

California Lutheran University

Bachelor's Degree for Professionals

RESEARCH DESIGN & STATISTICS I

PSYC 312-A1

Fall Term 2016

Wednesdays 6 – 9:30pm

Room 124, Woodland Hills

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Office: Room 103A, Woodland Hills
Office Hours: Mondays and Wednesdays 4 – 6pm, or by appointment

Important Dates

Fall Term 2016: August 29 – November 14

Last day to drop (no financial penalty or “W”): September 12

Last day to withdraw (no academic penalty): October 10

Textbook (Required)

Gravetter, F. J., & Wallnau, L. B. (2014). *Essentials of statistics for the behavioral sciences (8th edition)*. Wadsworth, Cengage Learning.

Website

Blackboard: www.callutheran.edu/myclu

The Blackboard course website will include lecture slides, activity-related materials, the course syllabus, and your grades. Additionally, I will periodically make important announcements about the course on Blackboard. In other words, most of the things you need for this course will be available on Blackboard. Please check the course website on a regular basis.

If you have any questions about Blackboard (e.g., you cannot access something on the website), please contact the Help Desk at helpdesk@callutheran.edu or (805) 493-3698 for prompt assistance.

Course Description

Research Design and Statistics I is the first of a two course sequence in Psychology designed to prepare undergraduate psychology majors to develop the knowledge and skills needed to design, implement and analyze psychological research.

Course Outcomes

By the end of this course, you should be able to:

- Construct and interpret distributions graphs
- Compute and apply measures of central tendency (mean, median, mode)
- Compute and apply measures of variability (range, standard deviation, variance)
- Compute and interpret z -scores
- Compute probabilities
- Solve problems by finding areas under the curve representing probabilities and rejection regions (using the normal distribution)
- Identify and apply the steps of hypothesis testing (e.g., identify and state the null and alternate hypotheses for a given study)
- Compute and interpret the following inferential statistics, using hypothesis testing procedures:
 - t -test
 - Analysis of Variance (ANOVA)
 - Correlation
- Given a scenario, choose the appropriate statistical analysis and complete the analysis
- Conduct basic statistical analyses using SPSS (a statistical software package)
- Write the results of analyses in APA-style format

Cal Lutheran Learning Outcomes

The institutional learning outcomes met through the successful completion of this course are:

- Information Literacy
- Quantitative Literacy
- Critical Thinking
- Communication (Written Communication)

Program Specific Learning Outcomes

The Psychology program learning outcomes met through the successful completion of this course are:

- Goal 1 – Field Specific Knowledge
- Goal 2 – Empirical Methodology and Critical Thinking
- Goal 4 – Communication Skills

Course Requirements/Assessments

There are 385 possible points in this course, distributed among multiple assessments. Please review the point breakdown and description of each assessment very carefully.

Assessment	Number	Points Each	Points Total	Portion of Grade (Approx.)
Mini Exams	4	50	200	52%
Final Exam	1	75	75	19.5%
Problem Sets	14	5	70	18%

Application Exercises	4	10	40	10.5%
			385	100%

Mini Exams. There will be 4 mini exams (50 points each). They are not cumulative and will only cover the specified topics/chapters. All material in lecture and the textbook is fair game for the mini exams. Each mini exam will contain multiple-choice questions and solve-by-hand word problems. The mini exams are take-home exams. They are open-book and open-notes. You will be given each mini exam in class and will have one week to work on it. You must submit it on or before the start of the following class. Late exams will not be accepted. If you know in advance that you will be unable to submit the mini exam by the deadline (e.g., you have to miss class for a business trip), you must contact me and arrange to drop it off before the due date. Should you miss the deadline and not provide advanced notice, you must contact me within 24 hours of the missed deadline and provide appropriate documentation of your absence (e.g., a doctor's note, a tow truck receipt). I will only accept late mini exams if both of these criteria are met. If you are not in class to obtain the mini exam, you must contact me to get a copy. Keep in mind the mini exam is still due by the following class, so you will want to arrange a pick-up as soon as possible.

