

California Lutheran University

Bachelor's Degree for Professionals

FINITE MATH
MATH 115
Winter Term 2017
Mondays & Wednesdays 6-8:15 PM
Woodland Hills, Room 117

Instructor: Cynthia Counter, Adjunct Senior Lecturer

Email: ccounter@callutheran.edu

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

Office Hours: Before class and by appointment

Important Dates

Winter Term 2017: November 21, 2016 to February 16, 2017

Thanksgiving Holiday: November 24

Christmas Recess: December 16 – January 2

Last day to drop (no financial penalty or “W”): December 5

Last day to withdraw (no academic penalty): January 17

Textbook and Calculator

There is no required textbook for this course, but you will need a calculator with statistical functions including built in Binomial and Normal pdf functions that will be used in lieu of using tables. I recommend the TI-83 or TI-84.

Online Resource: For supplemental videos and practice problems visit www.khanacademy.org

Additional Resource: (For a review of the basics of algebra.)

Painless Algebra, 3rd Ed, by Lynette Long, Hank Morehouse - Barron's (2011)

ISBN 978-0-7641-4715-9

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, power points, links to videos, homework exercises and solutions, practice quizzes, the take-home midterm, practice final 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 studies mathematics and models in the social sciences including logic, sets, families of functions, probability, and an introduction to descriptive and inferential statistics. Recommended for social science majors. **Course Prerequisite:** MATH 110

Course Objectives

Finite mathematics is a course introducing students to *noncalculus* mathematics beyond algebra. The most important goal of this course is for students to become more comfortable and proficient with using mathematical concepts, quantitative models, and statistics within their discipline. A secondary goal is to reinforce algebra and computation concepts students were introduced to in intermediate algebra.

Upon completion of this course students will be able to:

- Understand and use basic symbolic logic
- Understand the theoretical framework of probability and apply it to real world problems.
- Study basic linear, quadratic, and exponential models and their applications.
- Understand, use, and distinguish between descriptive and inferential statistics.
- Think critically about statistics in scientific literature and everyday life.

Cal Lutheran Learning Outcomes

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

- Development of critical thinking skills are implied in the course objectives.
- Field specific knowledge and experience are enhanced through intensive study of the course content.
- Interpersonal and teamwork skills are advanced through classroom activities.

Program Specific Learning Outcomes

As outlined in the CLU Mathematics Department goals, students who successfully complete this course will have made progress towards:

- Understanding and using mathematics as a way of thinking about and framing issues.
- Applying mathematical concepts and methods to a wide variety of situations and problems.
- Using appropriate technology to analyze, resolve, and understand mathematical issues.
- Possessing the self-confidence and enthusiasm to learn mathematics.

Course Requirements/Assessments

Required Readings:

I have written my own readings that are available on Blackboard (Bb) in pdf format. These can be used in preparation for class as well as a guide for class lectures and exercises.

Videos & Power Points:

In order to meet Carnegie hour requirements there will be videos and power points available for viewing online in addition to the live class meetings. Class time will be spent discussing concepts and procedures, as well as practicing problems.

Homework:

The corresponding practice exercises posted on Bb for each topic should be completed after the topic has been discussed in class. These exercises will not be collected or graded and do not contribute to the course grade. The answers are provided, so it is the student's responsibility to check his/her answers. These exercises are intended to reinforce the concepts and techniques discussed in class, as well as help students gain mastery of the material. These exercises will prepare you for the quizzes. I will address any questions concerning the homework exercises in class.

Quizzes:

There will be a quiz every Wednesday starting the second week of class for a total of ten quizzes. You may make up any missed quiz, or retake any quiz in which you would like to raise your score. Each quiz will consist of problems similar to the homework exercises, and will be closed book, closed notes. There will be a practice quiz with solutions posted in Bb for each quiz. The quizzes are not only for assessment, but are also learning opportunities; therefore, as soon as you are finished with your quiz I will grade it and allow you to make needed corrections for additional points. Your quiz scores will constitute 50% of your course grade.

