



Department of Mathematics

Syllabus
for
Math 1324.101CL Spring 2022
Mathematics for Business & Social Sciences
MW 9:30 AM – 10:50 AM in STEAM 119
F 10:00 AM – 10:50 AM in STEAM 119

Professor: Tom English
E-mail: tenglish@com.edu

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

Student hours

Office Hours: MW 8:00 AM - 9:20 AM, TTh 10:00 AM – 10:50 AM, F 8:00 AM – 9:50 AM, 11:00 AM – 11:30 AM.

1. Required Textbook

The textbook used in this course is: Finite Mathematics with Applications in the Management, Natural, and Social Sciences, Twelfth edition, by Lial, Hungerford, Holcomb and Mullins, Pearson Publishing Company. Note: you will have access to the text online via MyMathLab. You do not have to purchase a printed copy of the text.

2. Textbook Purchase

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.

3. 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.

4. **Technology**

A 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.

5. **Course Requirements**

Homework Assignments

There is an assigned homework for each section to be completed online using MyMathLab.

Quizzes and Exams

There are four quizzes, four chapter exams and a comprehensive final exam. All of the quizzes and exams are to be done online using MyMathlab . You can retake each quiz just once to improve your score; the higher score will be the one that counts.

There are no retakes on any of the exams.

6. **Determination of Course Grade**

Grading Formula:

The course grade will be determined by the following formula:

$$\text{Final Average} = 64\% \text{Chapter Exam Average} + 16\% \text{Final Exam} \\ + 10\% \text{Homework Average} + 10\% \text{Quiz Average}$$

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)

7. **Make-up policy**

You will be given two days to take a chapter exam. The final exam is given in class on 05-09-22. 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 that 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.**

8. Course Outline

Section	Topic	Due Date
3.1	Functions	01-23-22
3.2	Graphs of Functions	01-23-22
3.3	Linear Functions	01-30-22
3.4	Quadratic Functions	01-30-22
3.5	Polynomial Functions	01-30-22
3.6	Rational Functions	02-06-22
Quiz 1: Chapter 3		02-06-22
4.1	Exponential Functions	02-06-22
4.2	Applications of Exponential Functions	02-13-22
4.3	Logarithmic Functions	02-13-22
4.4	Logarithmic and Exponential Equations	02-13-22
Exam 1: Chapters 3, 4		02-13 to 02-14-22
5.1	Simple Interest and Discount	02-20-22
5.2	Compound Interest	02-20-22
5.3	Annuities, Future Value, and Sinking Funds	02-20-22
5.4	Annuities, Present Value, and Amortization	02-27-22
Quiz 2, Chapter 5		02-27-22
6.1	Systems of Two Linear Equations in Two Variables	02-27-22
6.2	Larger Systems of Linear Equations	02-27-22
6.3	Applications of Systems of Linear Equations	03-06-22
6.4	Basic Matrix Operations	03-06-22
6.5	Matrix Products and Inverses	03-06-22
Exam 2: Chapters 5, 6		03-10 to 03-11-22
7.1	Graphing Linear Inequalities in Two Variables	03-21-22
7.2	Linear Programming: The Graphical Method	03-21-22
7.3	Applications of Linear Programming	03-27-22
7.4	The Simplex Method: Maximization	03-27-22
7.5	Maximization Applications	03-27-22
Quiz 3, Chapter 7		03-30-22
8.1	Sets	04-03-22
8.2	Applications of Venn Diagrams	04-03-22
8.3	Introduction to Probability	04-03-22
8.4	Basic Concepts of Probability	04-10-22
8.5	Conditional Probability and Independent Events	04-10-22
8.6	Bayes' Formula	04-10-22
Exam 3: Chapter 7, 8		04-11 to 04-12-22
9.1	Probability Distributions and Expected Value	04-18-22
9.2	The Multiplication Principle, Permutations and Combinations	04-24-22
9.3	Applications of Counting	04-24-22
9.4	Binomial Probability	04-24-22
Quiz 4: Chapter 9		04-25-22
10.1	Frequency Distributions	04-29-22
10.2	Measures of Center	04-29-22
Exam 4 Chapter 9, 10		04-29 to 04-30-22
Final Exam		05-09-22

**** W-day: April 25 ****

9. Attendance Policy

You must log in and be active in MyMathLab at least three times each week and attend lectures. In addition to time spent in doing homework, taking quizzes and exams it should be necessary to study, using the course materials, at least 4 hours per week to be successful in the class.

10. 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 only permitted to withdraw six times during their college career by State law. The last day to withdraw is April 25th.

11. 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.

12. Early Alert Program

The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success is 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.

13. 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 manner that is consistent with College Policy and the Student Handbook. Any student found to have been academically dishonest on an assignment, quiz or exam will receive a zero for that assignment, quiz or exam and he or she 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.

14. Concerns about the Instructor

If you have any questions or concerns about any aspect of this course, please contact me at tenglish@com.edu. If, after discussing your concern with me, you continue to have questions, please contact Department Chair Leslie Richardson at lrichardson@com.edu

15. 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 (CT)	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

16. 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

17. Academic Success & Support Services

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

an advisor.

18. **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.

19. Counseling Statement: Any student that is 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 setup their appointment. Appointments are strongly encouraged; however some concerns may be addressed on a walk-in basis.

20. **COVID-19 Statement**

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.