

Math 1315: Master Syllabus for College Algebra for Economics & Business

Instructor: Mondal Hasan Zahid

Office Number: PKH 449

Office Hours: MF 11:00 - 12:40PM

WF 8:30 - 8:50AM

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Section Information: Math 1315 Section 002

Time and Place of Class Meetings: MWF 10:00 - 10:50AM, PKH 110

Course Prerequisites: C or better in MATH 1315 or MATH 1302. This course is not a substitute for MATH 1426.

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. After completing the course, students should be able to demonstrate the following competencies:

- 1.0 Students will be able to perform integer operations and evaluate expressions containing variables, exponents, radicals, and fractions.
- 2.0 Students will be able to factor and perform operations on polynomials.
- 3.0 Students will be able to analyze and solve linear equations, inequalities and functions in a variety of business applications including revenue, cost, and profit scenarios.
- 4.0 Students will be able to solve quadratic equations using various techniques, graph quadratic functions, and determine break-even, maximum, and/or minimum points with respect to revenue, cost and/or profit functions.
- 5.0 Students will be able to evaluate, solve and use exponential and logarithmic equations and functions to model various economic phenomena.
- 6.0 Students will be able to apply various financial formulas and methods to determine interest, future value of savings plans and loans as well as debt repayment.
- 7.0 Students will be able to generate and solve systems of linear equations in a variety of business applications, including the use of matrix operations.
- 8.0 Students will be able to use graphical methods to solve linear inequalities and apply linear programming techniques.
- 9.0 Students will be able to calculate and solve various probability problems using tree diagrams, Bayes' formula, permutations and combinations.

Required Textbooks and Other Course 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 MyLab 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 MyLab 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. *Calculus for Economics & Business*, 1st Ed, Banda, Van-Griner Publishing, 2019. ISBN: 9781617406607
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

Attendance:

At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section attendance will not be taken on a daily basis and I will not factor attendance into the grade"; but in order to do well students need to plan to attend lecture on a regular basis. **The course is comprehensive and it will be hard to catch up if you fall behind.– You are also responsible for keeping up with all major test dates.** We will attempt to stay on schedule but occasionally we might get behind and have to catch up later. However, while UT Arlington does not require instructors to take attendance in their courses, the U.S. Department of Education requires that the University have a mechanism in place to mark when Federal Student Aid recipients "begin attendance in a course." UT Arlington instructors will report when students begin attendance in a course as part of the final grading process. Specifically, when assigning a student a grade of F, faculty report the last date a student attended their class based on evidence such as a test, participation in a class project or presentation, or an engagement online via Blackboard. This date is reported to the Department of Education for federal financial aid recipients

Homework:

Homework will be assigned, administered, and graded through the MyLabsPlus 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 covered.

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 17% of your final grade. Your lowest exam will be replaced by your final exam's grade, if the final exam grade is higher. 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 includes 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>)

Signature Assignment:

The purpose of this assignment is to fulfill the SACS and institutional requirement that all CORE courses contain a clearly marked “**Signature Assignment**” within the course that covers the following three areas. :

- Critical Thinking Skills - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
- Communication Skills - to include effective development, interpretation and expression of ideas through written, oral and visual communication.
- Empirical and Quantitative Skills - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

It will consist of a homework assignment that is to be completed by all Math 1315 classes. This assignment will be handed out toward the start of the semester and students will complete it gradually throughout the semester as the needed skills to complete the assignment are acquired.

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:

Signature Assignment	5%
Homework and Quizzes	17%
3 Exams	48%
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>).

Important Dates:

First day of Class	August 21	Last date to drop	November 01
Census date	September 06	Final Exam	December 07

Calculators: A good scientific calculator or a graphing calculator is needed for this class. I personally usually use a TI 84. You will not be allowed to use a TI-30X Pro, TI Inspire, your cell phone, laptop calculator, or any calculator that has a qwerty or alphanumeric keyboard on a test. Alphanumeric or QWERTY keys are the keys on a calculator's keyboard that consist of the alphabet letters A to Z. [Otherwise you can use the calculator you prefer.]

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 817-272-2617, send a message to resource@uta.edu, or view the information at <http://www.uta.edu/universitycollege/resources/index.php>.

- **Universal Tutorial & Supplemental Instruction: (Ransom Hall 205)** UT SI offers a variety of academic support services for undergraduate students including: 60 minute one-on-one tutoring sessions, StartStrong Freshman tutoring program, and Supplemental Instruction. Office Hours are Monday – Friday 8:00 am – 5:00pm. For more information visit www.uta.edu/utsi or call 817-272-2617.

- **The IDEAS Center (2nd Floor of Central Library)** offers **FREE** tutoring to all students with a focus on transfer students, sophomores, veterans and others undergoing a transition to UT Arlington. Students can drop in, or check the schedule of available peer tutors at www.uta.edu/IDEAS, or call (817)272-6593.
- **The Library's 2nd floor Academic Plaza** offers students a central hub of support services, including IDEAS Center, University Advising Services, Transfer UTA and various college/school advising hours. Services are available during the library's hours of operation. <http://library.uta.edu/academic-plaza>

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.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals. Evacuation plans may be found at <http://www.uta.edu/campus-ops/ehss/fire/EvacMapsBuildings.php> and <http://www.uta.edu/police/EvacuationProcedures.pdf>

Campus Carry: Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit <http://www.uta.edu/news/info/campus-carry/>

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone), **2-3003** (campus phone). You may also dial 911. Non-emergency number 817-272-3381