Math 1302 – College Algebra – Section 501

Course Instructor

Mary Delise Burrus
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Faculty Profile: https://www.uta.edu/profiles/Mary-Burrus
The instructor will respond to email inquiries within 24-48 hours.
Office Hours: See Live Webcast/Office Hour Schedule

Learning Resource Center – Mathematics Emporium

Email: mathemporium@uta.edu
Website: http://www.uta.edu/math/emporium/
Facebook: https://www.facebook.com/pages/UTA-Math-Emporium/460329394127443

Math Department Office

Pickard Hall 478
Phone: 817-272-3261

Textbook and Materials

You have a couple of options for this course depending on personal preference. If you choose to purchase your items through the UTA bookstore http://www.bkstr.com/texasatarlingtonstore/shop/textbooks-and-course-materials and have questions, you may contact Shiva in the bookstore: shiva@uta.edu.

1. **Access Code and Textbook Bundle**: *College Algebra*, 12th Ed., Lial, Hornsby, Schneider, and Daniels, Pearson Ed. Inc., 2016. ISBN# 1323487662 (custom); containing MLP access code and *MyNotes* workbook.
2. **Access Code for MyLabsPlus**: Purchase your stand-alone access code at the UTA bookstore— or purchase online at www.uta.mylabsplus.com on the first class day. There is a free E-book within the MLP website.

Calculator Policy

Students may choose to use a scientific, non-graphing calculator on all assignments including tests and the final exam. If so, it MUST be one of the following models explicitly:

Texas Instruments 30X series: TI-30Xa, TI-30XIIS, TI-30XIIB, TI-30XS(Multiview)
Casio FX series: FX-82MS, FX-85M-S, FX-260SLR, FX-260SLRPK, FX-260SLRSCH
Sharp EL series: EL-501X, EL-501XBGR, EL-501XBWH, EL-531X, EL-531XBGR, EL-531XBWH
Canon F series: F-604, F-710

No variation of model will be accepted. This includes but is not limited to plus and pro models.

Software and System Requirements

Mozilla Firefox and Google Chrome are the recommended and supported browsers for this course. The course also has the following options for system requirements:

- Windows 7.0 or higher
- Mac OS x 10.8 or higher

Students are encouraged to use the Browser Check on the initial page within the MLP system in order to check and/or update (free download) the following software requirements:

- Adobe Flash Player version 11.9 or higher
- Adobe Reader version XI or higher

Course Elements

Course Lectures and Webcasts

Content material, notes with audio, and instructions can be found in the unit tabs within Blackboard. The course is separated into 3 units of material which will correspond to the 3 chapter tests. Within each unit there are two blocks with specific details and assignment requirements. Preparation will take place within Blackboard and all graded assignments are found within the MLP system.

You will have weekly webcasts with your course instructor. See Webcast/Office Hours Schedule for details and times. You will access the webcasts through the live webcasts tab within Blackboard. Participation in the live webcasts is optional, however you can earn up to 5 points of extra credit towards your final exam.

Schedule of Lessons and Tests

You must complete all assignments and tests by the due dates. Due dates are listed in **MyLabsPlus** and also in the Course Schedule located in Blackboard. **All MLP deadline times are in Central Time**.

Grade Calculation

Homework, Tests, Exam	Percent of Grade
Homework/Quizzes	20%
Chapter Exams (Average of 3 Tests)	50%
Comprehensive Final Exam	30%
Total:	100%

- Two of the lowest homework grades and one quiz grade will be dropped at the end of the semester.
- In the event you are not satisfied with one of your three chapter exam scores, you may ask your instructor for a retake. Only ONE retake on a chapter exam of your choosing will be granted. Please reference the course schedule for specific retake dates. You MUST solicit and receive approval from your instructor prior to taking your ONE retake exam. All retakes must be complete prior to the final exam.

Grading Scale

Grades will be computed based on the following distribution. Grades are rounded up accordingly.

