MAC 2233: Calculus for Business and Social Science I (In-Class)

I. Semester Information

Course Information: MAC 2233: Calculus for Business and Social Science I

Credit Hours/Contact Hours: 3 credit hours, 3 hours lecture

Pre-Requisites: Math placement test score or minimum grade of "C" in MAC 1105

Current Semester: Spring 2023

II. Contact Information

Instructor: Connie Campbell, Associate Professor of Mathematics, Gulf Coast State College

Instructor Credentials:

B.A. with a major in Mathematics, Huntingdon College

M.S. in Mathematics, The University of Mississippi

Ph.D. in Mathematics, The University of Mississippi

Instructor Phone: 850-769-1551x2812

Instructor Email: ccampbel2@gulfcoast.edu

Division Chair: Angelia Reynolds, areynolds@gulfcoast.edu; 850-872-3852

Division Administrative Assistant: Scott Spencer, sspencer@gulfcoast.edu; 850-747-3229

III. Approved Course Materials and Resources

Textbook: Calculus An Applied Approach, Brief, by Ron Larson, 10th edition, 2017, Cengage Learning, ISBN-13: 978-1305860926 or ISBN-10: 1305860926

Other Required Materials: A graphing calculator is required. A TI-83 or TI-84 model is recommended. (The TI-84 will be demonstrated on the course videos.) If you wish to use a different calculator on your tests, you must receive prior approval from the instructor. TI-89, TI-92, and other calculators that perform symbolic manipulation will not be permitted on tests. Cell phone calculators will also not be permitted. Each student is expected to have his/her own calculator.

IV. Curriculum

Course Description: Topics included are a review of algebraic preliminaries, rates of change and optimization methods, integration, and applications to business and social sciences.

Method of Instruction: This course is conducted by the lecture-question-demonstration method. At the beginning of the period, questions from the previous lectures and problem assignments are discussed. Following these discussions, the instructor lectures on current material from the text. Demonstrations of methods are explained and presented thoroughly, when not beyond the scope of the course and the background of the students. A short summary is given and a problem assignment is made. Small group activity is encouraged. The use of the graphing calculator is demonstrated in class. Students are also

encouraged to use videos available in Canvas. Short quizzes are given throughout the semester. Dates for unit tests and the final exam are announced in advance through the daily academic schedule. Unit tests are returned and a key provided for review.

Broad Goals of the Course:

- To gain proficiency in calculus computations of limits, derivatives, and integrals
- To gain an understanding of the applications of calculus in business and the social sciences

Student Learning Outcomes:

Upon completing the course, the student should be able to:

- Evaluate limits numerically, graphically, and analytically.
- Apply the definition of the derivative to a continuous function.
- Apply the basic rules of differentiation to determine the derivatives of polynomial, rational, exponential, logarithmic, and multivariable functions.
- Utilize the derivative to analyze the graphs of polynomial and rational functions and to solve optimization problems.
- Apply basic rules of integration to evaluate definite and indefinite integrals.
- Utilize integration to solve applied problems involving accumulation.

V. Student Expectations of the Instructor

Office Hours: The instructor will be available for 10 office hours each week. The specific hours will be announced in class and posted in Canvas before the end of the first week of classes.

Email/voicemail response time: The instructor will respond to emails within 24-48 hours with the possible exception of weekends and holidays. Sending an email to your instructor through Canvas is the fastest way to get a response.

Learning Management System Usage: Canvas will be used as a repository of information. Class notes, handouts, and unit test keys will all be uploaded in Canvas for easy access. Additionally, any outside resources the instructor finds beneficial will be housed in Canvas for student reference, including course videos. The gradebook will be set up to calculate current averages. Course evaluations will also be administered via Canvas.

VI. Expectations of the Student

Academic Integrity: Honest participation in academic endeavors fosters an environment in which optimal learning can take place and is consistent with the college's mission. Academic misconduct, including cheating or plagiarism, is destructive to the spirit of an educational environment and therefore will not be tolerated. "Cheating" includes, but is not limited to, the use of any unauthorized assistance in completing course work. "Plagiarism" includes, but it not limited to, the use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment.

Sanctions for incidences of academic misconduct, depending on the severity of the incidence and/or its repetition, may range from receiving an F grade (or zero) for the test, assignment, or activity, to failure of the course, to suspension or dismissal from the program or the College.

Accessibility Statement: Gulf Coast State College supports an inclusive learning environment for all students. If there are aspects of the instruction or design of this course that hinder your full participation, reasonable accommodations can be arranged. Prior to receiving accommodations, you must register with Student Accessibility Services. Appropriate academic accommodations will be determined based on the documented needs of the student. For information regarding the registration process, email sar@gulfcoast.edu or call 850-747-3243.

Recording of Lectures: In accordance with federal and state privacy laws, students may record class lectures for their own personal educational use, in connection with a complaint to the college, or as evidence in internal or external legal proceedings. Students may not publish or upload the recordings or any components thereof without the knowledge and written permission of the faculty member. Failure to obtain permission to publish could lead to the students' having to pay damages, attorney fees, and court costs. For more information about what can be recorded, please see the guidelines on pages 36-38 in the GCSC Student https://www.gulfcoast.edu/current-students/student-handbooks/2022-2023-student-handbook.pdf.

Attendance Policy: Attendance in class is vital to your success and is positively correlated with your final grade. Furthermore, attendance with participation is even more highly correlated with your final grade. Please ensure that you are present and participating at each class session. Attendance will be recorded each day and you are expected to attend. If you do not attend class for the first two weeks, you will be withdrawn for non-attendance. Absences of more than one-eighth the course (ie, at four absences in a standard 16 week two class per week semester) may result in withdrawal. YOU MUST ATTEND ON EACH TEST OR EXAM DAY.

Withdrawal Policy: Two withdrawals are permitted per course. After that, a grade will be assigned. Please be concerned about withdrawals. When admitting students into certain programs, universities may calculate withdrawals as grades. There are two kinds of withdrawals.

- Student Withdrawal: Students may withdraw from a course prior to the scheduled withdrawal deadline published in the college catalog. The form is on the Internet.
- Administrative Withdrawal: This withdrawal is completed by an instructor for excess absences. Withdrawals initiated prior to the published withdrawal deadline will be recorded as "W". After the withdrawal deadline, a student cannot be withdrawn from the course and will receive a grade.

Grade Forgiveness: A student may repeat a course when a grade of "D" or "F" has been earned. The last grade counts. However, universities may count forgiven grades in

calculating the grade point average. Forgiven grades may also be calculated in determining financial aid eligibility.

Attempts: This course, which is a college credit course, may be attempted three times. On the third attempt, 100% of the full cost of instruction will be charged. Students with major extenuating circumstances may submit a letter of appeal stating the circumstances to Counseling Center. All grades from the third and subsequent attempts will be calculated in the grade point average.

VII. Measures of Student Performance

Method of Assessment: There will be four in-class tests and one in-class final exam for this course. Each test will be worth 15% of your final grade and cover material from the previous unit. The final exam is comprehensive and will be worth 25% of your final grade. The final exam may replace your lowest test grade at the instructor's discretion. The remaining 15% of your grade will be formative assessments consisting of quizzes, homework, and/or graded in-class assignments.

Homework: Homework is assigned each week and the completion of all homework is essential for learning the material in the course and as preparation for the four tests and the final exam.

GCSC Grading Scale: The college catalog will be used to convert the numerical average to a letter grade. The college grading scale is: A (100-90), B (89-80), C (79-70), D (69-60), and F (59-0).