Lincoln University

Course Title:	Finite Mathematics	**Instructor:**	Prof. S. M. Goberstein
Course No:	MATH 15	**Phone:**	510-628-8037
Units:	3 units (45 lecture hrs.)	**E-mail:**	goberstein@lincolnuca.edu
Class Hours:	Monday, 9:00 – 11:45 am	**Office Hours:**	11:45 – 12:15 by appointment
Semester:	Spring 2016	**Office number:**	Room 407

REQUIRED MATERIALS

Textbook: ***Finite Mathematics for Business, Economics, Life Sciences, and Social Sciences***, 12th edition, 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 Barnett, Michael Ziegler, and Karl Byleen, Prentice Hall, 2010, ISBN-10: 0321645413

COURSE DESCRIPTION

Topics include matrix theory, systems of linear equations and inequalities, linear programming, elementary combinatorics and probability theory. We will cover most of the material in Chapters 1 – 8 and 11, and in Appendices A and B.

LEARNING OBJECTIVES

Students will review basic algebra and elementary properties of functions, learn basic concepts and techniques of mathematics of finance, linear algebra, linear programming, and probability theory and practice how to apply them. The goal is 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. Homework assignments will be given weekly throughout the course.

OTHER REQUIREMENTS

Students are expected to attend all class sessions. Use of mobile devices, laptops, or textbooks during exams is not allowed. Plagiarism/cheating on the exams will result in failing the course and a report to the administration.

ASSIGNMENTS, QUIZZES, and TESTS

Homework assignments will be due at the beginning of the class on the following dates: **Feb. 1, 29; March 28; April 11**. Quizzes (see the schedule below) will be based on the preceding homework assignments, will be given at the beginning of the class session (after answering questions) and will last 20 minutes. Midterm tests will be for 75 minutes and the final for 2 hours. All tests will be given at the end of the respective class session (the first part of that class will be devoted to answering questions).

EXAM SCHEDULE:

There will be 4 quizzes (each will be "worth" 20 points), 2 midterm tests (100 points each), and a comprehensive Final Test (200 points). The exam schedule is as follows:

Quizzes:	February 8; March 7; April 4, 18
Test 1:	March 14
Test 2:	April 25
Final Test:	May 9

GRADING POLICY:

The total score for homework assignments will be 20 points. Denote by HQ the sum of your homework and quiz scores, by T1 and T2 your scores on tests 1 and 2, respectively, and by FT your final test score. The smallest one of the four numbers – HQ, T1, T2, and (FT/2), will be dropped. Let S denote the sum of the **remaining** three numbers, and let P = (S+FT)/5. Your performance in class will be measured as P%, and the course grade will be assigned according to the following scheme:

93 – 100 % A	81 – 82 % B-	63 – 65 % D+
91 – 92 % A-	78 – 80 % C+	51 – 62 % D
89 – 90 % B+	69 – 77 % C	0 – 50 % F
83 – 88 % B	66 – 68 % C-	

Session	Date	Topics	Chapters
1	01/25	Basic Algebra Review; Special Topics	Appendices A&B
2	02/01 **HW is due**	Linear Equations and Graphs	1
3	02/08 **Quiz 1**	Functions and Graphs	2
	02/15	**Presidents' Day**	
4	02/22	Mathematics of Finance. Use of a calculator and Excel functions	3
5	02/29 **HW is due**	Systems of Linear Equations	4
6	03/07 **Quiz 2**	Matrices; Use of Excel array functions	4
7	**03/14**	**Test 1**	**1-4**
8	03/21	Linear Inequalities and Linear Programming	5
9	03/28 **HW is due**	Linear Programming: Simplex Method; Use of Excel Solver	6
10	04/04 **Quiz 3**	Logic, Sets, and Counting	7
11	04/11 **HW is due**	Probability	8
12	04/18 **Quiz 4**	Data Description and Probability Distributions	8, 11
13	**04/25**	**Test 2**	**5-8,11**
14	05/02	Review	1-8,11
15	**05/09**	**Final Test**	**1-8,11**