



Department of Mathematics

Syllabus
for
Math 1325.001IN Summer 2021
Business Calculus

Professor: Leslie Richardson
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Student hours

Virtual Office Hours: MTWR 10:30-11:30 pm on Microsoft Teams

1. Required Textbook/Materials

The textbook used in this course is: Calculus with Applications, 11th edition, by Lial, Greenwell and Ritchey, published by Pearson.

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 MyMathLab software.

2. Course Description

This course is the basic study of limits and continuity, differentiation, optimization and graphing, and integration of elementary functions, with emphasis on applications in business, economics, and social sciences.

3. Course Requirements

Homework Assignments

There is an assigned homework for each section to be completed online using MyMathLab, MML. The due dates are specified in the Assignments folder in MML.

Quizzes and Exams

There are 4 quizzes, 4 chapter-exams and a comprehensive final exam. All quizzes and exams are to be done online using MML and the due dates are specified next to the assignments in the Assignments folder in 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.**

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

Grading Formula:

The course grade will be determined by the following formula:

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

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)

5. **Make-up Policy**

You will be given two days to take a chapter exam and two days to take the final 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**

It is expected that you will log in and be active in MyMathLab daily. In addition to time spent in doing homework, taking quizzes and exams it will be necessary to study, using the course materials, 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.

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 Outcome (SLO) | SLO assessed via this assignment | SLO maps to Core Objective (CO) |
|--|---|--|
| 1. Apply calculus to solve business, economics, and social sciences problems. | Exam 3 | |
| 2. Apply appropriate differentiation techniques to obtain derivatives of various functions, including logarithmic and exponential functions. | Exam 2 | |
| 3. Solve application problems involving implicit differentiation and related rates. | Quiz 3 | |
| 4. Solve optimization problems with emphasis on business and social sciences applications. | Quiz 3 | Critical Thinking Skills |
| 5. Determine appropriate techniques of integration. | Exam 4 | |
| 6. Integrate functions using the method of integration by parts or substitution, as appropriate. | Quiz 4 | |
| 7. Solve business, economics, and social sciences applications problems using integration techniques. | Exam 4 | |

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 Dean of Instruction, Dr. Barney, at (409) 933-8727, rbarney@com.edu.

8. Course Outline

| <u>Week</u> | <u>Topic</u> | <u>Sections</u> | <u>Due Date</u> |
|-------------|---------------------------------------|-----------------|------------------|
| 1 | Limits | 3.1 | |
| | Continuity | 3.2 | |
| | Quiz 1, sections 3.1, 3.2 | | |
| | Rates of change | 3.3 | |
| | Definition of a Derivative | 3.4 | |
| | Review | | |
| 2 | Exam 1: Chapter 3 | | Jul 19-20 |
| | Finding Derivatives | 4.1 | |
| | Derivatives of Products and Quotients | 4.2 | |
| | The Chain Rule | 4.3 | |
| | Quiz 2, sections 4.1-4.3 | | |
| | Derivatives of Exponential Functions | 4.4 | |
| | Derivatives of Logarithmic Functions | 4.5 | |
| | Review | | |
| 3 | Exam 2: Chapter 4 | | 26-27 |
| | Inc/Dec functions, Relative Extrema | 5.1, 5.2 | |
| | Concavity, SDT, Graphing | 5.3 | |
| | Graphing, Abs Extrema | 5.4, 6.1 | |
| | Applications of Extrema | 6.2 | |
| | Implicit Differentiation | 6.4 | |
| 4 | Related Rates | 6.5 | |
| | Quiz 3, sections 6.2, 6.4, 6.5 | | |
| | Review | | |
| | Exam 3: Chapters 5, 6 | | Aug 2-3 |
| | Antiderivatives, Substitution | 7.1, 7.2 | |
| | Definite Integral, Area | 7.3 | |
| | Fundamental Theorem | 7.4 | |
| 5 | Integration by Parts | 8.1 | |
| | Quiz 4, sections 7.2, 8.1 | | |
| | Review | | |
| | Exam 4: Chapters 7, 8.1 | | 9-10 |
| | Review | | |
| | Final Exam | | 11-12 |

**** W-day: August 6 ****

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 is August 6th.

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 www.com.edu/coronavirus for future updates.