MATH 1324.031IN
Mathematics for Business & Social Sciences
Summer 1 2021
Online Course

Instructor Information: Angela Molen, amolen@com.edu

Virtual Office hours: Wednesdays 11:00 am - noon

Required Textbook: Finite Mathematics with Applications, twelfth edition, by Lial, Hungerford, Holcomb, and Mullins

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.

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.

Course requirements:

Homework Assignments
There is assigned homework for each section to be done online using MyMathLab. The due dates are provided in the schedule on page 3 of this syllabus. Each exam has a review that is included in homework assignments. If you score an 85 or above, you will receive 3 bonus points on the corresponding exam. Any late homework can be completed by the quiz or test date for a 20% reduction.

Quizzes and Exams
There are four quizzes to be done online using MyMathlab. You need to show work on paper that will be turned in to the instructor. You can retake each quiz just once to improve your score; the highest score will be the one that counts. There will be four chapter exams and a comprehensive final. There are no retakes on any of the exams.

Determination of Course Grade/Detailed 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)

Make-Up Policy: If you are unable to make a scheduled chapter exam, you will be allowed to make up the exam outside of class **provided you notify the instructor prior to the exam and have a legitimate reason for the absence**.

Attendance Policy: Students at COM are expected to participate every week for which they are registered. Per COM policy, students are required to log on to their course at least twice per week but would suggest logging in each day to complete the necessary assignments on time that are required of this course.

Tardiness Policy: Excessive tardiness may result in a student being withdrawn from the course.

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

Academic Dishonesty:
To plagiarize means to take someone else's ideas and present them as if they are yours. Turning in another student's work with or without their knowledge is an example of plagiarism. It is

academically dishonest to engage in plagiarism. If you plagiarize then you wll receive a zero for the assignment.

Link(s) to resource(s) about ways to avoid plagiarism:

http://en.writecheck.com/ways-to-avoid-plagiarism/

Student Concerns: 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 Leslie Richardson at lrichardson@com.edu.

Course outline:

Week	Math 1324	Sections	Due Date
5	Functions	3.1	
	Graphs of Functions	3.2	
	Applications of Linear Functions	3.3	
	Quadratic Functions and Applications	3.4	
	Polynomial Functions	3.5	
	Rational Functions	3.6	
	Quiz 1: Sections 3.1-3.6		**July 11**
6	Exponential functions	4.1	
	Applications of Exponential Functions	4.2	
	Logarithmic Functions	4.3	
	Logarithmic and Exponential Equations	4.4	**14**
	Exam 1: Chapter 3 and 4		**14-15**
	Simple Interest and Discount	5.1	
	Compound Interest	5.2	
	Annuities, Future Value, and Sinking Funds	5.3	
	Annuities, Present Value, and Amortization	5.4	
	Quiz 2: Sections 5.1-5.4		**18**
7	Systems: 2 Linear Equations in 2 Variables	6.1	
	Larger Systems of Linear Equations	6.2	
	Applications of Systems of Linear Equations	6.3	
	Basic Matrix Operations	6.4	
	Matrix Products and Inverses	6.5	**22**
	Exam 2: Chapters 5 and 6		**22-23**
	Graphing Linear Inequalities in 2 Variables	7.1	
	Linear Programming: The Graphing Method	7.2	**25**
8	Applications of Linear Programming	7.3	
	The Simplex Method: Maximization	7.4	
	Maximization Applications	7.5	
	Quiz 3: Sections 7.2-7.5		
	Sets	8.1	

		Apps: Venn Diagrams, Contingency Tables	8.2		
		Introduction to Probability	8.3		
		Basic Concepts of Probability	8.4	**Aug**	**1**
9		Conditional Probability & Independent Events	8.5		
		Bayes Formula	8.6		**3**
		Exam 3: Chapters 7 and 8			**3-4**
		Probability Distributions and Expected Value	9.1		
		Mult. Principle, Permutations, Combinations	9.2		
		Applications of Counting	9.3		
		Binomial Probability	9.4		
		Quiz 4: Sections 9.1-9.4			**8**
10		Frequency Distributions	10.1		
		Measures of Center	10.2		
		Exam 4: Chapters 9 and 10			**10-11**
		Final Exam			**12-13**

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://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.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.* https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf

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 Holly Bankston at 409-933-8520 or hbankston@com.edu. The Office of Services for Students with Disabilities is located in the Student Success Center.

Counseling Statement: Any student needing counseling services is requested to please contact Holly Bankston in the student success center at 409-933-8520 or hbankston@com.edu. Counseling services are available on campus in the student center for free and students can also email counseling@com.edu to set up their appointment. Appointments are strongly encouraged; however, some concerns may be addressed on a walk-in basis.

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 summer session is July 2. The last date to withdraw from the 10-week summer session is August 2. The last date to withdraw for the 2ⁿᵈ 5-week summer session is August 6.

F$_N$ Grading: The F$_N$ grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The F$_N$ 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 F$_N$ grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an F$_N$ 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.

COVID-19 Statement: All students, faculty, and staff are expected to familiarize themselves with materials and information contained on the College of the Mainland's Coronavirus Information site at www.com.edu/coronavirus. In compliance with Governor Abbott's May 18 Executive Order, face coverings/masks will no longer be required on COM campus. Protocols and college signage are being updated. We will no longer enforce any COM protocol that requires face coverings. We continue to encourage all members of the COM community to distance when possible, use hygiene measures, and get vaccinated to protect against COVID-19. Please visit com.edu/coronavirus for future updates.