College of the Mainland

Department of Mathematics

Syllabus
for
Math 1324.001IN
Math for Business & Social Science
Fall 2024

Professor: **Andrea Lewis**
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Virtual Office Hours: Monday and Wednesday 12:00 PM – 1:00 PM or by appointment

1. **Required Textbook/Materials**
   - The textbook used in this course is: Finite Mathematics with Applications in the Management, Natural, and Social Sciences, 13th edition, by Lial, Hungerford, Holcomb and Mullins, Pearson Publishing Company.
   - A graphing calculator is needed for this course. A Texas Instruments TI 83 Plus or TI 84 Plus is recommended. A TI 89 or higher cannot be used in this course.
   - You will need access to the internet to gain access to course materials using the MML (MyMathLab) accessed through your D2L Brightspace course. If you do not have your own internet access, you can get access on campus in the computer lab 332 on the 3rd floor of the STEAM building, the Library, and the Tutoring Center, ICB 109.

2. **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.

3. **Course Requirements**

   Homework Assignments

   There is a homework assignment for each unit covered. These are listed on the course outline in the syllabus and on the list of assignments on MyLab Math. Each homework assignments must be completed by 11:59 pm on the due date shown on both the course outline and on the list of assignments on MyLab Math. Each homework assignment will close the night before

the corresponding exam. You should do the assignments as soon as possible after reading the appropriate section in the textbook, and watching the associated video(s) on MyLab Math. Although the homework is online and the answers are entered online, you should write your work on paper, neatly showing all steps, and keep it in your notebook with your lecture notes for future reference, both as an aid for preparing for quizzes and exams, and as a place to begin when seeking assistance from your professor, your peers, or the college tutoring center.

Quizzes and Exams
There are 4 quizzes, 4-chapter exams and a comprehensive final exam.
- The four quizzes relate to the student learning outcomes and will be taken on MyLab Math. Like the homework assignments, the due dates are shown on both the course outline in this syllabus and on the assignment list on MyLab Math. Unlike the homework assignments, the quizzes must be taken in one sitting, and they are timed. The quizzes may be retaken one time. The higher of the two grades will be used to determine the student's quiz average.
- There are four exams which cover the chapters in the textbook. The exams are taken on MyLab on the due dates shown on the course outline in the syllabus. **Exams may not be retaken.** However, if the grade on the final exam is higher than the lowest chapter exam grade, the final exam grade will replace the lowest chapter exam grade.
- The final exam is taken on MyLab on the due date shown on the course outline in the syllabus. **The final exam may not be retaken**. **The Final Exam score will replace the lowest Chapter Exam Score when it is larger.**

4. **Determination of Course Grade/Detailed Grading Formula**

   Grading Formula:

   The course grade will be determined by the following formula:

   Final Average = 64%Chapter Exam Average + 16%Final Exam + 10%Homework Average + 10%Quiz Average

   Grading Scale:

   Grade A: Final Average in [89.5, 100]
   Grade B: Final Average in [79.5, 89.5)
   Grade C: Final Average in [69.5, 79.5)
   Grade D: Final Average in [59.5, 69.5)
   Grade F: Final Average in [0, 59.5)

5. **Make-up policy**
   You will be given two days to complete each exam. If you are unable to make a scheduled exam within days specified in the course outline, you will be allowed to make up the exam provided you notify the instructor before the end of the scheduled exam period and have a legitimate reason for not being able to take the exam.

6. **Attendance Policy**
   You must log in and be active in MML at least three times each week. In addition to time spent doing homework, taking quizzes and exams, it will be necessary to study, using the course materials, at least 4 hours per week to be successful in the class.

7. **Communicating with your instructor:**
   All electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means. **The email account used to register for MML must be your COM email.**
   I will make every effort to respond to your email within 24 hours of receiving it.

8. **Table Mapping SLO's and Core Objectives**

Student Learner Outcomes	Maps to Core Objective	Assessed via this assignment
1. Apply elementary functions, including linear, quadratic, polynomial, rational, logarithmic, and exponential functions to solving real-world problems	Critical Thinking Skills	Exam
2. Solve mathematics of finance problems, including the computation of interest, annuities, and amortization of loans.	Empirical and Quantitative Skills (EQS)	Exam
3. Apply basic matrix operations, including linear programming methods, to solve application problems.	Critical Thinking Skills (CT)	Exam
4. Demonstrate fundamental probability techniques and application of those techniques, including expected value, to solve problems.	Visual Communication Skills (CS)	Exam
5. Apply matrix skills and probability analyses to model applications to solve real-world problems.	Critical Thinking Skills (CT)	Quiz

