

# Mathematics 1090

Spring, 2020

**Instructor:** Jason Hoag  
**Office Location:** JWB 121  
**E-mail address:** [hoag@math.utah.edu](mailto:hoag@math.utah.edu)  
**Class Web Page:** Canvas

**Class Time and Place:** 8:05-9:25 a.m.  
Mondays, Wednesdays  
in WEB L112

**Office Hours:** Monday, Wednesday 9:30-10:30 am  
or by appointment

**Text:** *Business Algebra*, 3rd edition, published by Kendall Hunt,  
(ISBN: 9781524993405)  
Book Purchasing Instructions: (Please Read Before Purchasing)  
<http://www.math.utah.edu/schedule/bookInfo/Math1090BookInfo.pdf>

**Course Information:** Math 1090, Business Algebra is a 3-credit semester course.

**Prerequisite:** At least a C grade in Math 980 (Beginning Algebra), Math 1010 (Intermediate Algebra) OR Math 1030 (Quantitative Reasoning) 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 570.

**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:

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.

**Grading:**

The grades will be calculated as follows:

Homework	15%
Quizzes	20%
Midterm	20%
Midterm	20%
Final Exam	25%

**Grading Scale:**

Although I'm not philosophically opposed to curving grades, I find it's rarely necessary. The grade scale will be the usual:

A (93-100), A- (90-92), B+ (87-89), B (83-86), B- (80-82), C+ (77-79), C (73-76), C- (70-72), D+ (67-69), D (63-66), D- (60-62), E (0-59).

If I do need to curve the grades, I will simply shift everything down by a few points (whatever is necessary).

**Homework:**

I will assign homework **every** week and will collect it the following **Wednesday** of each week. All of the homework assigned from sections covered in the previous week is due at that time.

Each section of homework will be worth ten points. For example, if you have three sections of homework assigned, then that homework set is worth a total of 30 (raw) points.

I will choose some problems to be graded from each section, these will not be known before the homework is turned in. However, half of the credit given will be for completing **every** problem. It is your responsibility to make sure you understand the problems and their solutions. (Please notice that there is no way to get an A in this course if you choose not to do any of the homework. On the other hand, turning in all of the homework can help your grade substantially.)

All homework must be stapled together and turned in at the **beginning of class**. No late homework will be accepted.

To allow for illness, oversleeping, hectic schedules, etc. **your three lowest homework assignments will be dropped**. Do not ask for special favors with regard to the homework policy, unless the circumstances are extraordinarily severe. This policy is meant to be flexible enough to cover all reasons.

**Weekly Quizzes:**

There will be weekly in-class quizzes, every **Wednesday**, except for test weeks. I reserve the right to start the quiz at any time during the Wednesday class period, however I will usually begin class with the quiz. The quiz will cover the material covered in the previous week and will usually align with the homework that was just turned in. Quiz questions will be taken from textbook examples,

class examples, assigned problems or problems very much like those problems. All quizzes will be group quizzes. There will be no make-up quizzes. No exceptions. If you're late to class or miss class and thus miss the quiz for any reason whatsoever, you will have to use that as one of your dropped quiz scores. There will be roughly 13 or 14 quizzes throughout the semester. **Your lowest three quiz scores will be dropped.**

**Midterms:** There will be two midterm exams throughout the semester that will take the entire class period. They will be during normal class time, in our usual classroom.

The first midterm will be on **Wednesday, February 12<sup>th</sup>**.

The second midterm will be on **Wednesday, April 1<sup>st</sup>**.

