive a response. To limit the number of inquiries at the end of the semester, inquiries must be made within two weeks of receiving the feedback. I will review your inquiry and respond by the next business day. Grade changes will be made immediately and reflected in the gradebook on Cougar Courses. Your decision to submit a grade change inquiry will not affect how I evaluate you on future assignment. I know how monotonous it is to read over the syllabus, but if you have made it this far, I will give you one bonus point on a lab assignment if you can do the following: Please email me (drberry@csusm.edu) your favorite meme by 5:00 PM on 9/3/2021. It should be class appropriate though. So it might have to be your second or third favorite meme. Personally, I love anything with baby Yoda (aka Grogu), but I'm interested to see your favorites!

Grade grubbing. Grade grubbing is an act of asking for a grade to be raised for no legitimate reason. As described in the Grade change inquiry and the 24-hour rule section, feedback can be tough. Unless there is a clear evidence of error in calculating or assigning a grade, I will not respond to inquiries for your grade to be raised for no legitimate reason.

RESOURCES:

Writing Requirement. As stated in the course catalog, all CSUSM students must demonstrate competency in writing skills as a requirement for graduation. This requirement mandates that every course at the university must have a writing component of a least 2500 words (approximately 10 pages). The writing requirement in this course will be satisfied through lab assignments and exams. In fact, students write an average of 20 pages in this class, but it is spread more evenly throughout the semester. Need help writing? Visit the [WRITING CENTER](#).

The Psychology Academic Resource Lab (PARL). is located in SBSB 1206 and is available for one-on- one tutoring help in statistics. (PARL also has some online hours.) Check their website for the hours that the lab is staffed at [PARL WEBSITE](#). Their schedule has also been posted in Cougar Courses. PARL is a resource for all undergraduate students in psychology and the social sciences. The purpose of the PARL is to provide academic support for enhancing quantitative, computing, writing, biological, and research methodology skills that are essential to psychology. The PARL also offers a variety of specialized computer programs and tutorials on statistics, research methods, psychometrics, and the biological bases of behavior.

Statistics Help. Again, PARL can help! Psychology graduate students staff the lab, which will be available particular hours during each semester on a drop-in basis. The graduate students also provide individual attention for academic consultation. Finally, several workshops are held each semester that include writing APA style papers and how to apply to graduate school. You can also check out the Statistics Help website in the CSUSM Psychology Department: [STATISTICS HELP](#)

Accommodations for Students. Students with disabilities who require reasonable accommodations must be approved for services by providing appropriate and recent documentation to the Office of Disabled Student Services (DDS). This office is located in Craven Hall 4300, and can be contacted by phone at (760) 750-4905, or TTY (760) 750-4909. Students authorized by DSS to receive reasonable accommodations should meet with me during my office hours in order to ensure confidentiality. Should you have any questions about services provided through Disabled Student Services, please call 760-750- 4905 or go to http://www.csusm.edu/dss/handbooks/student_book.html

Additional resources.

- If you require support for hardware issues (computer, webcam, etc.) or with any software tools (Cougar Courses, Zoom, etc.), please visit [IITS For You Student page](#).
- If you need technology items for your coursework (laptop, webcam, wireless hotspot, etc.), please visit [IITS For You Appointment page](#).
- The new [USU](#) computer lab offers computer access and free printing. The lab is open Monday-Friday 10:00 am-4:00 pm and the computers are cleaned after every use for your safety. The computer labs on the 2nd and 3rd floors of Kellogg Library are closed.
- Cougar care network. <https://www.csusm.edu/ccn/index.html>

- Campus COVID Guidelines.
https://www.csusm.edu/shs/resources/covid_19campusresourcesguides.html
- What to do if I have a positive COVID Case. Please let your instructor know that you are ill and how long you plan to be away from school. You do not need to disclose to me your specific illness, but to prevent further exposure to our learning committee, please report your positive COVID case here:
<https://www.csusm.edu/csusmasone/contact/report-case.html>

HOW YOU WILL BE EVALUATED

You will be evaluated in three ways in this course: (1) three exams, (2) eight lab assignments, and (3) 8 credits of research experience (graded for completion).

