Lincoln University
SUMMER 2017

COURSE: **MATH 10: COLLEGE MATHEMATICS** (Tuesdays and Thursdays 9:00 – 11:45 AM) 3 units

INSTRUCTOR: Guoliang Fang glfang2005@gmail.com
510-628-8037

OFFICE HOURS: Before and after class (30 min. before/30 min. after)

TEXT: College Algebra, by Michael Sullivan, Pearson, 10th Edition, 2016
ISBN 978-0-321-9947-6
www.pearsonhighered.com/sullivan-10e-info/index.html
Required Tools: Microsoft Excel Spreadsheets
Optional: A scientific calculator

CATALOG DESCRIPTION:

Elementary algebra: fundamental algebraic concepts and operations, number bases, linear equations and inequalities, functions, graphing. Intermediate algebra: study of algebra including exponents and radical polynomials, geometric series, rational expressions, quadratic equations, and logarithms. (3 units)

EDUCATIONAL OBJECTIVES OF BACHELOR OF ARTS IN BUSINESS ADMINISTRATION:

1. To develop student's abilities to understand business concepts, terms and theories.
2. To prepare students for jobs in the fields of management, marketing, human resources, international business, and finance.
3. To develop critical thinking and to assist students in becoming more proficient in analysis, decision making and management.
4. To build students' understanding of international business and the effects of globalization.

The following Program Learning Outcomes (PLOs) are aligned with the Educational Objectives:

Students graduating our BA in Business Administration program will be able to:

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Outcomes	Mapping to ILOs
Demonstrate solid knowledge in the principle functional areas of general business and specific areas of concentration, which include: general business, management, entrepreneurship, and management information business (PLO 1).	ILO 1, ILO 2, ILO 3,
Determine the nature and extend of the information needed to evaluate a business problem. Apply critical thinking and reasoning skills to recognize credibility and accuracy within business environment (PLO 2)	ILO 1
Demonstrate the ability to communicate with others using written and oral communication tools within an organization (PLO 3).	ILO 2
Demonstrate the ability to use analytical skills to understand business problems and make well-informed decisions (PLO 4).	ILO 1, ILO 2, ILO 5
Apply and comply with ethical and legal principles of the business environment and evaluate different ethical perspectives (PLO 5).	ILO 3, ILO 4

This course is aligned with PLO1, PLO2, PLO3, PLO4, and PLO5.

COURSE 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. Students will be introduced to topics in elementary algebra including fundamental algebraic concepts and operations, number bases, linear equations and inequalities, functions, graphing, exponents and radical polynomials, geometric series, rational expressions, quadratic equations, and logarithms. 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 case studies and outside readings, as assigned. The emphasis will be on learning. Every student must participate in an intensive preparation and classroom activity. The emphasis will be on learning by examples and solving problems. Every student is welcome to participate in intensive classroom activities and discussions. Reading and problem solving assignments will be given throughout the course. Video materials will be presented. There may be class discussions and group presentations by students on the project assignments during class.

CLASS ATTENDANCE:

Students are expected to attend class on a regular basis. Attendance is crucial to performing well in this course, as some of the material presented may not be found in the textbook. Further, the lecture and classroom demonstrations will emphasize and expand upon important topics found in the textbook. Thus, it is vital that you take thorough notes in class.

ASSIGNMENTS:

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.

Please bring a **hard copy** of your **typed and stapled** homework assignment that has your name on it to class the day it is due. **Please no e mailed assignments**. **No late homework will be accepted!**

In accordance with the university policy on cheating and plagiarism, any student who does not do his/her own write-up completely independently on any assignment will fail the assignment.

EXAMS:

There will be two exams — a midterm and a final. To assess your learning in this course, exam questions will be derived from the lecture and textbook. Topics covered in lecture will be of major emphasis on the exam, and should be the focus of your textbook readings, though there will be some test questions found in the assigned readings but not covered in the lecture. To avoid guessing, there will be no multiple-choice questions on the exams. Exams may include conceptual or theoretical questions, and questions with applied scenarios. **All exams are open books and open notes.**

QUIZZES:

To encourage attendance and to help students with assessment of their knowledge, there will be a set of unannounced quizzes given at the start of class. They will be based on lecture and any assigned reading. They will not be computational in nature, but rather conceptual questions intended to help students gauge how well they understand the material.

GRADING PLAN:

Percentage	Grade
90-100%	A
80-89%	B
70-79%	C
60-69%	D
below 60%	F

Weights	
Homework	20%
Quizzes and class participation	10%
Midterm	30%
Final	40%

CLASSROOM POLICY:

Please do not use personal computers, iPads or smart phones during the lecture. If you do need to text message or receive a call, please take it outside the classroom.

I am available and will do my best to help you learn and succeed. Questions and points of discussion are encouraged. I am also highly accessible for discussions if you wish to receive additional information or learn more about a certain topic or need help with data analysis. Please visit me during my office hours, or talk to me immediately after class, if you need study tips or additional help. No appointment is required for my office hours.

TENTATIVE CLASS SCHEDULE:

Date	Content
13-Jun	Real numbers. Algenra essentials. Geometry Essentials. Poolynomials.
15-Jun	Factoring polynomials. Rational Expressions.
20-Jun	Linear equations, quadratic equations, inequalities.
22-Jun	Distance and midpoint formulas. Graphs of equations in two variables.
27-Jun	Functions. Graphing functions. Transformations.
29-Jun	Mathematical models, building functions, quadratic equations and their properties.
4-Jul	No class: Independence Day.
6-Jul	Midterm exam.
11-Jul	Plynomial functions and models. Properties of rational functions.
13-Jul	Composite functions. One-to-one functions.
18-Jul	Exponential and logarithmic functions.
20-Jul	Financial models. Exponential growth and decay models. Newton's Law.
25-Jul	System of linear equations. Matrix algebra.
27-Jul	Final exam

Note: Instructor reserves the right to modify the content of this syllabus.

GOOD LUCK!

Syllabus Reviewed: 5/2017