



Lincoln University

Course Title:	Finite Mathematics	Instructor:	Prof. Serge Ruiz
Course No:	MATH 15	Phone:	949-232-3323
Units:	3 units (= 45 lecture hours)	E-mail:	sruiz@lincolnuca.edu
Class Hours:	Mondays, 09:00 am – 11:45 am	Office Hours:	By appointment
Semester:	Spring 2015	Office Number:	Room 402

REQUIRED MATERIALS

Textbook: *Finite Mathematics* for Business, Economics, Life Sciences, and Social Sciences, 12/E, by Raymond A. Barnett, Michael R. Ziegler, Karl E. Byleen, Prentice Hall, 2011, ISBN-10: 0321614011

Required Tools: Microsoft Excel; A scientific or graphing calculator.

Optional: *Graphing Calculator and Excel Spreadsheet Manual* for Finite Mathematics for Business, Economics, Life Sciences and Social Sciences, 12/E, by Raymond A. Barnett, Michael R. Ziegler, and Karl E. Byleen, Prentice Hall, 2010, ISBN-10: 0321645413

COURSE DESCRIPTION

Topics include matrix theory, linear systems, linear programming, probability, decision theory, and game theory. Also applied calculus is covered. (3 units)

LEARNING OBJECTIVES

The students will review the basic algebra and elementary functions, learn the basic concepts and techniques of mathematics of finance, linear algebra, linear programming, and probability and practice how to apply them. The goal is to introduce students to problem solving and mathematical modeling and to build a solid foundation in the principles of mathematical thinking.

INSTRUCTIONAL METHODS

Lecture method is used in combination with the practical use of a calculator, business software, and the Internet resources to solve application problems. The emphasis will be on learning by doing. Every student must participate in an intensive classroom activity. Reading, writing, and problem solving assignments will be made weekly throughout the course.

OTHER REQUIREMENTS

All students are required to attend the class. Continuous assessment is emphasized. Written or oral quizzes will be given every week. Students must complete all assignments and take all quizzes, mid-term exam and final exam ON THE DATES DUE. Talking in class, using cell phones, coming late, leaving the room at times other than at break time is not allowed. Plagiarism/cheating will result in the grade F and a report to the administration.

ASSIGNMENTS & QUIZZES

Most assignments will be from the textbook. Each assignment is due at the beginning of the following class. You can return your assignments electronically if you desire. Quizzes will take place at the beginning of the course, after collecting assignments and answering questions. Quizzes are designed to last 20 minutes and are based on the material in the assignment.

TESTING

Classroom activities	every week	10%
Quizzes	as scheduled	10%
Assignments	every week	10%
Mid-term exam	as scheduled	30%
Final exam	as scheduled	40%

There will be no make-up for a missed quiz or participation in a classroom activity. No make-up exams will be given unless you have the instructor's prior approval obtained in person before the exam date, with the exception of an extreme emergency. Late assignments will get no credit or reduced credit. ***Students will not be allowed to use computers or cellular phones during tests.***

GRADING

Grades will be determined according to the following percentages awarded for completed work:

100-93	92-90	89-87	86-83	82-80	79-77	76-73	72-70	69-67	66-60	59-0
A	A-	B+	B	B-	C+	C	C-	D+	D	F

OTHER COMMENTS

- Please participate. You will be asked to go to the board to solve exercises.
- Please come on time. Late arrivals disturb everyone else.
- To avoid distracting noise in class, cellular phones must be turned off or the ringing mode silenced.
- Questions and comments during the class are welcome. Do not hesitate to ask questions – do not leave anything unclear for you.

SCHEDULE OF TOPICS

Please read every chapter of the textbook before you come to class

Session	Date	Topics	Chapters
1	01/26	Basic Algebra Review	Appendix A
2	02/02	Special Topics	Appendix B
3	02/09	Linear Equations and Graphs	1
	02/16	PRESIDENTS' DAY	
4	02/23	Functions and Graphs	2
5	03/02	Mathematics of Finance. Use of a calculator and Excel functions.	3
6	03/09	Systems of Linear Equations	4
7	03/16	Midterm Exam	1-4
8	03/23	Matrices; Use of Excel array functions	4
9	03/30	Linear Inequalities and Linear Programming	5
10	04/06	Linear Programming: Simplex Method; Use of Excel Solver	6
11	04/13	Logic, Sets, and Counting	7
12	04/20	Probability	8
13	04/27	Data Description and Probability Distributions	8, 11
14	05/04	Review	1-8, 11
15	05/11	Final	1-8, 11

MODIFICATION OF THE SYLLABUS

This syllabus was updated on December 19, 2014. The instructor reserves the right to modify this syllabus at any time during the semester. An announcement of any changes will be made in the classroom.