EXAMS:

The material in this course is acquired gradually because new material builds on previously learned concepts. It is very difficult to “cram” for a statistics test. Thus, it is important to read your assignments before class and complete your work on time. You should also try to keep your notes and assignments clear, organized, and legible as these resources may be valuable on exams and assignments. Because many psychologists depend on textbooks and statistical tables when they need to analyze research findings, you may use the all materials that are provided to you by the instructor when working on exams. This by no means indicates that the exams are easy—they will be fair, but challenging. In fact, you should try to rely on minimal resources when taking the exams. Otherwise, you will spend too much time looking for information and not finish the exam. Please note that if you have taken this course in a previous semester and received a repeatable grade, you may not use materials that the instructor gave your from that course. For example, if you received exam feedback, you may not use that feedback on exams.

You will take **three exams** in this course. Exam questions will include 10 – 20 multiple choice questions, but the remaining majority of the tests will include interpreting and expressing (in writing) what a statistical result means. Each exam is worth 20% of your final course grade. On exam days posted in the syllabus, I will post the exam on Cougar Courses no later than 9:30 AM. You will have until 5:00 PM to submit the exam on Cougar Courses. On the day prior to the exam, I will post a recorded video answering questions that you submit in advance. I will also post an exam review sheet a few weeks in advance.

LAB:

In order to achieve the course goals and to keep you aware of your progress, you will have regular lab assignments. This is how we assess your mastery of Instructor’s Course Learning Outcome 3 (but also 2 and 4). These Assignments help you to keep up with the material. Also, because new material builds on older material all exams and lab assignments are “naturally cumulative” (though each focuses on the most recent material covered).

Your lab grade is worth 30% of your final course grade. There will be eight lab assignments, posted in the assignments section of cougar courses. Assignments will be posted two weeks before they are due. (Please see the course schedule of topics and due dates.) Lab assignments are due by 11:59 PM, and will be graded and returned promptly. **Unexcused late lab assignments will be penalized by 20%.** Late assignments should be turned in during the following class, after which time they will be graded as a 0. Please note that in the event of a late assignment, they will not be graded until the following class. This means that if an exam occurs in the class period following one in which an assignment is due, that it will not be graded until the class after the exam. In other

words, you won't be able to benefit from the assignment feedback on the exam. This standard is designed to prevent you from getting behind in your work. Excused late lab assignments will be assessed on a case-by-case basis, but should be rare—instances of illness, accidents, etc., not from failure to budget enough time to get the assignment completed. At the point of a second late assignment at any time during the semester, I will arrange a meeting with you to discuss this matter.

- You must turn in an **electronic copy** of your work on cougar courses.
- **Please read this carefully.** If you **complete and turn in all 8 lab assignments within the specified time frame**, your lowest assignment grade will be dropped, leaving your highest 7 grades to comprise the lab grade. If you do not complete and turn in all 8 lab assignments, the average of your 8 grades (including 0's) will comprise that portion of your lab grade—so don't miss any assignments!

QUIZZES:

There is growing evidence to suggest that taking frequent quizzes to test one's knowledge about course concepts increases familiarity, understanding, and ownership of course content. This can have a huge positive impact on your grade! In my experience, students come into the class afraid of the math, but they do extremely well on the math in this course. What do students struggle with? The concepts—understanding why we are doing the math! There will be 11 quizzes posted throughout the semester. Each will have 10 multiple choice questions. At the end of the semester I will drop your lowest quiz grade. The top 10 quiz grades for you will be averaged and that average will constitute 20% of your final grade. Quizzes will be posted on Tuesdays and are due by 11:59 PM on Wednesdays (the very next day). Because I believe that science is social, you will be given the opportunity to consult with one another about your answers on these quizzes. I will post a forum next to the quiz on CC and you can share ideas with peers about what you think the answers are.

Unexcused late quizzes will be penalized by 20%. Late quizzes will need to be submitted by the following day (Thursdays) by 5PM. If not posted by Thursday at 5PM, they will receive a grade of 0. Answer keys will be posted on Fridays.

Some ground rules for quiz forum posting. Don't just post, "the answer to #1 is C." These posts will be deleted. Posts in the forum should look something like this: "Hi Friends, I am having trouble with #3. I think that the answer is A, because Dr. Berry said _____ in one of our recorded lectures, but he also said _____ in this other recorded lecture, making me think that the answer could also be D? I'm lost! What do you all think?"