Final Exam. There will be a cumulative final exam (75 points). It will cover all of the topics/chapters from the course. The final exam will follow the same format as the mini exams (i.e., multiple-choice questions and solve-by-hand word problems), except it will be longer and consist of more questions. The final exam will take place in class, on the last day of class. It will be closed-book and closed-notes. However, you will be allowed one 3" x 5" notecard in which you may include any notes you like, such as important concepts, procedures, and formulas. You may also use a basic calculator (no graphing calculators, cell phones, laptops, etc.). If you know in advance that you will be unable to take the final exam on the scheduled date/time, you must notify me at least 1 week ahead of time. We will then schedule the exam for an earlier date/time. Should you miss the final exam and not provide advanced notice, you must contact me within 24 hours of the missed exam and provide appropriate documentation of your absence (e.g., a doctor's note, a tow truck receipt). I will only allow a make-up exam if both of these criteria are met. Additionally, this make-up exam may contain different questions (either content or format) than the original exam.

Problem Sets. The key to understanding and mastering statistics is practice, practice, practice! To help you develop and refine your skills, you will complete 14 problem sets (5 points each). The purpose of these problem sets is to give you a chance to practice what you just learned in the textbook, as well as help you realize which concepts you understand well and which concepts you need to spend more time on. There are approx. 25 questions at the end of each chapter in the textbook. I strongly encourage you to focus more on understanding the concepts than simply getting the correct answers. To help you maintain this focus on understanding and reduce potential stress/anxiety, these problem sets will not be graded. Instead, you will earn credit based on completion. Each problem set will be collected and checked to make sure you are attempting the problems. You must attempt to answer every question. If you are stuck and have absolutely nothing to write for the question, you must instead explain all the things you do know about the problem (based on lecture and the textbook reading), as well as why you are having trouble solving it. If you do not complete the entire problem set (i.e., answer every question), you will not get credit. To allow you more flexibility, problem sets will be collected at the same time as the corresponding mini exam. You should not, however, wait until the last minute to complete the problem sets. You will get more from the problem sets if you complete them as you read each chapter. You may not make up missed problem sets.

Application Exercises. There will be 4 application exercises (10 points each). The purpose of these exercises is to give you practice analyzing data using SPSS (statistical analysis software) and writing the results in APA-style format. More specific instructions will be provided when each exercise is assigned.

We will work on these application exercises together in class. Given these are participation-based exercises, you must be in class to earn full credit. If you miss an application exercise, you may do it on your own and earn half credit. Keep in mind that you will need SPSS to complete each assignment, so you will have to come to campus to use the computer lab (if you do not have a copy of the software on your personal computer).

Class Attendance. Statistics is a course in which a lot of material is covered in a very short period of time. Additionally, this material builds on itself. If you miss even one class, you will likely feel lost and have difficulty catching up. Furthermore, in class, we will go over concepts in more detail and complete practice problems that may not be on the lecture slides. If you want to be successful in this course, I strongly recommend that you attend every class. Attendance will be taken throughout the term. You are allowed to miss 1 class – for any reason – without penalty. For every unexcused absence following, 10 points (approx. 2.5%) will be deducted from your final grade. Absences will only be excused if you contact me within 24 hours of the missed class and provide appropriate documentation of your absence (e.g., a doctor’s note, a tow truck receipt). Attendance will not be taken during the 1st week of classes.

Extra Credit. Extra credit opportunities may be offered throughout the term. If you miss one of these possible opportunities (e.g., you are not in class, you do not turn it in on time), you may not make it up.

Course Grades

Your final grade will be based on your performance on all of the above assessments. Grading will be on a straight scale (i.e., no curve). The grade distribution is as follows:

*To find your percent, divide your total points on Blackboard by 385. Then, multiply by 100.

Grade	Percent
A	93–100%
A-	90–92.99%
B+	87–89.99%
B	83–86.99%
B-	80–82.99%
C+	77–79.99%
C	73–76.99%
C-	70–72.99%
D+	67–69.99%
D	63–66.99%
D-	60–62.99%
F	0–59.99%

Student Workload and Carnegie Hours

The expectation is that a 4-credit course will meet for 50 hours of instructional time and will have about 100 hours of out-of-class work (homework). You will have approximately 9 hours of homework per week (of course, this may vary depending on the week).

