MAC 2311H CALCULUS WITH ANALYTIC GEOMETRY I Fall 2025
Honors Course Syllabus

I. COURSE DESCRIPTION

MAC 2311: Calculus with Analytic Geometry I, 4 lecture hours, and 4 credit hours. **Prerequisite:** Minimum grade of "C" in MAC 1140 and in MAC 1114. Placing into MAC 2311 by only placement test scores requires permission of the Mathematics Division Chair. To receive permission, the student who has not successfully completed MAC 1114 (Trigonometry) must verify successful completion ("C" or higher) of a trigonometry course at the high school level or higher.

Description: In this course, students will develop problem solving skills, critical thinking, computational proficiency, and contextual fluency through the study of limits, derivatives, and definite and indefinite integrals of functions of one variable, including algebraic, exponential, logarithmic, and trigonometric functions, and applications. Topics will include limits, continuity, differentiation and rates of change, optimization, curve sketching, and introduction to integration and area.

II. REQUIRED TEXT AND CALCULATOR

1. **Textbook:** *Calculus: Early Transcendental Functions, 8th Edition*, Ron Larson and Bruce Edwards, Cengage, © 2024, ISBN 978-0-357-75932-5 or 978-0-357-75933-2
2. **Graphing Calculator:** A graphing calculator is required. A TI-83 or TI-84 model is recommended. (The TI-84-Plus will be demonstrated in class.) 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 not be permitted.* Each student is expected to have his/her own calculator.

III. STUDENT LEARNING OUTCOMES

SLO1. Students will calculate a limit, derivative, or integral using appropriate techniques.
SLO2. Students will determine the continuity and differentiability of a function.
SLO3. Students will use limits and derivatives to analyze relationships between the equation of a function and its graph.
SLO4. Students will apply differentiation techniques to model and solve real world problems.
SLO5. Students will use integrals and the fundamental theorem of calculus to analyze the relationship between the integral of a function and the related area.

IV. SPECIFIC COURSE OBJECTIVES

These objectives are posted in Canvas.

V. COURSE OUTLINE AND INSTRUCTOR INFORMATION

We will cover Chapters 2 through 5 in the textbook. See the Daily Schedule for more details. Your instructor's contact information is also found on the Daily Schedule.

VI. ATTENDANCE AND WITHDRAWAL POLICIES

1. **Attendance Policy.** Students are expected to attend class and to arrive on time. Attendance will be taken daily.

2. **No shows.** Students who never attend during the first two weeks of class shall be classified as "no show" and withdrawn from the course.
3. **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 a withdrawal as an F.
   - **Student-initiated withdrawal:** Students may withdraw from a course prior to the scheduled withdrawal deadline published in the college catalog. To withdraw from a class before the withdrawal deadline, go to the Admissions Forms page on the college's website, then scroll down and select Student Withdrawal Form. (You will then be prompted to log into the MyGCSC portal if you are not already logged in.) Complete and submit this online form as directed. Students who withdraw themselves will receive a "W" for the course on their transcript. (Exception: If a student has attempted the course two or more times before, then the student cannot be granted a "W" and must receive a grade for the course.)
   - **Instructor-initiated withdrawal:** If before the withdrawal deadline a student has missed two or more weeks of class, then the instructor reserves the right to withdraw that student from the course.
   - **Withdrawal with a "W" after the deadline is not permitted.** Instructors do not have the authority to report a "W" after the deadline published in the college catalog. If a student has extenuating circumstances preventing him/her from successfully completing the course, and the withdrawal deadline has passed, the student may make an appeal with the Office of Student Affairs.

VII. GRADE FORGIVENSS AND ATTEMPTS

1. **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.
2. **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 the Counseling Center. All grades from the third and subsequent attempts will be calculated in the grade point average.

VIII. HOMEWORK

Homework will be assigned daily. The daily completion of all homework is essential for learning the material in the course and as preparation for the examinations. **Students who do not make a substantial effort at the homework generally perform poorly on the unit tests and on the final exam.**

IX. TESTING AND GRADING

1. There will be five (5) unit tests and a final exam. The unit tests will be announced in advance, will count equally, and will be returned. The final exam will not be returned. There are no exemptions from the final exam. At the option of the instructor, unannounced "pop-quizzes," graded homework, or group activities may be given. If so, the average of the grades will count as an additional unit test. Therefore, the number of grades counted as a unit test may

be six (6). The student is expected to keep up daily with the assigned work. **Although a graphing calculator is required for this course, students will be expected to demonstrate mastery of differentiation and integration techniques without the use of a calculator.**

