

# Business Algebra

## Math 1090-005, Fall 2017

**Class meets:** 08/21/2017 to 12/06/2017

**Time:** MWF 10:45AM-11:35AM

**Holidays:** September 4 (Labor Day) and November 24 (Thanksgiving Day)

**Place:** BUC 305

**Instructor:** Sung Chan Choi, JWB 121

**Website:**

**Email:** [choi@math.utah.edu](mailto:choi@math.utah.edu)

**Office Hours:** M 11:40 AM - 12:40 PM in CRCC 214, T 12:00 PM-1:00 PM in JWB 121

F 11:50 AM - 12:50 PM in JWB 121

### **Tutoring, Computer Lab, and Printing: LCB 155 and LCB 155 C**

Free tutoring and free printing are available in the T. Benny Bushing Mathematics Center, located between LCB and JWB. The regular hours is M-Th 8:00am - 8:00pm, Fri 8:00am - 6:00pm. See <http://www.math.utah.edu/ugrad/mathcenter.html>.

**Text:** *Business Algebra*, 2nd edition, by Kelly MacArthur

ISBN: 978-1-4652-4069-9 (E-Book Version)

Textbook Information:

See <http://www.math.utah.edu/schedule/bookInfo/Math1090BookInfo.pdf>

Choose Option (2).

### **Calculators:**

I will only allow scientific calculators (no graphing or programmable calculators will be allowed ever) on exams or quizzes.

### **Course Objectives:**

Upon successful completion of this course, a student 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.

**Prerequisites:** "C" or better in (MATH 1010 OR MATH 1050 OR MATH 1080) OR Accuplacer CLM score of 60 or better OR ACT Math score of 23 or better OR SAT Math score of 540 or better.

**Requirement Designation:** Quantitative Reasoning (Math)

**Grade Distribution:**

Homework	15%
Quiz	15%
Midterm Exam 1	15%
Midterm Exam 2	15%
Midterm Exam 3	15%
Final Exam	25%

**Grading Scale:**

$\geq 93$	A	73 - 76	C
90 - 92	A-	70 - 72	C-
87 - 89	B+	67 - 69	D+
83 - 86	B	63 - 66	D
80 - 82	B-	60 - 62	D-
77 - 79	C+	$\leq 59$	E

**Course Policies:**

• **General**

- Exams are closed book, closed notes.
- If you cheat on any homework, quiz or exam, I will automatically give you a zero for that grade.
- You may need a scientific calculator for the course. No other types of calculators, such as graphing, programmable or cell phone calculators will be allowed in homework and exams.

• **Weekly Homework**

- I will collect homework during the class on **Wednesday**. Homework assignment will be posted on CANVAS. You need to check CANVAS everyday. All of the homework assigned the previous week is due at that time.
- All homework must be written in a neat and organized form and **stapled** together. If you do **not staple** together or do **not write homework number and your name, 5 points will be taken off**. A non-stapled or non-organized homework will hinder our from grading because the class size is big.
- I will grade all homework problems for completeness. It will be worth 1 point a problem. For example, if you have 30 problems of homework assigned for one week and you solve all 30 problems then you can get 30 points regardless of correctness.
- I will choose 5 problems from weekly homework assigned then they will be graded for correctness. Each selected problem will be worth 5 points. To get 5 points for correctness, you **MUST** show all your work! If you turn in just the answers, with no work shown, you will get a 0 point for correctness.

- So total score will be worth the sum of completeness and correctness. For example, if you have 24 points for completeness and 23 points for correctness then your total score will be 47.
- **Late homework will NOT be accepted.** But **2 lowest scores** will be dropped at the end of this semester.

- **Quizzes**

- 8 in-class quizzes will be given during this semester.
- 10-15 minutes will be given.
- **No makeup** quiz will be given. But **1 lowest scores** will be dropped.

- **Midterms**

- There will be three in-class midterm exams.
- **9/22(F),10/27(F),and 11/22(W)** in the regular classroom.
- You will need a scientific calculator for the course. No other types of calculators, such as graphing, programmable or cell phone calculators will be allowed in homework and exams.
- **No makeup exams will be given** except in the case of a documented emergency. Please contact the instructor ASAP, or at least two classes ahead of time so that the instructor and student can make arrangements to make up the test. I reserve the right to make makeup exams more difficult than the scheduled exam.

- **Final**

- The comprehensive final exam will be on **December 15(F), 3:30 PM - 5:30 PM.**
- There will be **no alternative** arrangements made for scheduling the final exam because we will have departmentally common final exam. You must be here for the scheduled final exam or you will receive a zero on that exam. Please **remember this fact** when scheduling your flights home for winter break.
- If you have another final exam scheduled at the same time or an **overlapping** time with this final exam, you have **until December 1st** to inform me of that conflict. In that case, we'll work with the other professor to find a solution for your final exam scheduling conflict.
- If you inform me of the final exam scheduling conflict **after December 1st**, then you will have to work out the accommodations with the other professor or **figure it out yourself.**

- **Other Policies**

- I do NOT allow the use of laptop computers in my classroom. But tablets are okay if you are taking notes on it.
- There will be no retakes of exams . . . ever. Your score is what you get.
- You may take an alternate exam if you submit a documented verification about it to me first and explain the extenuating circumstances that make it necessary. Needing to work, babysitting your siblings, oversleeping, or needing more time to study do not pass as acceptable reasons.