90 — 100%	A
80 — 89%	B
70 — 79%	C
60 — 69%	D
Below 60%	F

Homework and Quizzes

All homework and quizzes will be assigned in MyLabsPlus. (www.uta.mylabsplus.com) All homework and quiz assignments are available to you on the first class day. The automated system will provide feedback on assignments immediately upon submission.

- **NO late homework or quizzes will be accepted,** so watch the due dates on the MyLabsPlus calendar. You will receive a zero for any assignments not submitted.
- There is a homework assignment covering each section of material, a syllabus quiz, and 6 ten question content quizzes. Homework assignments are set for unlimited access up until the due date and you have 3 attempts per question, however you only have two attempts at each quiz which have a 45 minute time limit and must be completed once opened. Quizzes cannot be saved and resumed later.
- All homework assignments contain learning aids to help you through the material. Be careful not to become overly dependent on these aids or you may not perform well on the exams. You have three chances at a question per attempt. To gain access to the next attempt once a question is marked wrong; simply select the "similar exercise" button at the bottom of the homework screen. Quizzes are designed to check your knowledge retention and therefore do not contain the learning aids except in review mode once the quiz has been submitted.
- If you have trouble completing the assignments, please seek some form of tutoring and/or see your instructor or coach for assistance.

Extra Credit: Signature Assignments

This course contains three related concept assignments. Each of these assignments will cover two of the six learning objectives and outcomes listed in the objective section of your master syllabus. You will be required to complete a variety of short answer questions. These assignments will count as bonus points on a chapter exam based on the percentage score earned on each assignment. No more than 5 points can be earned on any given test. Extra credit will be applied at the end of the semester and cannot apply to the final exam. These assignments will access the following skills:

- 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.

Tests

There will be three online proctored chapter tests throughout the course of the semester. (Please reference the course schedule for exact dates.)

- All chapter tests are found within MLP and are comprised of 18 multiple choice and short answer questions along with one paragraph style response that all must be completed within 90 consecutive minutes. Tests cannot be opened, saved, and returned to at a later time. Tests are opened a few days prior to the deadlines.
- You may use one 3x5 index card with notes front and back, an approved scientific calculator (see list of approved calculators in Materials section), and blank scratch paper. No additional materials are allowed.
- All exams are either taken in the Math Emporium Computer Lab (PKH 308) on the UTA campus by appointment only or by making arrangements for online proctoring with Proctor U which requires prior scheduling and a webcam. Students are solely responsible for their own scheduling and the fees associated with using the service. See tab in Blackboard called Testing/Proctor U for details.
- Use of any unauthorized electronic devices or notes during an exam will result in a grade of ZERO.

Final Exam

The final exam is a comprehensive, proctored exam containing material from all sections covered over the course of the semester. (Please reference the course schedule for exact dates.)

- The final is found within MLP and is comprised of 30 questions that must be completed within 150 consecutive minutes. The final cannot be opened, saved, and returned to at a later time. It will be opened a few days prior to the deadline.
- You may use two 3x5 index cards with notes front and back, an approved scientific calculator (see list of approved calculators in Materials section), and blank scratch paper. No additional materials are allowed.
- The final exam can either be taken in the Math Emporium Computer Lab (PKH 308) on the UTA campus by appointment only or by making arrangements for online proctoring with Proctor U which requires prior scheduling and a webcam. Students are solely responsible for their own scheduling and the fees associated with using the service. See tab in Blackboard called Testing/Proctor U for details.
- Use of any unauthorized electronic devices or notes during an exam will result in a grade of ZERO.

Makeup Policy

In addition to the policy that NO late homework or quizzes will be accepted (see Homework and Quizzes), **there are no make-up exams.** If you know ahead of time that you are going to be out for a legitimate reason, it is your responsibility to inform me and make the necessary arrangements. If you have a conflict with a scheduled exam due to a school sponsored or excused event, you MUST have documentation and you MUST arrange to take the test BEFORE you leave. To request an alternate test date because of an approved conflict, please fill out the Alternate Test Date Request Form which can be found in Blackboard and email the form along with the necessary documentation at least two weeks prior to the first exam. A request for a

rescheduled exam will only be considered in rare, documentable, and verifiable instances. The decision to grant an alternate test date will be at the sole discretion of the instructor and/or course coordinator.

