MATH 1315.002: College Algebra for Economics & Business
Fall 2018

Instructor(s): Joshua Patterson

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Office Hours: M/W/F 11:00AM – 12:00PM

Section Information: MATH 1315.002

Time and Place of Class Meetings: M/W/F 10:00AM – 10:50AM in PKH 110

Description of Course Content: This course covers material in a traditional algebra course with emphasis on business and financial application. The application of common algebraic functions including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences are addressed. Additional topics include systems of linear equations and inequalities, linear programming, mathematics of finance, elements of matrix algebra, logic and probability including expected value. Credit may be received for only one of MATH 1301, MATH 1302, or MATH 1315.

Student Learning Outcomes: Upon completion of Math 1315, the students should have a solid knowledge of the material including (but not limited to) the topics: linear equations, systems of linear equations, systems of linear inequalities, linear programming, mathematics of finance, elements of matrix algebra, logic and probability.

Textbook and Materials: This course is part of the UTA Mathematics Department Affordability Campaign, making state-of-the-art online mathematics resources available to our students at the lowest possible price when compared to purchasing elsewhere. To receive the discounted price, purchase course materials through the UTA Bookstore. Search by course or use this site: http://bit.ly/2tQ090S

1.   **E-text and Direct Access (Required):** Your course materials include the e-version of the course text as well as MyLabs course access which is designed to enrich student success by providing instant feedback on your assignments plus on-demand access to personalized study plans, a multimedia library, practice tests, and more. The e-texts may be downloaded on multiple devices with long-term access for each student. Every student has trial access to MyLabs course materials as soon as the course is available in Blackboard, so you can start working on your course even before you purchase the course materials! That said, students will need a verified purchase within the first two weeks of classes, otherwise, the access to your digital materials will freeze and your account will stay deactivated until the purchase is confirmed. During the purchasing process, please ensure you enter your name as shown on your UTA records along with your MAVS email address for proper processing.

2.   **Workbook (Required):** Guided notetaking and example problems to support your time spent in class. *Algebra for Economics & Business, 1st Ed, Banda, Van-Griner Publishing, 2019.* **ISBN: 9781617406591**

3.   **Loose-leaf Textbook (Optional):** You may choose to enhance your digital purchase and select a loose-leaf textbook for only $25 from the bookstore. Full details are available in Blackboard. *Mathematics with Applications in the Management, Natural, and Social Sciences, 12th Ed. Lial, Hungerford, Holcomb, and Mullins, Pearson Ed. Inc., 2019.* **ISBN: 9780134776378**

Descriptions of major assignments and examinations:

Attendance: Attendance will be taken each class period. This course meets twice a week. Your attendance portion of the grade will be calculated by # of times attended / # of total class periods. That being said, attendance is categorized as both attendance **AND** participation. Therefore, attending class but leaving early, being inattentive, or otherwise unengaged in the classroom activities could result in an absence for that day.

Signature Assignment:: I will be administering a 'signature assignment' in a **show your work** format to fulfill SACS requirements. This assignment will be worth 5% of your final grade and will be administered as it is covered in the course in a way that ideally does not interfere with exams or exam preparation.

Homework: Homework will be assigned, administered, and graded through the MyLabs online system. Homework will be due each week. Late homework **will not be accepted**, except with written documentation of a UTA recognized excused absence for the day the content was due.

Quizzes: Quizzes will be administered in-class on an as-needed basis. If administered, they will be included in your Homework grade.

Exams: We will have three (3) in-class exams during the course of the semester, each exam will count as 15% of your final grade. Your lowest exam will be replaced by your final exam's grade, if the final exam grade is higher. NOTE: The final exam cannot be replaced by a midterm exam. Therefore, all students wishing to pass the course must take the final exam. I intend to review for each exam during the class period preceding the exam.

Make-up Exams: Similar to the homework, make-up exams will not be given except with **written documentation** of a UTA recognized excused absence. Examples of a UTA recognized excused absence include medical reasons, athletic events / scholastic activities, and a religious holy day.

A "religious holy day" means a holy day observed by a religion whose places of worship are exempt from property taxation under Section 11.20 of the Tax Code.
(source https://www.uta.edu/catalog/2001/general/academicreg.html)

Other Requirements: A graphing calculator is recommended, such as a TI-84 Plus ideally. However, I encourage my students to work without the aid of a calculator. My intentions throughout the course will be to demonstrate methods that can done by hand, primarily.

