Updated 07/18/2023

McLENNAN COMMUNITY COLLEGE

WACO, TEXAS

COURSE SYLLABUS

AND

INSTRUCTOR PLAN

Mathematics for Business and Social Sciences

MATH 1324.O090

Matt Shelton

NOTE: This is a 16-week course

NOTE: This is an Online course

Mathematics for Business and Social Sciences

MATH 1324.O090

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:

MATH 0311 or consent of division chair.

Instructor Information:

Instructor Name: Matt Shelton
MCC E-mail: mshelton@mclennan.edu
Office Phone Number: (254)299-8834
Office Location: MATH 209
Office/Teacher Conference Hours: Monday & Wednesday 1:00p – 2:00p (In office)
Tuesday & Thursday 1:00p – 3:00p (Online)

Required Text & Materials:

All textbook materials provided to students through IncludED. Please do not opt out of IncludED otherwise you will not receive the required materials to complete the course. If you opted out watch your email for options to opt in before the opt in window closes for the semester.

It is recommended that students have access to a graphing calculator. We recommend the TI-83 or 84 graphing calculator.

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

Methods of Teaching and Learning:

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

- Communications: Students participate in assignments involving topics related to finite math or other mathematics with an emphasis on business and social science application problems. They then share their results with their instructor and/or colleagues in class via written, oral, and visual methods.
- Critical Thinking: Critical thinking is the essence of all mathematical studies. Through inductive and deductive reasoning, students explore problems using the logical process of inquiry, analysis, evaluation, and synthesis.
- Empirical and Quantitative Skills: Students work on various mathematical problem solving skills throughout the course. The course focuses on the manipulation and analysis of numerical data or observable facts as presented in application problems and /or problem skill sets in which students demonstrate their ability to reach informed conclusions using mathematical processes.

Course Objectives and/or Competencies:

- 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.

In this course attendance will be determined by the work you submit in MyMathLab. Attendance will be taken on a weekly basis. In order to be counted present you must log in to Brightspace, go to MyMathLab, open at least one homework assignment and submit at least one homework problem each week. A week will begin on Monday and end Sunday night at 11:59pm.

There are two ways you can be dropped for attendance. First, you must submit your first work in MyMathLab by 1:00pm on September 10th or you will be dropped from the course and not allowed re-entry. Second, if you are counted absent 4 times before October 27th you will be withdrawn from the course and receive a grade of W.

A reminder that just doing the minimum amount of work for attendance will not keep you on pace to complete the course on time.

Course Outline or Schedule: This is only a suggested schedule to keep you on pace.

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 Inverses** **2.6 Input-Output Models**	
Week 4		**Ch. 2 Quiz (OBJ 1,3,5)**
Week 5	**3.1 Graphing Linear Inequalities** **3.2 Solving Linear Programming Problems Graphically**	
Week 6	**3.3 Applications of Linear Programming**	
Week 7	**7.3 Introduction to Probability** **7.4 Basic Concepts of Probability** **8.1 The Multiplication Principle; Permutations**	
Week 8	**8.2 Combinations** **8.3 Probability Applications of Counting Principles**	
Week 9	**8.4 Binomial Probability** **8.5 Probability Distributions; Expected Value**	
Week 10		**Ch. 7/8 Quiz (OBJ 4,5)**
Week 11	**10.1 Properties of Functions** **10.2 Quadratic Functions; Translation and Reflection**	
Week 12	**10.3 Polynomial and Rational Functions**	

	10.4 Exponential Functions	
Week 13	**10.5 Logarithmic Functions** **10.6 Applications: Mathematics of Finance**	
Week 14	**Thanksgiving Break**	
Week 15		**Ch. 10 Quiz (OBJ 1,2)**
Week 16		**Final Exam (ALL)**

This course will use a variety of internal and external assessments. A faculty developed comprehensive final exam will access the core objectives of critical thinking and empirical/quantitative analysis. These core objectives will also be assessed using parts of a standardized test (CAAP). A faculty designed rubric will be used to assess communication skills as well. Review of such items such as GPA, retention levels, and success in following course may be used to evaluate the effectiveness of student learning.