Announcements: Found in *MyLabsPlus* and in *Blackboard*.

- Students are responsible for all information found in these announcements.
- Students should check for new announcements at least twice a week.

Help for Students

- Online Coach – information is found within a tab in your Blackboard course.
- Math Emporium – computer lab located in Pickard Hall 308, offers free daily tutoring. For details and scheduling visit the website, http://www.uta.edu/math/emporium/
- Math Clinic – located in Pickard Hall 325, offers free daily help.
- University Tutoring Service http://www.uta.edu/universitycollege/current/academic-support/learning-center/tutoring/index.php Ransom Hall Suite 205.
- Maverick Resource Hotline (817-272-6107). https://www.uta.edu/universitycollege/resources/resource-hotline.php
- Counseling and Psychological Services (CAPS) https://www.uta.edu/caps/
- Additional Online Course Help: https://www.khanacademy.org/

Course Objectives

Course Catalog Description

This course is designed as preparation for higher level mathematics courses. Topics include the study of linear, quadratic, polynomial, rational, radical absolute value, logarithmic, and exponential functions, relations and inequalities; graphs, basic characteristics, and operations on functions; real and complex zeros of functions; graphing techniques; systems of equations and matrices. The use of mathematical software and calculators is required.

Learning Objectives and Outcomes

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

1.0 Students will be able to solve algebraic equations and inequalities including linear, quadratic, radical, and absolute value relations and functions.
2.0 Students will be able to interpret equations and their graphs using the rectangular coordinate system, forms of lines, and slope.
3.0 Students will be able to use functions both in a procedural and a conceptual manner. They will be able to represent functions graphically, numerically, algebraically, and/or verbally.
4.0 Students will be able to solve, graph and determine characteristics for polynomial and rational functions.
5.0 Students will be able to transform and solve equations involving logarithmic and exponential functions.
6.0 Students will be able to solve simultaneous systems of equations and inequalities interpreting the meaning of the solution(s) and demonstrating graphical solution techniques when appropriate. They will also be able to perform matrix operations, including multiplication, inverses, and determinants.

Course Competencies

1.0 To demonstrate competency in various relations and functions, a student should be able to:

- 1.1 Solve linear equations and inequalities.
- 1.2 Solve rational equations.
- 1.3 Solve equations involving radicals.
- 1.4 Solve absolute value equations and inequalities.
- 1.5 Identify characteristics, evaluate, and graph linear, nth-root, and absolute value functions.
- 1.6 Solve quadratic equations and inequalities using factoring, square root property, completing the square, the quadratic formula, and substitution. Include complex solutions.
- 1.7 Use the discriminant to describe solutions to quadratic equations.
- 1.8 Solve applied problems involving linear, rational, radical, absolute value, and quadratic equations.

2.0 To demonstrate competency in the rectangular coordinate system, a student should be able to:

- 2.1 Define the parts of the rectangular coordinate system.
- 2.2 Graph lines using points, intercepts, and slope.
- 2.3 Find the slope of a line and interpret slope as an average rate of change.
- 2.4 Use slope to determine parallel and perpendicular lines.
- 2.5 Write the equation of a line given points, slope, or intercepts.

3.0 To demonstrate competency in basic functions and operations, a student should be able to:

- 3.1 Define and identify relations and functions.
- 3.2 Determine the domain and range of a function.
- 3.3 Evaluate functions using function notation.
- 3.4 Determine the intervals for which a function is increasing, decreasing, or constant.
- 3.5 Determine the intervals for which a function is continuous.
- 3.6 Find the average rate of change between two values of a function.
- 3.7 Use functions to model data.
- 3.8 Identify characteristics and evaluate piecewise-defined functions.
- 3.9 Graph basic functions using translations.
- 3.10 Determine whether a function in even or odd.
- 3.11 Find the sum, difference, product, and quotient of functions.
- 3.12 Determine the difference quotient.
- 3.13 Find the composition of functions and determine the effect on domain.