Grading: Students are expected to keep track of their performance throughout the semester and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels.

Grading Policy:
Daily Grade (Attendance and Participation) ………...…………………………..... 7%
Signature Assignment …... 5%
Homework and Quizzes ………………………………………………………….... 13%
3 Exams ……………………………………………………………………..… 45%
Final Exam ……………………………………………………………………….... 30%

                                                                                    Total: 100%

Grade: A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = 59% or below

Grade Grievances: Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current University undergraduate catalog. http://wweb.uta.edu/catalog/content/general/academic_regulations.aspx

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (http://wweb.uta.edu/ses/fao).

Americans with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX Policy: The University of Texas at Arlington ("University") is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. For information regarding Title IX, visit www.uta.edu/titleIX or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or jmhood@uta.edu.

Academic Integrity: All students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

Instructors may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.uta.edu/oit/cs/email/mavmail.php.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

Final Review Week: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

1315 MWF Schedule Fall 2018:

	Date	Events	Notes
W	08/22/18	Syllabus 1.1 – The Real Numbers	**Classes Begin**
F	08/24/18	1.2 – Polynomials and Positive Exponents 1.5 – Negative Exponents and Radicals	
M	08/27/18	1.3 – Factoring	
W	08/29/18	1.4 – Rational Expressions	
F	08/31/18	1.6 – First-Degree Equations 2.4 – Linear Inequalities	
M	09/03/18	**Labor Day – No Classes**	
W	09/05/18	2.1 & 2.2 – Graphs, Intercepts, and Equations of Lines	
F	09/07/18	3.1 & 3.2 – Functions and Their Graphs	**Census Date**
M	09/10/18	3.3 – Applications of Linear Functions	
W	09/12/18	**Review for Exam 1**	**Study for Exam 1**
F	09/14/18	**Exam 1**	
M	09/17/18	1.7 – Quadratic Equations	
W	09/19/18	3.4 – Quadratic Functions and Applications	
F	09/21/18	3.5 – Polynomial Functions	
M	09/24/18	4.1 & 4.2 – Exponential Functions and Applications	
W	09/26/18	4.3 – Logarithmic Functions	
F	09/28/18	4.4 – Logarithmic and Exponential Equations.	
M	10/01/18	5.1 – Simple Interest and Discount	
W	10/03/18	5.2 – Compound Interest	
F	10/05/18	5.3 – FV Ordinary Annuities and Sinking Funds	
M	10/08/18	5.4 – PV Ordinary Annuities , Amortization, and Bond Pricing	
W	10/10/18	**Review for Exam 2**	**Study for Exam 2**
F	10/12/18	**Exam 2**	
M	10/15/18	6.1 – Systems of Two Linear Equations	
W	10/17/18	6.2 – Larger Systems of Equations and Gauss Jordan	
F	10/19/18	6.3 – Applications of Systems of Linear Equations	
M	10/22/18	6.4 – Basic Matrix Operations	
W	10/24/18	6.5 – Matrix Product and Inverses	
F	10/26/18	6.6 – Applications of Matrices	
M	10/29/18	7.1 – Graphs of Linear Inequalities	
W	10/31/18	7.2 – Linear Programming: Graphical Method	
F	11/02/18	7.3 – Applications of Linear Programming	**Last Day to Drop**
M	11/05/18	8.1 – Sets	
W	11/07/18	8.3 – Introduction to Probability	
F	11/09/18	8.4 – Odds and Concepts of Probability	
M	11/12/18	8.5 – Conditional Probability	
W	11/14/18	8.6 – Bayes' Formula	
F	11/16/18	9.2 – Multiplication Principle, Permutations, and Combinations	
M	11/19/18	9.3 – Applications of Counting	
W-F	11/21-11/23	**Thanksgiving Break. No classes scheduled.**	
M	11/26/18	**Review for Exam 3**	**Study for Exam 3**
W	11/28/18	**Exam 3**	
F	11/30/18	**REVIEW FOR FINAL EXAM**	**Study for Final**
M	12/03/18	**REVIEW FOR FINAL EXAM**	**Study for Final**
T	12/04/18	**Last Class Day (Campus Wide)**	**Last Class Day**
Sat	12/08/18	**FINAL EXAM @ 3:30pm-6:00pm**	**NOTE SPECIAL TIME!!**

As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. –Joshua Patterson