- I will demand respectful behavior in my classroom. Examples of disrespect include reading a newspaper or magazine in class, social chatting with your friend in class, text-messaging your buddies during class or cuddling with your girl/boyfriend in class.
- There will be no cursing nor negative ranting (for example, "math sucks") on any written work turned in. The penalty for such things on your written work will be a zero score on that assignment or test!
- You need to have a valid email address registered with Campus Information System.
- You need to check CANVAS everyday.
- 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.  
See <http://regulations.utah.edu/academics/6-400.php>
- I reserve the right to change my policies stated in this syllabus at some point in the semester. If I do make a change to a policy, I will announce it in class and send the change in email.

### **Other Important Dates:**

- 9/1(F): Last Day to Add,Drop(Delete),Elect CR/NC,or Audit Classes
- 10/20 (F): Last Day to Withdraw from classes
- See <http://registrar.utah.edu/academic-calendars/fall2017.php>

### **ADA:**

The American with Disabilities Act requires that reasonable accommodations be proved for students with physical, cognitive, systemic learning, and psychiatric disabilities. The student needs to have such a disability approved by the Disability Service Office (162 UNION, 581-5020) in order to have the accommodations provided. The instructor need to be informed about such a disability and approved accommodations at the beginning of the semester.

### Tentative Course Outline:

The weekly coverage might change as it depends on the progress of the class. However, you must keep up with the reading assignments.

Week	Content
Week 1	<ul style="list-style-type: none"><li>• 8/21 Intro, Review</li><li>• 8/23 Section 1.1, 1.2</li><li>• 8/25 Section 1.2, 1.3</li></ul>
Week 2	<ul style="list-style-type: none"><li>• 8/28 Section 1.3, 1.4</li><li>• 8/30 Section 1.4</li><li>• 9/1 Section 1.5 ,</li></ul> Quiz 1
Week 3	<ul style="list-style-type: none"><li>• 9/4 No class (Labor Day)</li><li>• 9/6 Section 1.6</li><li>• 9/8 Section 1.6, 1.7</li></ul> Quiz 2
Week 4	<ul style="list-style-type: none"><li>• 9/11 Section 1.7</li><li>• 9/13 Section 1.8</li><li>• 9/15 Section 2.1</li></ul> Quiz 3
Week 5	<ul style="list-style-type: none"><li>• 9/18 Section 2.2</li><li>• 9/20 Review for Midterm 1</li><li>• 9/22 Midterm 1</li></ul>
Week 6	<ul style="list-style-type: none"><li>• 9/25 Section 2.3</li><li>• 9/27 Section 2.4</li><li>• 9/29 Section 2.5</li></ul>
Week 7	<ul style="list-style-type: none"><li>• 10/2 Section 3.1</li><li>• 10/4 Section 3.2</li><li>• 10/6 Section 3.3</li></ul> Quiz 4
Week 8	<ul style="list-style-type: none"><li>• 10/9 Fall Break</li><li>• 10/11 Fall Break</li><li>• 10/13 Fall Break</li></ul>
Week 9	<ul style="list-style-type: none"><li>• 10/16 Section 3.4</li><li>• 10/18 Section 3.4, 3.6</li><li>• 10/20 Section 3.6</li></ul> Quiz 5
Week 10	<ul style="list-style-type: none"><li>• 10/23 Section 3.7</li><li>• 10/25 Review for Midterm 2</li><li>• 10/27 Midterm 2</li></ul>
Week 11	<ul style="list-style-type: none"><li>• 10/30 Section 4.1</li><li>• 11/1 Section 4.2</li><li>• 11/3 Section 4.3</li></ul>

Week	Content
Week 12	<ul style="list-style-type: none"> <li>• 11/6 Section 4.4</li> <li>• 11/8 Section 4.5</li> <li>• 11/10 Section 4.6</li> </ul> <p style="text-align: right;">Quiz 6</p>
Week 13	<ul style="list-style-type: none"> <li>• 11/13 Section 4.6</li> <li>• 11/15 Section 5.1</li> <li>• 11/17 Section 5.2</li> </ul> <p style="text-align: right;">Quiz 7</p>
Week 14	<ul style="list-style-type: none"> <li>• 11/20 Review for Midterm 3</li> <li>• 11/22 Midterm 3</li> <li>• 11/24 Thanksgiving day holiday</li> </ul>
Week 15	<ul style="list-style-type: none"> <li>• 11/27 Section 5.2</li> <li>• 11/29 Section 5.3</li> <li>• 12/1 Section 5.3</li> </ul>
Week 16	<ul style="list-style-type: none"> <li>• 12/4 section 5.4</li> <li>• 12/6 section 5.5</li> </ul> <p style="text-align: right;">Quiz 8</p>
Week 17	<ul style="list-style-type: none"> <li>• 12/14(TH) Final Review</li> <li>• 12/15(F) Final( 3:30 PM - 5:30 PM )</li> </ul>