WACO, TEXAS

COURSE SYLLABUS
AND
INSTRUCTOR PLAN

MATH BUSINESS AND SOCIAL SCIENCE
MATH 1324 Section 039

TERI BARNES

This is a 16-Week Course

FALL 2025

"AN EQUAL OPPORTUNITY INSTITUTION"

Course Description:
Demonstrates the application of these and other mathematical concepts to the solution of various business, economics, and other real-world problems: systems of linear equations and inequalities, matrices, linear programming, mathematics of finance, set theory, introductory probability and statistics, nonlinear functions, limits, and derivatives.

Prerequisites and/or Corequisites:

Prerequisite: TSI math complete or MATH 0311, or consent of division chair.

Course Notes and Instructor Recommendations:

This course has a major component (MyMathLab) that requires a good working knowledge of the computer. Online access is needed at a speed that will facilitate streaming video and downloading of materials**.** Video lectures and problem solving will be provided. MyMathLab is the online component that will house the course information. All homework will take place in this environment.

Instructor Information:

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

OFFICE HOURS

Tuesday:	**7:00-8:00 am**
	12:00-3:00 pm
Thursday:	**7:00-8:00 am**

Zoom by Request

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 Required

MCC Bookstore Website: http://www.mclennan.edu/bookstore/

Methods of Teaching and Learning:

This is a face to face course but 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. Video lectures and problem solving will be provided. MyMathLab is the online component that will house the course information. All homework and some testing will take place in this environment.

Upon completion of the course, the student will be able to:

1. Use a variety of algebraic and matrix methods to solve systems of linear equations.
2. Formulate matrix models and use them to solve linear programming and input-output open model economics problems.
3. Recall and use a variety of symbols and terms, including Venn diagrams, to solve set-theory problems.
4. Distinguish between probability and odds and calculate both for stated problems.
5. Distinguish between and use the counting principles of permutations, combinations, and the multiplication principle, and apply them to probabilities.

6. Construct a probability distribution and use it to calculate expected value for a given experiment.
7. Summarize one-variable data using statistical measures of central tendency and variance.
8. Analyze normal data distributions.
9. Solve a variety of finance problems involving interest, effective rates, and annuities.
10. Classify nonlinear functions as quadratic, polynomial, rational, exponential, or logarithmic; and identify their graphs and key characteristics.
11. Demonstrate the use of the limit definition of derivative to determine the derivative of polynomial, square root, or rational functions.

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.

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.

Course Outline or Schedule: This is subject to change if needed ..announced in Brightspace

Dates	Lecture/Work	Tests/Objectives
Week 1	2.1 Solution of Linear Systems by the Echelon Method 2.2 Solution of Linear Systems by the Gauss-Jordan Method	
Week 2	2.3 Addition and Subtraction of Matrices 2.4 Multiplication of Matrices	
Week 3	2.5 Matrix Inverse 2.6 Input-Output Models	Exam Ch. 2
Week 4	3.1 Graphing Linear Inequalities 3.2 Solving Linear Programming Problems Graphically	
Week 5	3.3 Applications of Linear Programming 4.1 Slack Variables and the Pivot	
Week 6	4.2 Maximization Problems	Exam Ch. 3 & 4
	7.1 Sets 7.2 Applications of Venn Diagrams	
Week 7	7.3 Introduction to Probability	
	7.4 Basic Concepts of Probability	Exam Ch. 7
Week 8	8.1 The Multiplication Principle; Permutations 8.2 Combinations	
Week 9	8.3 Probability Applications of Counting Principles 8.4 Binomial Probability	
Week 10	8.5 Probability Distributions; Expected Value	
	9.1 Frequency Distributions; Measures of Central Tendency	
Week 11	9.2 Measures of Variation 9.3 The Normal Distribution	Exam Ch. 8/9
Week 12	10.1 Properties of Functions 10.2 Quadratic Functions; Translation and Reflection	
Week 13	10.3 Polynomial and Rational Functions 10.4 Exponential Functions	
Week 14	10.5 Logarithmic Functions 10.6 Applications: Mathematics of Finance	Exam Ch. 10
Week 15	11.1 Limits 11.2 Continuity	
Week 16	11.3 Rates of Change 11.4 Definition of the Derivative	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 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.

06/24/2025

MCLENNAN COMMUNITY COLLEGE

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 Accommodations (Disability Services) as soon as possible to begin the steps for requesting accommodations. 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 Accommodations (Disability Services). 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 (254)299-8122
Room 319, Student Services

Title IX:

Title IX of the Education Amendments of 1972 is a Federal civil rights law that prohibits discrimination on the basis of sex in educational programs and activities that receive Federal funds. 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 a Title IX incident are encouraged to immediately contact the Title IX Coordinator at titleix@mclennan.edu or by calling, Dr. Claudette Jackson, (Accommodations/Title IX) at (254) 299-8465.

Additionally, Title IX provides rights and protections for pregnant and newly parenting students which can include educational accommodations such as excused absences

and the opportunity to make up assignments and tests. Lactation spaces are also available on campus. Please email titleix@mclennan.edu for more information.

MCC employees are mandatory reporters and must report incidents immediately to the Title IX Coordinator. Faculty and Staff may email titleix@mclennan.edu to submit a report.

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 may report sexual harassment anonymously by visiting https://www.lighthouse-services.com

Visit McLennan's Title IX webpage at https://www.mclennan.edu/titleix/ to learn more about Title IX protections, reporting, and resources.

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/

Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff. To schedule an appointment, go to https://calendly.com/paulannespantry-mcc/15min.

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/)

Success Coaching Services is here for you.

We know life can be overwhelming sometimes—and that challenges outside the classroom can impact your success inside it. That's why our Success Coaches provide personalized support to help you navigate it all.

Success Coaching is available to every MCC student, no matter where you're starting from. Whether you're looking for direction, need quick advice, or just want someone to talk to, our coaches are here to listen, celebrate your strengths, and help you move forward with confidence. At Success Coaching Services, your voice is heard, your goals matter, and your future is our focus.

To learn more or schedule an appointment, visit www.mclennan.edu/successcoaching, call 254-299-8226, or email success@mclennan.edu.

College personnel also recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources and other essential resources, we encourage you to contact the CREW - Campus Resources Education Web by calling 254-299-8561 or emailing crew@mclennan.edu.

Success Coaching Services, the CREW, and Paulanne's Pantry are located on the second floor of the Student Services building in Success Coaching Services, suite 249.

The Student Counseling Center offers confidential mental health counseling to currently enrolled students at no charge. Counselors are trained to help students with problems related to personal, social, and emotional concerns. Sessions focus on short-term goals in order to facilitate students college success and adjustment. This service is available to students in person or through Zoom.

Make an appointment to meet with a counselor by visiting the center in the Wellness & Fitness building, room 101, calling 254-299-8210, or emailing counseling@mclennan.edu.

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/scholarships-and-resources/emergencygrant.html

MCC Academic Integrity Statement:

Please view our Academic Integrity statement for more 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:
For online and blended/hybrid courses, students must have access to a reliable computer and internet. For more information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system go to: https://www.mclennan.edu/center-for-teaching-and-learning/Faculty-and-StaffCommons/requirements.html

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 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.