Exams:

There will be a MIDTERM and a FINAL exam each worth 25% of your course grade. The midterm will be available online on Bb and will be open book, open notes, open discussion. The final exam will be in class, but you will be allowed to use one 8.5 inches by 11 inches page of notes, both sides, with no restrictions as to content. The final exam problems will be similar to the quiz problems and will only cover material since the midterm.

Course Grades

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

CRITERION	WEIGHT	PERCENTAGE
1. Quizzes	50%	A 95-100 A- 90-94.9
2. Midterm Exam	25%	B+ 86-89.9 B 83-85.9
3. Final Exam	25%	B- 80-82.9 C+ 76-79.9 C 73-75.9 C- 70-72.9 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			3 hours	30 hours	Over 10 weeks
Weekly Classes	4 hours	44 hours			Includes final exam and quizzes
Videos and Power Points	2 hours	10 hours			Over 5 weeks
Quiz Prep			2 hours	20 hours	Over 10 weeks Average, varies by student
Midterm				5 hours	Average, varies by student
Homework			4 hours	40 hours	Over 10 weeks Average, varies by student
Final Exam Prep				5 hours	Average, varies by student
Total		54		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

Attendance Policy:

Attendance is not a formal component of the course grade, but it is crucial for success. It is during class meetings that students will solve problems and use the calculator with the instructor's guidance.

Make up and Late Policy:

Any missed quiz may be made up, and any quiz in which the student wishes to raise his/her score may be made up after obtaining permission from the instructor and a make-up date set. Midterms may be turned in late without penalty if prior permission has been obtained from the instructor.

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).

NOTE: ALL QUIZZES ARE ON WEDNESDAYS

Week #	Meeting Dates	Topics	Assessments
1	Mon 11/21	Module 1: Propositional Logic	
	Wed 11/23	No Class	
2	Mon 11/28	Module 2: Predicate Logic	
	Wed 11/30	Module 3: Set Theory	Quiz 1: Propositional Logic
3	Mon 12/5	Module 4: Product and Addition Rules	
	Wed 12/7	Module 5: Combinations & Permutations	Quiz 2: Predicate Logic
4	Mon 12/12	Module 6: Classical Probability	
	Wed 12/14	Module 7: Empirical and Conditional Probabilities	Quiz 3: Set Theory
5	Mon 1/2	No Class	
	Wed 1/4	Catch Up and Review	Quiz 4: Combinatorics
6	Mon 1/9	Module 8: Bayes Rule (Narrated Power Point & YouTube Video)	
	Wed 1/11	Module 9: The Binomial Distribution (Narrated Power Point & YouTube Video)	Quiz 5: Probability MIDTERM Due (Covers Quizzes #1-4)
7	Mon 1/16	Module 10: The Normal Distribution (Narrated Power Point & YouTube Video)	
	Wed 1/18	Module 11: Descriptive Statistics (Narrated Power Point & YouTube Video)	Quiz 6: Bayes Rule
8	Mon 1/23	Module 12: Confidence Intervals (Narrated Power Point & YouTube Video)	
	Wed 1/25	Module 13: Hypothesis Tests (Narrated Power Point & YouTube Video)	Quiz 7: Probability Distributions
9	Mon 1/30	Module 14: Linear Models (Narrated Power Point & YouTube Video)	
	Wed 2/1	Module 15: Quadratic Models (Narrated Power Point & YouTube Video)	Quiz 8: Descriptive Statistics & Confidence Intervals

10	Mon 2/6	Module 16: Exponential Models (Narrated Power Point & YouTube Video)	Quiz 9: Hypothesis Tests Quiz 10: Linear, Quadratic, & Exponential Models
	Wed 2/8	Review	
11	Mon 2/13	Review	Final Exam
	Wed 2/15	Final Exam	

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