Course Grading Information:

Homework: There is an online homework assignment for each section that is covered during the semester. They will be your main source of practice for the quizzes. You can work on a homework assignment as many times as you want to improve your grade up until the due date. Your homework average will count 20% of your final grade.

Chapter Quizzes: There will be three online quizzes over the chapters covered in this course. Unlike the homework, the quizzes can only be attempted once (see make-up section below), and they are timed. You will have 90 minutes (the same amount of time you would get in a face-to-face course) to complete each quiz once you start. There is no way to save your progress and return at a later time to finish. You must make sure that when you start a quiz you have enough time to complete it. Also make sure that when you are done you hit the "Submit Test" button or else it may not record your grade, and you will not be permitted to access it again. If you accidentally close the quiz window or click a link that takes you away from the quiz, you will be locked out of all assignments. You will need to contact me to unlock your assignments. Depending on the situation I may not be able to reopen the locked quiz. The quizzes will look exactly like the homework problems for the sections covered. The quizzes must be completed by their due date. Each of the three quizzes will count 20% of your final grade for a total of 60%.

Final Exam: There will be a comprehensive final exam. It will be done online and will also be timed. You will have 120 minutes to complete the final exam. The problems on the test will come from the chapter quizzes so it would be a good idea to review those problems before taking the final. The final exam will count as 20% of your final grade.

The standard grading scale applies:

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

Communication Assignments Rubric (not for a grade)

Course name/number/section: Student name/number:

Type of Communication Event:

___Boardwork

___Classtime explanation

___Personal interview

___Case study presentation ___Poster board project presentation

___Small group presentation ___Online presentation

IN WRITTEN LANGUAGE	4 Student demonstrates **full knowledge with no mistakes** and **elaborates** on mathematical concepts.	3 Student demonstrates **good knowledge** but does **not elaborate.**	2 Student demonstrates **limited knowledge** but makes **several mistakes**.	1 Student does **not have a grasp** of the mathematical information.
IN ORAL LANGUAGE	4 Student uses **fluent and accurate** words to describe mathematical concepts and processes.	3 Student uses **somewhat appropriate** words to describe mathematical concepts and processes.	2 Student uses **vague words** to describe mathematical concepts and processes.	1 Student uses **incorrect and confusing words** to describe mathematical concepts and processes.

IN VISUAL PRESENTATION	4 Student uses **appropriate and accurate** visual representation of mathematical concepts and processes.	3 Student uses **somewhat appropriate** visual representation of mathematical concepts and processes.	2 Student uses **some inaccuracy in** visual representation of mathematical concepts and processes.	1 Student uses **total inaccuracy in** visual representation of mathematical concepts and processes.

Late Work and Make Up Work Policies:

Due dates are set for all homework, quizzes, and the final exam. If students do not make the deadlines, those grades become zero. Assignments will be released on a schedule. There will be no early releases.

Assignments for Chapters 2 will be available starting August 25th.
Assignments for Chapters 3, 7 and 8 will be available starting September 15th.
Assignments for Chapter 10 will be available starting October 27th.
The final exam will be available starting December 1st.

All assignments are due by 11:59pm on December 9th.

Each student will be allowed one retake quiz for the semester in case you accidentally get locked out or you just make a low score. Your retake will need to be completed by 11:59pm on December 9th. It is your responsibility to contact me when you've decided which quiz you would like to retake.

Student Behavioral Expectations or Conduct Policy:

Cheating will not be tolerated in class. Having someone else do your online homework assignment and tests are both violations of the academic integrity policy and either may result in failing grades and/or being dropped from the class. Infractions such as these will be reported to the administration for tracking and possible college action. At any time you may be asked to prove that the submitted work on your account is actually yours.

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.

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.