RESEARCH EXPERIENCE (GRADED FOR COMPLETION):

Part of your experience in this class is to learn about how social and behavioral scientists conduct research and so you are required to participate in research this semester. Of course, we will conduct studies in class, but not with the same methodological rigor that is used in a lab. This is a requirement of the Psychology Department at CSUSM. All students enrolled in PSYC 220 must fulfill this requirement. In order to do this, you must have a CSUSM email account. This participation and the alternative assignment are detailed in the **Human Participant Pool (HPP) handout** available to you online via Cougar Courses. In this course, you must complete 8 HPP credits. Each hour of research experience is worth **two credits**, and so you will spend about 4 hours on this activity outside

of class. **If you do not complete this course requirement your grade will be dropped one half grade.** For example, a B+ would be dropped to a B. **No exceptions will be made for this requirement.**

GRADING SYSTEM:

The table to the right details the total points available in this class. Dr. Berry will grade assignments quickly but carefully before returning the feedback to you. You can find your grades posted on the class website (Cougar Courses). Should you have any questions about your grades, Dr. Berry encourages you to share your concerns. *Please note that although the Research Experience is not formally graded, failure to complete all credits will result in a reduction of your final course grade by one half step. If you have a C, your grade would be dropped to a C-, which is failing in this class. **Also note that Dr. Berry will provide a grade calculator to help you know where you stand during the semester.

<u>Assignment</u>	<u>Points</u>	<u>Percent</u>
3 Exams	600	60%
8 Lab Assignments	300	30%
10 Quizzes	100	10%
Research Experience	Not Graded*	
Total	1000	100%

GRADE DISTRIBUTION:

<u>Points</u>	<u>Letter Grade</u>	<u>Points</u>	<u>Letter Grade</u>
950 – 1000	A	730 – 759	C
900 – 949	A-	700 – 729	C-
860 – 899	B+	660 – 699	D+
830 – 859	B	630 – 659	D
800 – 829	B-	600 – 629	D-
760 – 799	C+	0 - 599	F

Tentative Schedule for PSYC 220 Fall 2021 Section 40/41A

Note. Quizzes are Due on Wednesdays not Tuesdays

*Quiz 11 is Due on the Wednesday before Thanksgiving 11/24

Date	Topic	Due
8/31	Recorded Lecture: Introduction; The Role of Statistics in Psychology and Research Concepts	Quiz 1
9/2	Lab: Introduction to SPSS in Cougar Apps	
9/7	Recorded Lecture: Frequency Distributions and Measures of Central Tendency	Quiz 2
9/9	Lab: Frequency Distributions and Descriptive Statistics in SPSS	
9/14	Recorded Lecture: Probability, Measures of Variability, and the Normal Distribution	Quiz 3
9/16	Lab: Standard Scores	Assignment 1
9/21	Recorded Lecture: Parameter Estimation, Sampling Distributions, Hypothesis testing	Quiz 4
9/23	Lab: One Sample z-Test	Assignment 2
9/28	Recorded Lecture: Exam 1 Review Q and A	Assignment 3
9/30	Exam 1	
10/5	Recorded Lecture: Type I and Type II Errors and the One-Sample t-test	Quiz 5
10/7	Lab: One-Sample t-test in SPSS	
10/12	Recorded Lecture: Research Designs and Independent Groups t-test	Quiz 6
10/14	Lab: Independent Groups t-test in SPSS	
10/19	Recorded Lecture: Correlated Groups t-test	Quiz 7
10/21	Lab: Correlated Groups t-test in SPSS Recorded	Assignment 4
10/26	Lecture: One-Way Between Subjects ANOVA Omnibus Test	Quiz 8
10/28	Lab: One-Way Between Subjects ANOVA in SPSS	Assignment 5
11/2	Recorded Lecture: One-Way Between Subjects ANOVA Post Hoc test AND Exam 2 Review Q and A	Assignment 6
11/4	Exam 2	
11/9	Recorded Lecture: One-Way Repeated Measures ANOVA	Quiz 9
11/11	***Veterans Day: Class Does Not Meet***	
11/16	Recorded Lecture: Pearson Correlation	Quiz 10
11/18	Lab: One-way Repeated Measures ANOVA in SPSS AND Pearson Correlation in SPSS	
11/23	Recorded Lecture: Chi-Square and Choosing the Correct Test	Assignment 7
11/25	***Thanksgiving: Class Does Not Meet***	Quiz 11*
11/30	***No recorded Lecture***	
12/2	Lab: Chi-Square	
12/7	Recorded Lecture: Final Exam Review Q and A	Assignment 8
12/9	Final Exam	