Activity	Instructor-Led Hours		Homework Hours		Remarks
	Weekly	Course	Weekly	Course	
Class (includes Final Exam & Application Exercises)	3 hrs. 20 min.	36 hrs. 40 min.			
Textbook Reading			5 hrs.	50 hrs.	Average, varies by student
Mini Exams (4)		13 hrs. 20 min.			Average, varies by student
Problem Sets (14)			3 hrs.	30 hrs.	Average, varies by student
Studying & Exam Prep			2 hrs.	20 hrs.	Average, varies by student
Total		50 hrs.		100 hrs.	

*NOTE: In this chart, the Carnegie Instructional Hours have already been converted to traditional clock hours; these are based on a 60-minute clock hour

Class Conduct

It is essential that we create a classroom environment that is conducive to learning. Together, we will determine how we should go about creating this type of environment. On the first day of class, we will discuss and decide our classroom policies. I will then post them on Blackboard to serve as guidelines for maintaining a positive classroom environment.

Course Evaluations Statement

All course evaluations are conducted online. Your feedback is important to us. You will receive an email message reminding you when the website is open for your feedback. The link is: courseval.callutheran.edu.

Disability Statement

California Lutheran University is committed to providing reasonable accommodations in compliance with ADA of 1990 and Section 504 of the Rehabilitation Act of 1973 to students with documented disabilities. If you are a student requesting accommodations for this course, please contact your

professor at the beginning of the semester and register with the Disability Support Services Coordinator, Wendy Jimenez, for the facilitation and verification of need. The Disability Support Services Coordinator is located in the Center for Student Success Office located at 3259 Pioneer Street and can be contacted by calling (805) 493-3260 or emailing wjimene@callutheran.edu.

Statement on Academic Honesty

The educational programs of California Lutheran University are designed and dedicated to achieve academic excellence, honesty and integrity at every level of student life. Part of CLU's dedication to academic excellence is our commitment to academic honesty. Students, faculty, staff, and administration share the responsibility for maintaining high levels of scholarship on campus. Any behavior or act which might be defined as "deceitful" or "dishonest" will meet with appropriate disciplinary sanctions, including dismissal from the University, suspension, grade F in a course or various forms of academic probation. Policies and procedures regarding academic honesty are contained in the faculty and student handbooks.

Plagiarism, cheating, unethical computer use and facilitation of academic dishonest are examples of behavior that will result in disciplinary sanctions. Plagiarism includes, but is not limited to:

- Word for word copying without using quotation marks or presenting the work as yours
- Using the ideas or work of others without acknowledgement
- Not citing quoted material; Students must cite sources for any information that is not either the result of original research or common knowledge

Standards of Student Conduct Statements:

- Student Life Handbook: callutheran.edu/student_life/student_handbook/index.php
- Academic Honesty Statement: callutheran.edu/ctl/services/academic-honesty.php

University Harassment Policy

Be civil to each other, both on- and offline. For information on the University's student harassment policy and rights, please go to the following link: callutheran.edu/student_life/student_handbook/index.php

Sexual Misconduct

California Lutheran University does not tolerate any degree of sexual misconduct on or off-campus. We encourage you to report if you know of, or have been the victim of, sexual harassment, misconduct, and/or assault. If you report this to a faculty member, she or he must notify Cal Lutheran's Title IX Coordinator about the basic facts of the incident. More information about your options for reporting can be found at: callutheran.edu/title-ix/

Pearson Library

Pearson Library provides access to scholarly books, journals, ebooks, and databases of full text articles from scholarly journals. To begin using these materials, visit the library web page <http://www.callutheran.edu/library>

There are many ways to contact Pearson Library for research assistance, no matter where you are!

