



# LINCOLN UNIVERSITY

<b>Course Title</b>	Finite Mathematics	<b>Instructor:</b>	Prof. Dan Sevall
<b>Course No:</b>	MATH 15	<b>Phone:</b>	650-380-0518
<b>Class hours:</b>	Mondays and Wednesdays 12:30 pm – 3:15 pm	<b>E-mail:</b>	dsevall@lincolnuca.edu
<b>Units:</b>	3 units (= 45 lecture hours)	<b>Office Hours:</b>	Mondays and Wednesdays at 11:30 am – 12:30 pm
<b>Semester:</b>	Spring 2012	<b>Office:</b>	Room 407

## REQUIRED MATERIALS:

Textbook: *Finite Mathematics for Business, Economics, Life Sciences and Social Sciences*, 11<sup>th</sup> edition by Raymond A. Barnett, Michael R. Ziegler, Karl E. Byleen, Prentice Hall, 2008, ISBN: 0132255707

Required Tools: Microsoft Excel Spreadsheets

Optional: A scientific calculator

## 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 concepts and techniques of elementary and intermediate algebra, get complete coverage of the function and graph concepts, and learn how to apply them. Particular emphasis will be placed on the practical use of mathematics in business and in economics. The goal is to introduce students to problem solving and mathematical modeling using algebra 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:**

Most assignments will be from the textbook. Each assignment is due on the Wednesday of the next week after it is assigned.

## **TESTING:**

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

*Students will be allowed to use computers during tests.*

## **GRADING:**

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

- 85% -100 % : A (A+ to A-) range
- 75% - 84%: B (B+ to B-) range
- 65% - 74%: C (C+ to C-) range
- 55% - 64%: D
- Below 55%: F

## **COURSE SCHEDULE:**

Weekly schedule of topics is attached. Students should read every chapter of the textbook on the topic to be discussed in class before they come to class. Be ready to answer in writing all review questions and to solve problems at the end of the chapter.

## **MODIFICATION OF THE SYLLABUS:**

**This syllabus was updated on November 10th, 2011.** 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.

## Spring 2012 SCHEDULE OF TOPICS

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

<b>Class Session</b>	<b>Topics</b>	<b>Chapters</b>
1	Basic Algebra Review	Appendix A
2	Special Topics	Appendix B
3	Linear Equations and Graphs	1
4	Functions and Graphs	2
5	Mathematics of Finance	3
6	Systems of Linear Equations	4
7	<b>Review</b>	R, 1 - 4
	<b>MIDTERM EXAM</b>	
8	Linear Inequalities and Linear Programming	5
9	Linear Programming: Simplex Method (Use of Excel Solver)	6
10	Logic, Sets, and Counting	7
11	Probability	8
12	Introduction to Discrete Random Variables	6
13	Introduction to Continuous Random Variables	8, 11
14	<b>Review</b>	1-11
	<b>COMPREHENSIVE FINAL EXAM</b>	

Let's get ready for a great course!