4.0 To demonstrate competency in polynomial and rational functions, a student should be able to:

- 4.1 Determine domain and range.
- 4.2 Identify increasing, decreasing, and constant functions.
- 4.3 Graph quadratic functions.
- 4.4 Find and use the vertex of a quadratic function in an application.
- 4.5 Use long division and synthetic division algorithms for polynomials.
- 4.6 Determine zeros and factors of functions using a variety of algebraic techniques.
- 4.7 Determine the value of a polynomial function using the remainder theorem.
- 4.8 Sketch the graph of a polynomial function.
- 4.9 Use the intermediate value theorem for polynomial functions.
- 4.10 Determine the asymptotes of a rational function.
- 4.11 Sketch the graph of a rational function.
- 4.12 Create a polynomial function given zeros of the function.

5.0 To demonstrate competency in exponential and logarithmic functions, a student should be able to:

- 5.1 Identify characteristics and determine the inverse of a function.
- 5.2 Evaluate exponential and logarithmic functions.
- 5.3 Expand and condense expressions using logarithmic properties.
- 5.4 Relate logarithmic and exponential functions.
- 5.5 Determine the graph of logarithmic and exponential equations.
- 5.6 Solve exponential and logarithmic equations.
- 5.7 Solve problems consisting of exponential and logarithmic applications.

6.0 To demonstrate competency in systems of equations and matrices, a student should be able to:
- 6.1 Solve linear and non-linear systems of equations using algebraic techniques.
- 6.2 Solve systems of equations using Cramer's Rule and determinants.
- 6.3 Determine the solution of a system of inequalities.
- 6.4 Relate solving equations and inequalities to linear programming applications.
- 6.5 Solve application problems using systems of equations.
- 6.6 Apply properties of matrices and perform basic operations.

Course Policies

Drop Policy

If you withdraw from the course for any reason, you must follow University procedures. It is your responsibility to execute these procedures correctly and within the deadlines. **Instructors are unable to drop students**. The Math Department Office can help with the withdrawal process. We strongly recommend that you drop the course if you are significantly behind in completing the required assignments. 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/aao/fao).

Accommodations and 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), The Americans with Disabilities Amendments Act (ADAAA), and Section 504 of the Rehabilitation Act. 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 disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the Office for Students with Disabilities (OSD). Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

The Office for Students with Disabilities, (OSD) www.uta.edu/disability or calling 817-272-3364.
Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or calling 817-272-3671.

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. CAPS is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems, and make positive changes in their lives.

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 Catalog. For undergraduate courses including this one, see http://catalog.uta.edu/academicregulations/grades/#undergraduatetext. For student complaints, see http://www.uta.edu/deanofstudents/student-complaints/index.php.

Non-Discrimination Policy

The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos.

Title IX

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

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. This course includes a zero tolerance policy for academic dishonesty and students 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.*

UT Arlington faculty members may employ the Honor Code in their courses by 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. Additional information is available at https://www.uta.edu/conduct/.
Students found guilty of cheating will receive a grade of "F" for the course.

> *"Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts." (Regents' Rules and Regulations, Series 50101, Section 2.2)*

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 http://www.uta.edu/universitycollege/resources/index.php.

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.

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. To schedule an appointment with a peer tutor or mentor email IDEAS@uta.edu or call (817) 272-6593.

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.

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/

Student Feedback Survey

At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online 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 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. We further recommend that you enter the UTA Police Department's emergency phone number into your own mobile phone. For non-emergencies, contact the UTA PD at 817-272-3381.

Student Intellectual Property Rights Statement

A student shall retain all rights to work created as part of instruction or using university technology resources.