- Email Yvonne Wilber (Professionals liaison) at ywilber@callutheran.edu
- General library email: CLUlibrary@callutheran.edu
- Library main phone: (805) 493-3250
- Text us your question: (805) 493-3867
- Get more help at: <http://www.callutheran.edu/library/help/>

Cal Lutheran Writing Center

The Writing Center provides 1:1 writing consultations, in-person and online, with trained undergraduate and graduate writing consultants. We welcome all writing-related projects at any stage of the writing process across the diverse disciplines of study at Cal Lutheran. The Writing Center also hosts writing workshops, provides in-class visits, facilitates writing groups, and offers a writer's studio option for longer, sustained projects. Services suit writers of all levels, including traditional undergraduates, graduate students from all fields, all English language learners, and accomplished scholars alike. All members of the Cal Lutheran community with an @callutheran.edu email address are welcome to make use of our services. For more information, please visit at www.callutheran.edu/writing_center or call (805) 493-3257. Please schedule appointments online through MyCLU Blackboard with the yellow "The Writing Center" icon in "Tools," or stop by The Writing Center itself, located in the Darling Collaboration Suite of Pearson Library.

Veterans Resources

If you are a veteran, military member, or a family member of a veteran or military member, please refer to Cal Lutheran's Veterans Resources webpage for important information: <http://www.callutheran.edu/veterans/>. Also, if you are a veteran receiving benefits and you are struggling in a class, you most likely qualify for free tutoring. Please contact the Veterans Coordinator, Jenn Zimmerman, veterans@callutheran.edu or (805) 493-3648, for more information.

Help Desk

Students may contact the Help Desk about telephone, network, wireless network, software questions password problems, hardware problems, and general consultation (i.e., you cannot log into your MyCLU portal, or you are having problems with Blackboard). Please click on the following link for more information http://www.callutheran.edu/iss/technology_services/helpdesk.php or call (805) 493-3698.

Final Note

This syllabus is subject to change. Every effort will be made to alert students to changes that occur in a timely manner.

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Class Schedule

The schedule may change as the term progresses. Students will be made aware of any changes immediately (in class and on Blackboard).

Week & Class Date	Lecture Topic	Reading	Assignments	Due (Start of Class)
Week 1, Wed. Aug. 31	Intro to Statistics	Chap. 1	Problem Set 1	
Week 2, Wed. Sept. 7	Frequency Distributions & Central Tendency	Chap. 2 & 3	Problem Sets 2 & 3	
Week 3, Wed. Sept. 14	Variability & Z-Scores	Chap. 4 & 5	Problem Sets 4 & 5 Application Exercise 1 Mini Exam 1 (covers Chap. 1, 2, 3, 4, & 5)	
Week 4, Wed. Sept. 21	Probability & Distribution of Sample Means	Chap. 6 & 7	Problem Sets 6 & 7	Problem Sets 1, 2, 3, 4, & 5 Mini Exam 1
Week 5, Wed. Sept. 28	Hypothesis Testing	Chap. 8	Problem Set 8 Mini Exam 2 (covers Chap. 6, 7, & 8)	
Week 6, Wed. Oct. 5	Intro to t -Test & Independent Samples t -Test	Chap. 9 & 10	Problem Sets 9 & 10	Problem Sets 6, 7, & 8 Mini Exam 2
Week 7, Wed. Oct. 12	Independent Samples t -Test (cont.) & Related Samples t -Test	Chap. 11	Problem Set 11 Application Exercise 2 Mini Exam 3 (covers Chap. 9, 10, & 11)	
Week 8, Wed. Oct. 19	Analysis of Variance (ANOVA)	Chap. 12	Problem Set 12	Problem Sets 9, 10, & 11 Mini Exam 3
Week 9, Wed. Oct. 26	Other ANOVA Designs	Chap. 13	Problem Set 13 Application Exercise 3	
Week 10, Wed. Nov. 2	Correlation	Chap. 14	Problem Set 14 Application Exercise 4 Mini Exam 4 (covers Chap. 12, 13, & 14)	
Week 11, Wed. Nov. 9	Final Exam (covers Chap. 1 – 14)	--		Problem Sets 12, 13, & 14 Mini Exam 4