



Finite Mathematics

Course Syllabus

Course No:	MATH 15	Instructor:	Prof. Leonid Romanyuk
Semester:	Spring 2013	Phone:	(510) 628-8024
Units:	3 units (= 45 lecture hours)	E-mail:	lromanyuk@lincolnuca.edu
Class hours:	Monday 12:30 pm – 3:15 pm	Office hours:	Monday, Wednesday 11:50 am – 12:25 pm
Classroom:	TBA	Office number:	Room 402

COURSE DESCRIPTION:

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

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

TOOLS: A scientific or graphing calculator and Microsoft Excel software

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

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 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 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.

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%

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:

Less than 50% total is an "F"; 75% total is "C+". Other grades will be calculated "on the curve" from the scores above.

COURSE SCHEDULE:

Daily 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.

ASSIGNMENTS:

Each assignment is due on the Monday of the next week after it is assigned. Additional assignments based on the Internet and library resources can be given during the semester. Take a folder or a notebook and create an Assignment Notebook. You will put in it the solutions and other results of all your assignments. The instructor can ask you to turn in this folder / notebook and grade your work at any time during the semester.

MODIFICATION OF THE SYLLABUS:

This syllabus was updated on January 7, 2013. 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 2013 Schedule of Topics

*Read every chapter on the topic to be discussed in class before you come to class.
Be ready to answer in writing all review and discussion questions at the end of the chapter.*

Date	Topics	Chapters
1/28/13	Basic Algebra Review.	APPENDIX A.
2/04/13	Special Topics.	APPENDIX B.
2/11/13	Linear Equations and Graphs	1
2/18/13	Presidents' Day (Holiday)	
2/25/13	Functions and Graphs	2
3/04/13	Mathematics of Finance. Use of a calculator and Excel functions.	3
3/11/13	Systems of Linear Equations.	4
3/18/13	Review. MIDTERM EXAM	1 - 4
3/25/13	Matrices. Use of Excel array functions.	4
4/01/13	Linear Inequalities and Linear Programming.	5
4/08/13	Linear Programming: Simplex Method. Use of Excel Solver.	6
4/15/13	Logic, Sets, and Counting.	7
4/22/13	Probability.	8
4/29/13	Data Description and Probability Distributions.	8, 11
5/06/13	Review	1 – 8, 11
5/13/13	COMPREHENSIVE FINAL EXAM	