Department of Mathematics

Syllabus
for
Math 1324.221CL
Math for Business & Social Sciences
Spring 2022
TR 5:30 – 7:20 pm in STE 102

MML Course ID: smith92151

Professor: Danielle Smith
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Office: STE 102

Student hours: Tuesdays & Thursdays 5:00-5:30 in STE 102

1. **Required Textbook/Materials**
   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.
   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) software. If you do not have your own internet access, you can get access on campus in the Innovations Computer Lab, TVB 1324, the Library and the Tutoring Center, TVB 1310.

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. **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.

4. **Course Requirements**

   Homework Assignments
   There is an assigned homework for each section to be completed online using MML. The homework for the sections that we cover during the week will be due the following Monday. However, if we cover a section on Tuesday and the exam is Thursday, that homework and review will be due before the test on Wednesday by 11:59PM.
   Homework worked after the due date will receive a 20% deduction on all problems worked after the due date. You'll be able to work on past due homework until the exam date.

   Quizzes and Exams
   There are 4 quizzes, 4 chapter exams and a comprehensive final exam. All of the quizzes and exams are to be done online using MML. 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.

5. **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**

   The Final Exam score will replace the lowest Chapter Exam Score when it is larger.

   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)

6. **Attendance Policy**
   Attendance is required for all class meetings.

7. **Make-up policy**
   If you are unable to make a scheduled exam, **you must notify the instructor prior to the exam and have a legitimate reason for the absence** to be eligible for a make-up. Try your best to be present for all scheduled exams; not being prepared is not a legitimate reason to miss an exam. All makeup exams must be taken in the Testing Center by appointment.

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 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.

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 for Math & Computer Science, Leslie Richardson at lrichardson@com.edu, 409-933-8329.

11. **Productive Workplace**
    Students are expected to bring all tools necessary for success to class every day. These tools include writing implements, notebook/notebook paper and an approved calculator. All other items (back packs, purses, bags, etc.) must cleared from your desk. Your cell phone is to be placed on silent and placed in your purse, backpack, or pocket. It is not to be out during class. Having a cell phone out during class is an interruption to the learning environment for your classmates, yourself, and the instructor.

12. **Course Outline**   **MML Course ID: smith92151**

Week	Topic	Sections	Due	
1	Functions, Graphs of Functions	3.1, 3.2	Jan	24
	Linear, Quadratic Functions	3.3, 3.4		24
2	Polynomial Functions	3.5		31
	Rational Functions	3.6		31
	Quiz 1, Chapter 3			31
	Exponential Functions	4.1		31
3	Applications	4.2	Feb	7
	Logarithmic Functions	4.3		7
	Logarithmic, Exponential Equations	4.4		7
4	**Review**			
	<mark>**Exam 1: Chapters 3, 4**</mark>			**10**
5	Simple Interest, Compound Interest	5.1, 5.2		21
	Annuities, Future Value, Sinking Funds	5.3		21
6	Present Value, Amortization	5.4		28
	Quiz 2, Chapter 5			**28**
	Systems of Linear Equations	6.1, 6.2		28
7	Applications, Basic Matrix Operations	6.3, 6.4	Mar	5
	Matrix product, inverses	6.5		7
8	**Review**			
	<mark>**Exam 2: Chapters 5, 6**</mark>			**10**
	**** Spring Break March 14 – 18 ****			
9	Linear Programming - Graphically	7.1, 7.2		28
	Applications	7.3		28
10	Simplex Method	7.4	Apr	4
	Maximization Applications	7.5		4
	Quiz 3, Chapter 7			**7**
11	Sets, Venn Diagrams	8.1, 8.2		11
	Basic Concepts of Probability	8.3, 8.4		11
12	Conditional Probability, Indep Events	8.5		18
	Bayes' Formula	8.6		18
	Review			
13	<mark>**Exam 3: Chapters 7, 8**</mark>			**19**
	Prob Distributions, Expected Value	9.1		25
	Multiplication Principle, Permutations and Combinations	9.2		25
14	Applications of Counting	9.3	May	2
	Binomial Probability, **Quiz 4, Ch 9**	9.4		2
	Frequency Distributions,	10.1		2
15	Measures of Center, **Review**	10.2		4
	<mark>**Exam 4: Chapters 9, 10**</mark>			**5**
16	**Review**			
	<mark>**Final Exam**</mark>			**12**

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

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.*

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 8-week session is March 2nd. The last date to withdraw from the 16-week session is April 25th. The last date to withdraw for the 2nd 8-week session is May 4th.

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.