**Final Exam:** The final exam for this class is comprehensive and will occur during the regularly scheduled final exam time, given by the University. For Spring 2020 the final exam is scheduled on **Wednesday, April 29<sup>th</sup>**, from **3:30-5:45 pm**. Please put this date in your calendar now, as there will be no opportunity for a later or make-up final exam. The location is TBA. This is a departmental final which means there is a small chance that you will have a final from another class scheduled at the same time by the university. You have until April 8th to inform me of a conflict with another final. No exceptions made for any other conflicts. You can see the University set finals schedule here <https://registrar.utah.edu/academic-calendars/final-exams-spring.php>

**Online Grades:** I will put your grades online on Canvas I do my best to update the grades on a regular basis and keep everything accurate. However, I would advise you to check your grades often to make sure there were no data entry mistakes. I'm always happy to correct any mistakes I've made. You just need to let me know about them.

**Please keep quizzes and tests until the end of the semester in case a mistake is made.**

**Calculators:** For exams, you will be allowed to use a scientific calculator, but only a calculator from this approved list of calculators. This will also be true on the final exam.

<http://www.math.utah.edu/schedule/bookInfo/m1090ApprovedCalculators.pdf>

**Tutoring Lab:** T. Benny Rushing Mathematics Student Center (adjacent to JWB and LCB), Room 155

M - Th 8 a.m. - 8 p.m.

F 8 a.m. - 6 p.m.

**Computer Lab:** 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>

**Lecture Videos:** There is a complete set of lecture videos for this course, at <http://www.math.utah.edu/lectures/> (go to 1090 lecture videos page from there). These videos may be helpful additional resources for your success in this course.

**Additional Policies:**

- 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.
- No laptops (except for tablets that students are writing on with a tablet pencil and using for note-taking) will be allowed in class, in order to minimize distractions to other students.
- There will be no retakes of exams, for any reason. If you have an emergent, extenuating circumstance that makes it necessary to take an alternate exam, it is your responsibility to discuss that with me, before the exam occurs, or as soon as possible. In general, I allow exams to be taken early, but not late.
- I will post announcements to the class in Canvas and will hold you accountable for receiving that information. Be sure to turn on your notifications in Canvas so you are alerted to announcements I make in Canvas as well as grade changes, discussion posts, etc.
- If you have questions about any exam/assignment grade, or you want to appeal the grading of the exam/assignment, you must turn it in to me within one week of the exam/assignment being turned back in class. I'm happy to look over your appeal and/or questions and give my feedback in order to benefit your learning. But it must be done in this timeframe of a week from when I hand back the exam/assignment.
- If you cheat on any homework, project, quiz or exam, I will automatically give you a zero for that grade. Depending on the severity of the cheating, I may decide to fail you from the class. Please note that the use (or even just pulling it out of your pocket) of a cell phone or any other electronic device during any in-class exam is considered cheating and cause for receiving an automatic zero. Also, if you exhibit any other behaviors that are unethical, like offering me a bribe to give you a better grade (even if you later claim you were joking), I will report your behavior to the Dean of Students.

**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.

**Veterans Center:** If you are a student veteran, the U of Utah has a Veterans Support Center located in Room 161 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources: <http://veteranscenter.utah.edu/>. Please also let me know if you need any additional support in this class for any reason.

## **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>

## **Addressing**

**Sexual Misconduct:** Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veterans status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

**Safety Statement:** The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit [safeu.utah.edu](http://safeu.utah.edu).

## **Student Names and**

**Personal Pronouns:** Class rosters are provided to the instructor with the students legal name as well as Preferred first name (if previously entered by you in the Student Profile section of your CIS account). While CIS refers to this as merely a preference, I will honor you by referring to you with the name and pronoun that feels best for you in class, on papers, exams, group projects, etc. Please advise me of any name or pronoun changes (and update CIS) so I can help create a learning environment in which you, your name, and your pronoun will be respected. If you need assistance getting your preferred name on your U-ID card, please visit the LGBT Resource Center Room 409 in the Olpin Union Building, or email [bpeacock@sa.utah.edu](mailto:bpeacock@sa.utah.edu) to schedule a time to drop by. The LGBT Resource Center hours are M-F 8am-5pm, and 8am-6pm on Tuesdays.

**Wellness Statement:** Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness at [www.wellness.utah.edu](http://www.wellness.utah.edu) or 801-581-7776.