



WACO, TEXAS

**COURSE SYLLABUS
AND
INSTRUCTOR PLAN**

MATHEMATICS FOR BUSINESS AND SOCIAL SCIENCE

MATH 1324 Section W091

TERI BARNES

This is a 16-Week Online Course

SPRING 2026

"AN EQUAL OPPORTUNITY INSTITUTION"

Course Description:

The application of common algebraic functions, including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences are addressed. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value.

Prerequisites and/or Corequisites:

Prerequisites: None

Corequisites: None

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 and testing 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:

To Be Announced

Office Hours:

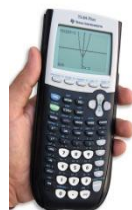
**Tuesday: 7:00-8:00 am
12:00-3:00 pm**

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:

In class lectures and problem solving will be provided. MyMathLab is the online component that will house the course information. Homework and testing will be done online in this environment. Lecture notes, reference materials, and videos are available there as well.

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

Apply elementary functions, including linear, quadratic, polynomial, rational, logarithmic, and exponential functions to solving real-world problems. Solve mathematics of finance problems, including the computation of interest, annuities, and amortization of loans. Apply basic matrix operations, including linear programming methods, to solve application problems. Demonstrate fundamental probability techniques and application of those techniques, including expected value, to solve problems. Apply matrix skills and probability analyses to model applications to solve real-world 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.

Full calendar with specific due dates is provided in the course.

Course Outline or Schedule:

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.

[Click Here for the MCC Attendance/Absences Policy](https://www.mclennan.edu/highlander-guide/policies.html)

(<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.

In this online course—attendance will be based on participation Sunday to Saturday. You must work each week (either on homework or test). If you do not complete work in a week—that counts as an absence. You are allowed 4 such weeks, but if you receive a FIFTH absence, you could be dropped for attendance issues.