

California Lutheran University

Bachelor's Degree for Professionals

STATISTICAL METHODS

ECON 311

Fall Term 2016

Thursdays 6-9:30 PM

Swenson, Room 111

Instructor: Cynthia Counter, Adjunct Senior Lecturer

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Phone: (805) 889-2398 (cell: voice mail & text)

Office Hours: Before class and by appointment

Important Dates

Fall Term 2016: August 29, 2016 to November 15, 2016

Labor Day Holiday: September 5

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

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

Textbook and Computer Software

There is no required textbook for this course. We will be meeting in a computer lab, so everyone will have access to a PC with EXCEL. If you want to do assignments at home you will need a computer with EXCEL.

Website

Blackboard: www.callutheran.edu/myclu

The Blackboard course website will contain most of the things you will need for this course including this course syllabus, required readings in pdf format, course announcements, links to videos, assignments as EXCEL workbooks, online quizzes and exams, and your grades. Please check the course website on a regular basis.

If you have any questions about Blackboard (e.g., how to upload an assignment, 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

This course provides students with an introduction to the field of statistics by discussing the basic methods in analysis of central tendency, dispersion, probability distributions, and inferential statistics. It stresses concepts and applications using technology (EXCEL), although

some basic mathematical foundations will be discussed. This course covers basic probability theory (discrete and continuous), descriptive statistics (numerical and graphical methods), interval estimation, hypothesis testing, analysis of variance (ANOVA), and simple linear regression. **Course Prerequisite:** MATH 115 FINITE MATH.

Course Objectives

By the end of the course students will gain **quantitative literacy** by being able to:

1. Compute probabilities of simple and compound events; compute probabilities from binomial, hypergeometric, and normal distributions.
2. Apply descriptive statistics to summarize both qualitative and quantitative data sets. For qualitative data sets this includes constructing frequency distributions, pie charts, and bar charts; and calculating sample proportions. For quantitative data sets this includes finding the mean, median, mode, range, variance, and standard deviation; and constructing a frequency distribution and histogram.
3. Compute point estimates and construct interval estimates for proportions and means; estimate sample sizes.
4. Conduct hypothesis tests to test claims about proportions and means.
5. Conduct hypothesis tests to test claims concerning two proportions or two means from two independent populations.
6. Conduct hypothesis tests to test claims concerning two means from dependent (matched) samples.
7. Perform analysis of variance to test claims concerning three or more means from independent samples.
8. Perform simple linear correlation and regression.

Course Requirements/Assessments

Required Readings:

No textbook is required for the course, but readings in pdf format that I have written will be assigned and available on Blackboard. The readings include theory and examples.

YouTube Videos:

Each week will feature one or more YouTube videos that focus on using EXCEL to work problems like the ones on the graded assignments.

Quizzes:

There is an online quiz for each of the ten lessons. Each quiz may be taken multiple times, and contains multiple choice, matching, and true/false questions concerning concepts and vocabulary. Only the highest score for each quiz will count towards the final course grade.

Classwork:

During class there will be a class assignment that is to be completed during that class meeting using EXCEL, and turned in electronically via Bb as an EXCEL worksheet. The instructor will be present to provide guidance and to make sure that students have worked the problems correctly and understand the material enough so that they can complete the homework.

Homework:

There is a homework assignment for each lesson. All assignments should be performed using EXCEL, and should be turned in electronically via Bb as an EXCEL worksheet. The homework will include problems that feature the topic for that week, as well as review problems featuring topics from the previous weeks. If the submitted assignment is not fully correct, the instructor will provide hints and suggestions so that it may be corrected and resubmitted for full credit.

Midterm:

An online midterm exam covers concepts and vocabulary for lessons 1 through 4. It may be taken multiple times, and contains multiple choice and matching questions similar to the quizzes. Only the highest score will count towards the final course grade. The best way to prepare for the midterm is to review the quizzes.

Final Exam:

An online final exam covers concepts and vocabulary for lessons 5 through 10. It may be taken multiple times, and contains multiple choice and matching questions similar to the quizzes. Only the highest score will count towards the final course grade. The best way to review for the final is to review the quizzes.

Course Grades

Your final course grade will be a weighted mean based on the following:

CRITERION	WEIGHT	PERCENTAGE
1. Homework	30%	A 95-100 A- 90-94.9
2. Classwork	30%	B+ 86-89.9 B 83-85.9
3. Quizzes	20%	B- 80-82.9 C+ 76-79.9
4. Midterm	10%	C 73-75.9 C- 70-72.9
5. Final Exam	10%	D+ 67-69.9 D 63-66.9 D- 60-62.9

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	
Required Readings			4	40	Over 10 weeks
Weekly Classes	3.5	35			Over 10 weeks
YouTube Videos	1.5	15			Over 10 weeks
Quizzes			1.5	15	Average, varies by student
Homework			4	40	Average, varies by student

Midterm				2.5	Average, varies by student
Final Exam				2.5	Average, varies by student
Total		50		100	

*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

Attendance Policy:

Attendance is not a formal component of the course grade, but it is crucial for success. It is during class meetings that the instructor will guide students through the problem solving process using EXCEL, and the students will have opportunities to ask the instructor questions and work on the graded assignments.

Make up and Late Policy:

There are no formal due dates for work, but all work should be completed in a timely manner so that feedback and corrections are possible. The last day for work submissions is, Monday, November 14.

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: <http://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 at 3259 Pioneer Street, and can be contacted by calling 805.493.3878 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 Cal Lutheran’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 dishonesty are examples of behavior which 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](#)
- [Academic Honesty Statement](#)

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:**
[Student Life Handbook](#)

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: <http://www.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 email specific details about your problems to helpdesk@callutheran.edu, 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.

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 #	Meeting Dates	Lesson Topics	Assignments Due
1	9/1	Introduction to Probability	Reading Assignment 1 YouTube Videos Quiz 1 Classwork 1 (CW#1) Homework 1 (HW#1)
2	9/8	Discrete Probability Distributions	Reading Assignment 2 YouTube Videos Quiz 2 Classwork 2 (CW#2) Homework 2 (HW#2)
3	9/15	Binomial & Hypergeometric Probability Distributions	Reading Assignment 3 YouTube Videos Quiz 3 Classwork 3 (CW#3) Homework 3 (HW#3)
4	9/22	Continuous Probability Distributions	Reading Assignment 4 YouTube Videos Quiz 4 Classwork 4 (CW#4) Homework 4 (HW#4) Midterm
5	9/29	Analyzing Qualitative Data	Reading Assignment 5 YouTube Videos Quiz 5 Classwork 5 (CW#5) Homework 5 (HW#5)
6	10/6	Hypothesis Tests for Proportions	Reading Assignment 6 YouTube Videos Quiz 6 Classwork 6 (CW#6) Homework 6 (HW#6)
7	10/13	Describing Quantitative Data	Reading Assignment 7 YouTube Videos Quiz 7 Classwork 7 (HW#7) Homework 7 (HW#7)
8	10/20	Estimating Means	Reading Assignment 8 YouTube Video Quiz 8 Classwork 8 (CW#8) Homework 8 (HW#8)

9	10/27	Hypothesis Tests for Means	Reading Assignment 9 YouTube Video Quiz 9 Classwork 9 (CW#9) Homework 9 (HW#9)
10	11/3	ANOVA and Linear Correlation & Regression	Reading Assignment 10 YouTube Video Quiz 10 Classwork 10 (CW#10)
11	11/10	Wrap Up	Corrections Final Exam

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