9. **Academic Dishonesty**
   College of the Mainland is committed to a high standard of academic integrity. All students are responsible for honesty and independent effort. Incidents of academic and scholastic dishonesty (including cheating, plagiarism, and collusion) will be dealt with in a way consistent with College

Policy and the Student Handbook. Any student found academically dishonest on an assignment, quiz or exam will receive a zero for that assignment, and they will be referred to the Office of Student Conduct for further disciplinary action. Please read the sections on *Standards of Student Conduct and Discipline and Penalties* in the on-line Student Handbook.

10. **Concerns about the Instructor**

If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact the Department Chair, Leslie Richardson, at (409) 933-8329, lrichardson@com.edu.

11. **Course Outline**

Week	Topic	Sections	Due
1 August 19 - 25	Functions	3.1	8/20
	Graphs of Functions	3.2	
	Linear Functions	3.3	8/22
	Quadratic Functions	3.4	
	Polynomial Functions	3.5	8/24
	Rational Functions	3.6	
2 August 26 – September 1	**Quiz 1, Chapter 3**	**QUIZ**	8/27
	Exponential Functions	4.1	
	Applications	4.2	8/29
	Logarithmic Functions	4.3	
	Logarithmic and Exponential Equations	4.4	8/31
3 September 2 - 8	**Exam 1: Chapters 3 and 4**	**EXAM**	**9/2-9/3**
	Simple Interest	5.1	9/5
	Compound Interest	5.2	
	Annuities, Future Value, Sinking Funds	5.3	9/7
	Present Value, Amortization	5.4	
	QUIZ	**QUIZ**	
4 September 9 - 15	Systems of Linear Equations	6.1, 6.2	9/10
	Applications	6.3	
	Basic Matrix Operations	6.4	9/12
	Matric Product, Inverses	6.5	
	Exam 2: Chapters 5 and 6	**EXAM**	**9/13-9/14**
5 September 16	Linear Programming – Graphically	7.1, 7.2	9/17

– 22	Applications Simplex Method, Maximization Applications	7.3 7.4, 7.5	9/19
	Quiz 3: Chapter 7	**QUIZ**	
	Sets	8.1	9/21
	Venn Diagrams	8.2	
6 September 23 – 29	Basic Concepts of Probability	8.3 8.4	9/24
	Conditional Probability, Independent Events	8.5	9/26
	Bayes' Formula	8.6	
	Exam 3: Chapters 7 and 8	**EXAM**	**9/27-9/28**
7 September 30 – October 6	Probability Distributions, Expected Value	9.1	10/1
	Multiplication Principle, Permutations and Combinations	9.2	
	Applications of Counting	9.3	10/3
	Binomial Probability	9.4	
	Quiz 4, Chapter 9	**QUIZ**	
	Frequency Distributions	10.1	10/5
	Measures of Center	10.2	
8 October 7 – 13	**Exam 4: Chapters 9 and 10**	**EXAM**	10/7-10/8
	Final Exam	**EXAM**	10/9-10/10

**** W-day: October 2 ****

Institutional Policies and Guidelines

Grade Appeal Process: Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook https://www.com.edu/student-services/docs/Student_Handbook_2024-2025_v2.pdf.

An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.

Academic Success & Support Services: College of the Mainland is committed to providing students the necessary support and tools for success in their college careers. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

ADA Statement: Any student with a documented disability needing academic accommodations is requested to contact Kimberly Lachney at 409-933-8919 or klachney@com.edu. The Office of Services for Students with Disabilities is located in the Student Success Center.

Textbook Purchasing Statement: A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy: Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1st 5-week session is July 1. The last date to withdraw from the 10-week session is July 30. The last date to withdraw for the 2nd 5-week session is August 2.

FN Grading: The FN grade is issued in cases of failure due to a lack of attendance, as determined by the instructor. The FN grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the FN grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an FN grade.

Early Alert Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

Resources to Help with Stress: If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here https://www.com.edu/community-resource-center/. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at deanofstudents@com.edu or communityresources@com.edu.

Nondiscrimination Statement: The College District prohibits discrimination, including harassment, against any individual on the basis of race, color, religion, national origin, age, veteran status, disability, sex, sexual orientation, gender (including gender identity and gender expression), or any other basis prohibited by law. Retaliation against anyone involved in the complaint process is a violation of College District policy.