

# Syllabus for Math 1090-002 (Fall 2017)

## Business Algebra

### Course Information:

Time and Location: MWF 8:35am – 9:25am, WEB2230  
Instructor: Erjuan Fu  
Email: fu@math.utah.edu  
office: JWB 319  
Office Hours: MF 9:30am – 10:30am, or by appointment

**Textbook:** *Business Algebra, 2nd edition*, by Kelly MacArthur.

ISBN: 978-1-4652-0869-9

The book information site is <http://www.math.utah.edu/schedule/bookInfo/index.html> . You will get the best deal if you get the e-book for free with the homework software that we'll be using and you can't get that until the first day of school.

**Course Information:** Math1090, College Algebra for Business and Social Sciences is a 3-credit semester course.

**Prerequisites:** At least a C grade in Math1010 (Intermediate Algebra) OR Math1050 (College Algebra) OR in Math1080 (Precalculus) OR an Accuplacer score of 60 on the College Level Math (CLM) test OR at least an ACT Math score of 23 OR at least SAT Math score of 540.

**Course description:** Functions and graphs, polynomial and rational functions, matrices, Gaussian elimination, exponential and logarithmic functions, growth, periodic and continuously compounded interest, arithmetic and geometric sequences, annuities and loans.

**Expected Learning Outcomes:** At the end of the course you should be able to:

1. Graph and analyze quadratic, exponential and logarithmic functions; solve quadratic, exponential and logarithmic equations.
2. Understand what a mathematical function is and know how to use linear, quadratic, logarithmic and exponential functions to model real world examples.
3. Know how to solve a system of linear or quadratic equations that arise in business applications.
4. Find solutions to linear programming problems, to maximize a function over a geometric region.
5. Perform simple matrix algebra computations.
6. Use matrices to solve systems of linear equations.
7. Understand what an inverse function is and be able to find the inverse function, when it exists.
8. Distinguish between simple and compound interest situations.

9. Calculate future and present value of annuities, and know when to use which formula for the life application.
10. Compute an amortization schedule and loan payments, such as automobile or mortgage payments.

**Homework:** We will use WebAssign for homework. Usually, we will have some homework each week, and you should turn in the corresponding homework before the due day.

**Quizzes:** Usually, there will be a quiz every week on Friday. The problems will be very similar to the text or examples that we have done in class; or the homework problems. No make-up quizzes will be given. Totally, we will have 12 quizzes, and **your lowest two quiz scores will be dropped**. The quizzes' dates are listed here:

Aug. 25; Sep. 1, 8, 15, 22, 29; Oct. 20, 27; Nov. 3, 10, 17, 22

Note: *Nov. 22 is Thursday.*

**Midterms:** There will be **THREE** 50-minute midterm exams throughout the semester, and they will be during normal class time, in our usual classroom. You may be asked to supply valid ID. Make-up exams will be allowed **ONLY** for special circumstances with **verifiable evidence** (serious illness, family crisis, etc). If you must miss an exam for special circumstances you **must inform me in advance** and you **must get in touch with me promptly** about making up the exam, otherwise, I will not consider give a make-up exam for you.

**Final Exam:** The final exam for this course is a department-wide exam, so **NO Make Up final exam !!!** The final exam is on Friday, December 15th, 3:30 pm – 5:30 p.m. Please make sure this is on your schedule. You may be asked to supply valid ID.

Note: If our final exam date/time conflicts with another final exam you are scheduled to take, you must notify me before Dec. 1, 2017. Otherwise, we will not be able to change your final exam date.

**Calculators:** You may find it helpful to have a graphing calculator for your own personal use. However, if I allow calculators on exams or quizzes, I will only allow scientific calculators (no graphing or programmable calculators will be allowed ever). Most of the time, you will not have use of a calculator on exams and quizzes. This will be discussed more in class with each quiz and test.

**Grading policy:** Your grade will be based on:

Quizzes 10%      Midterm 20%      Midterm 20%      Midterm 10%      Final 30%

(Note: There will be 3 midterms. Your lowest midterm score will count for 10% of your grade and your top two midterm scores will each count for 20% of your final grade.)

**Grades (Evaluation and Criteria):** Final letter grades will be determined by overall percentage as follows:

A	93 - 100%	B+	87 - 89.99%	C+	77 - 79.99%	D+	67 - 69.99%	E	0-59.99%
A-	90 - 92.99%	B	83 - 86.99%	C	73 - 76.99%	D	63 - 66.99%		
		B-	80 - 82.99%	C-	70 - 72.99%	D-	60 - 62.99%		

**Tutoring:** The Rushing Math Center (Rm 155) offers free tutoring, a computer lab, and study

areas for undergraduates, and it is located in the basement between LCB and JWB. The tutoring hours for the fall semester are: 8:00am-8:00pm from Monday to Thursday and 8:00am - 6:00pm on Friday. It is open the 2nd week of classes and through finals, except for university holidays and weekends.

**Private Tutoring:** University Tutoring Services, 330 SSB (they offer inexpensive tutoring). There is also a list of tutors at the Math Department office in JWB233.

**Computer Lab:** also in the T. Benny Rushing Mathematics Student Center, Room 155C. M - Th 8 a.m. - 8 p.m. F 8 a.m.- 6 p.m. Link to computer lab is <http://www.math.utah.edu/ugrad/lab.html>

**Classroom Etiquette:** Please turn off your cells phones while you are in class. If your cell phone rings or you are texting, you will be asked to leave.

**Student Responsibilities:** All students are expected to maintain professional behavior in the classroom setting, according to the Student Code, spelled out in the Student Handbook. You have specific rights in the classroom as detailed in Article III of the Code. The Code also specifies proscribed conduct (Article XI) that involves cheating on tests, collusion, fraud, theft, etc. Students should read the Code carefully and know you are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, beginning with verbal warnings and progressing to dismissal from class and a failing grade. Students have the right to appeal such action to the Student Behavior Committee.

<http://regulations.utah.edu/academics/6-400.php>

**ADA Statement:** The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability & Access (CDA), 162 Olpin Union Building, 581-5020 (V/TDD). CDA will work with you and me to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to CDA.

**Academic dishonesty:** The guidelines in the Student Handbook will be followed. Cheating in any form may result in a failing grade for the relevant assignment or for the course.

**Course Schedule:** *This schedule is tentative and is subject to change.*

Aug. 21,23	Review
Aug. 25, 28, 30 & Sep. 1, 6, 8	Chapter 1
Sep. 11, 13, 15, 18, 20, 22	Chapter 2
Sep. 25, 27, 29 & Oct. 2, 4	Chapter 3
Oct. 6	Midterm 1
Oct. 16, 18, 20, 13	Chapter 3
Oct. 25, 27, 30 & Nov. 1, 3, 6, 8, 10	Chapter 4
Nov. 13	Midterm 2
Nov. 15, 17, 20, 22, 27, 29	Chapter 5
Dec. 1	Midterm 3
Dec. 4, 6	Final Review