McLENNAN COMMUNITY COLLEGE

WACO, TEXAS

COURSE SYLLABUS

AND

INSTRUCTOR PLAN

COLLEGE ALGEBRA

MATH 1314 Section O031

TERI BARNES

This is a 16-Week Face to Face Course

FALL 2023

Course Description:

Provides a study of algebraic concepts that may include: linear, quadratic, polynomial, exponential, logarithmic, and rational functions, their graphs, and applications in mathematical modeling; composition and inverses of functions, systems of linear equations and inequalities; matrices and determinants; and sequences and series. Problem solving with algebraic applications relevant to today's world is emphasized. Graphing calculator required. Semester Hours (3)

Prerequisites and/or Corequisites:

Prerequisite: MATH 0311 or TSI math complete or equivalent score on approved alternative test, or consent of division chair.

Course Notes and Instructor Recommendations:

This course has an online component and a good working knowledge of the computer is essential. Online access is needed at a speed that will facilitate streaming video and downloading of materials. This course is geared for the student who is motivated and responsible in dealing with deadlines and scheduling.

Instructor Information:

Instructor Name:	Teri Barnes
MCC E-mail:	tbarnes@mclennan.edu
Office Phone Number:	254 299-8880
Office Location:	MATH 210
Office Hours:	To Be Announced

Required Text & Materials: (No Hard Copy Text Required)

This course is being offered as Inclusive Access—this means you do not purchase a book. The electronic course information is included in tuition payments.

TI 83/84 Graphing Calculator

Methods of Teaching and Learning:

MyMathLab is the online component that will house the course information. You will access this through Brightspace. Homework and some testing will be done online in this environment. Lecture notes, reference materials, and videos are available there as well.

Course Objectives and/or Competencies:
Upon completion of the course, the student will be able to:
1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses
2. Recognize and apply polynomial, rational, radical, exponential, and logarithmic functions, and solve related equations.
3. Apply graphing techniques.
4. Evaluate all roots of higher degree polynomial and rational functions.
5. Recognize, solve and apply systems of linear equations using matrices.
6. Graph the following functions: linear, quadratic, piecewise-defined, absolute value, polynomial, rational, exponential, and logarithmic
7. Recognize and use transformations of functions such as shifting, stretching, shrinking, and reflecting
8. Solve quadratic equations in one variable by factoring, using the square root property, completing the square, using the quadratic formula, and by graphing
9. Solve both linear and non-linear inequalities and state the solution in interval notation

10. Find the zeros and extrema of polynomials both algebraically and by graphing
11. Solve exponential and logarithmic equations
12. Perform operations with matrices, find determinants of matrices, and use matrices to solve systems of equations
13. Interpret mathematical models such as formulas, graphs, and tables, and draw inferences from them
14. Use appropriate technology to enhance mathematical thinking and understanding and to solve mathematical problems and judge the reasonableness of the results, such as deriving functions which model sets of data .
15. Use critical thinking and problem solving techniques to solve real-world application problems

Course Attendance/Participation Guidelines:

If a student is not in attendance in accordance with the policies/guidelines of the class as outlined in the course syllabus as of the course census date, faculty are required to drop students from their class roster prior to certifying the respective class roster. A student's financial aid will be re-evaluated accordingly and the student will only receive funding for those courses attended as of the course census date.

Before the 60% point of the semester, a student who is absent for 25% or more of a face-to-face or blended course or who misses 25% or more of assigned work for an online course will be withdrawn from the course with a grade of W. A student may also request to be withdrawn with a grade of W before the 60% point of the semester. After the 60% point of the semester, the student may request to be withdrawn if the student is passing, or be assigned the final grade earned at the end of the semester after grades have been updated to reflect missing work.

Course Outline or Schedule: Full calendar will be provided in class and on Brightspace.
This is subject to change if need arrises.

Dates	Lecture/Work	Tests/Objectives
Week 1	**Calculator Unit**	
Week 2	**1.3 Functions and their Representatives** **1.4 Types of Functions and their Rates of Change** **2.1 Equations of Lines**	**Calculator Exam**
Week 3	**2.2 Linear Equations** **2.4 Piece Wise Functions/Greatest Integer Function** **2.5 Absolute Value Functions**	**Exam Ch 1/2**
Week 4	**3.1 Quadratic Functions and Models** **3.2 Quadratic Equations and Problem Solving**	
Week 5	**3.3 Complex Numbers** **3.4 Quadratic Inequalities** **3.5 Transformations of Graphs**	
Week 6	**Review**	**Exam Ch 3**
Week 7	**4.1 Nonlinear Functions and Their Graphs** **4.2 Polynomial Functions and Models**	

Week 8	4.3 Division of Polynomials 4.4 Real Zeros of Polynomials 4.5 Fundamental Theorem of Algebra	
Week 9	4.6 Rational Functions and Models 4.7 More Equations and Inequalities 4.8 Radical Equations and Power Functions Chapter 4 Review	Exam Ch. 4
Week 10	5.1 Combining Functions 5.2 Inverse Functions 5.3 Exponential Functions and Models	
Week 11	5.4 Logarithmic Functions and Models 5.5 Properties of Logarithms 5.6 Exponential and Logarithmic Equations	
Week 12	5.7 Constructing Nonlinear Models Review	Exam Ch. 5
Week 13	6.3 Systems of Linear Equations in Three Variables 6.5 Properties and Applications of Matrices 6.6 Inverses of Matrices 6.7 Determinants	
Week 14	Review	Exam Ch. 6
Week 15	Review for Final	
Week 16		Final Exam

Course Grading Information:

1. Homework: There is a homework assignment for each section that is covered during the semester. Since the test questions will be similar to the homework problems they will be a good source of practice for the tests. Homework due dates will be posted online. You can work on homework assignments as many times as you want to improve your grade before the due date. Once the due date passes, your score is frozen. You can still access problems to practice, but you can't improve your score. Your homework average will count as 30% of your total average.

3. Tests: Five/Six tests plus a comprehensive Final.   There are no makeup tests or retests. Tests will count as 50% of the final average.

Before each test is available (online or face to face), all homework assignments must be completed with at least a 70% score for that unit. A score of 0 will be assigned to that test if the student has not met this prerequisite for testing by the indicated due date.

4. Final Exam: A cumulative final exam is required and cannot be dropped. It will count 20% of the final average.

5. Grading in this course will be based on homework, unit/chapter tests, and a comprehensive final exam according to the following percentages.

You can check your grades using the "Gradebook" button on the left side of the MathLab component.   The standard grading scale applies:

90 – 100 = A   80 – 89 = B   70 – 79 = C   60 – 69 = D   59 and below = F

Late Work, Attendance, and Make Up Work Policies:

Due dates are set for all homework and test dates are scheduled. If students do not make the deadlines, those grades become zero. If a test is missed, the grade is zero. Instructor has the right to make adjustments to this policy under special circumstances.

Student Behavioral Expectations

Students are expected to maintain classroom decorum, that includes respect for other students and the instructor, prompt and regular attendance, and an attitude that seeks to take full advantage of the education opportunity.

Click Here for the MCC Attendance/Absences Policy
(https://www.mclennan.edu/highlander-guide/policies.html)
Click on the link above for the college policies on attendance and absences. Your instructor may have additional guidelines specific to this course.

Attendance for this Online Course:

Please refer to the Highlander Guide for the complete policy. Attendance will be based on participation in the course. You should have activity (homework or test) in the course each week. A report will be run each week (on Sundays) to determine activity in the course. Any week in which no work is logged, will count as an absence. You are allowed four weeks of inactivity, before you can be dropped. You will receive an email when you are on the Inactivity report in any week.

ACADEMIC RESOURCES/POLICIES

Accommodations/ADA Statement:

Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. For additional information, please visit www.mclennan.edu/disability.

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:
disabilities@mclennan.edu 2542998122   Room
319, Student Services Center

Title IX:

We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the acting Title IX Coordinator at titleix@mclennan.edu or by calling, Dr. Claudette Jackson, (Accommodations/Title IX) at (254) 299-8465. MCC employees are mandatory reporters and must report incidents immediately to the Title IX Coordinator. Individuals may also contact the MCC Police Department at (254) 299-8911 or the MCC Student Counseling Center at (254) 299-8210. The MCC Student Counseling Center is a

confidential resource for students. Any student or employee may report sexual harassment anonymously by visiting http://www.lighthouse-services.com/mclennan/. Go to McLennan's Title IX webpage at www.mclennan.edu/titleix/. It contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence, or domestic violence.

Student Support/Resources:

MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at http://www.mclennan.edu/campus-resource-guide/

Academic Support and Tutoring is here to help students with all their course-related needs. Specializing in one-on-one tutoring, developing study skills, and effectively writing essays. Academic Support and Tutoring can be found in the Library and main floor of the Learning Commons. This service is available to students in person or through Zoom. You can contact the Academic Support and Tutoring team via Zoom or email (ast@mclennan.edu) by going to our website (https://www.mclennan.edu/academic-support-and-tutoring/).

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources or want to explore strategies for balancing life and school, we encourage you to contact either MCC CREW – Campus Resources Education Web by calling (254) 299-8561 or by emailing crew@mclennan.edu or a Success Coach by calling (254) 299-8226 or emailing SuccessCoach@mclennan.edu. Both are located in the Completion Center located on the second floor of the Student Services Center (SSC) which is open Monday-Friday from 8 a.m.-5 p.m.

Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff. To schedule an appointment, go to https://mclennan.co1.qualtrics.com/jfe/form/SV_07byXd7eB8iTqJg. Both the Completion Center and Paulanne's Pantry are located on the second floor of the Student Services Center (SSC).

MCC Foundation Emergency Grant Fund:

Unanticipated expenses, such as car repairs, medical bills, housing, or job loss can affect us all. Should an unexpected expense arise, the MCC Foundation has an emergency grant fund that may be able to assist you. Please go to https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html to find out more about the emergency grant. The application can be found at https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf.

MCC Academic Integrity Statement:

Go to www.mclennan.edu/academic-integrity for information about academic integrity, dishonesty, and cheating. The unauthorized use of artificial intelligence (AI) for classwork can be a violation of the College's General Conduct Policy. Whether AI is authorized in a course and the parameters in which AI can be used in a course will be outlined by each instructor.

Minimum System Requirements to Utilize MCC's D2L|Brightspace:

Go to https://www.mclennan.edu/center-for-teachingandlearning/FacultyandStaffCommons/requirements.html for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

Minimum Technical Skills:

Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology:

In the event MCC's technology systems are down, you will be notified via your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

Email Policy:

McLennan Community College would like to remind you of the policy (http://www.mclennan.edu/employees/policy-manual/docs/E-XXXI-B.pdf) regarding college email. All students, faculty, and staff are encouraged to use their McLennan email addresses when conducting college business.

A student's McLennan email address is the preferred email address that college employees should use for official college information or business. Students are

expected to read and, if needed, respond in a timely manner to college emails. For more information about your student email account, go to www.mclennan.edu/studentemail.

Instructional Uses of Email:

Faculty members can determine classroom use of email or electronic communications. Faculty should expect and encourage students to check the college email on a regular basis. Faculty should inform students in the course syllabus if another communication method is to be used and of any special or unusual expectations for electronic communications.

If a faculty member prefers not to communicate by email with their students, it should be reflected in the course syllabus and information should be provided for the preferred form of communication.

Email on Mobile Devices:

The College recommends that you set up your mobile device to receive McLennan emails. If you need assistance with set-up, you may email Helpdesk@mclennan.edu for help.

You can find help on the McLennan website about connecting your McLennan email account to your mobile device:

- Email Setup for iPhones and iPads
- Email Setup for Androids

Forwarding Emails:

You may forward emails that come to your McLennan address to alternate email addresses; however, the College will not be held responsible for emails forwarded to an alternate address that may be lost or placed in junk or spam filters.

For more helpful information about technology at MCC, go to MCC's Tech Support Cheat Sheet or email helpdesk@mclennan.edu.

Disclaimer:

The resources and policies listed above are merely for informational purposes and are subject to change without notice or obligation. The College reserves the right to change policies and other requirements in compliance with State and Federal laws. The provisions of this document do not constitute a contract.