2. The unit test grades and the daily/quiz average comprise 75% of the grade for the course. (If the instructor includes a daily/quiz average, the weight of this average will be equal to the weight of one unit test.) The weight of each item on a unit test will be determined by the instructor. All students will be required to take a comprehensive final exam, which comprises 25% of the grade for the course. The following scale is used to convert the numerical average to a letter grade: A(100-90), B(89-80), C(79-70), D(69-60), and F(59-0).
3. Mathematics Division policies allow no take-home tests, no extra credit assignments, and no curving of grades.
4. Students will not be allowed to leave a testing situation (such as a unit test, midterm, or final exam) and come back at a later time to finish the test.
5. Students will not be allowed to retake a unit test, midterm, or final exam.
6. Students will have an honors project to complete for the honors course. If students do not complete the honors project, then students will lose one letter grade based on their overall average at the end of the semester.
    - Calculated overall average is an A with no honors project = B in the course
    - Calculated overall average is a B with no honors project = C in the course
    - Calculated overall average is a C with no honors project = D in the course
    - Calculated overall average is a D with no honors project = F in the course
    - Calculated overall average is an F with no honors project = F in the course

X. MAKE-UP WORK

No quizzes will be made up. If you miss a unit test and you have a valid excuse, the instructor has the option to allow you a make-up test or to use your final exam score in the place of the first missing unit test score. Approved make-up tests must be taken **before** the next class meeting. If you have not missed any unit tests, the instructor, at his/her discretion, may opt to replace the lowest unit test score with the final exam score. Take-home tests are not allowed.

XI. UNFORESEEN CIRCUMSTANCES

Unforeseen circumstances, such as power outages, inclement weather, and public health emergencies, might necessitate a change in schedule and/or an alteration in the number of unit tests given. In the event that the college must move to fully on-line delivery of the course, students might be expected to have access to an internet-connected computer, webcam, and microphone.

XII. SUCCESS IN THIS COURSE

What to bring to class every day: Graphing calculator, paper, pencil, graph paper, willingness to participate and to learn.

Outside of class: Studying requires discipline, tenacity, and hard work. View this course as a job. During a regular Fall or Spring term, students should plan to spend at least 8 to 12 hours per week outside of class working the homework assignments and quizzes. During a condensed 8-week Summer term, this amount of time per week doubles. Attentiveness to detail and alertness are essential. Students are expected to take responsibility for their learning.

Available help:

1. **Your Instructor:** Full-time faculty have posted office hours on their schedules. Students having difficulty are strongly encouraged to see the instructor for additional help.
2. **Math Lab:** Math tutors are available face-to-face and virtually via the Math Lab. There is no charge for Gulf Coast State College students. See the GCSC Math Lab website for hours of operation.
3. **Course Videos:** These videos can be viewed through our Canvas course webpage.
4. **Canvas Webpage:** Your instructor will post useful information and links in Canvas.
5. **Counseling Center:** The Counseling Center is located on the first floor of Student Union East.
6. **Support Materials Accompanying the Textbook:** CalcChat website.
7. **Communication through Canvas:** Students are encouraged to email one another through Canvas and to organize study groups that meet virtually or in public locations. Students should NOT invite people they do not know well to their homes.
8. **TRIO Student Support Services (SSS)** is a federally funded grant program which serves first generation students (neither parent has a 4-year bachelor degree), low-income students, and/or students with disabilities achieve their academic goals. Student success is at the center of everything we do in our program. We offer academic advising, 24/7 online tutoring in most subjects, textbook and computer/technology loans, transfer and cultural trips, assistance with financial aid applications and scholarships, career exploration and a dedicated computer lab and study area. All services are FREE to SSS program participants. Visit https://www.gulfcoast.edu/current-students/trio/ to apply online or call (850) 913-2937 for more information. SSS is located in Student Union West Room 89.

XIII. STUDENT ACCESSIBILITY RESOURCES

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 Resources. 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.

XIV. CLASSROOM CONDUCT POLICY

In order to promote a learning environment, in which you as a student may receive the greatest consideration, we will do all we can to prevent unnecessary interruptions and class disruptions. To this end, it is the stated policy of the Division of Mathematics that disruptions, absolutely and unequivocally, will not be tolerated in the classrooms administered by this division. To this end, we remind you that the instructors are obligated to adhere strictly to the following policies:

1. Everyone is required to be in class on time. Anyone entering the classroom after the instructor has begun class is late and is a disruption to the class. The instructor must implement an appropriate policy to discourage late arrivals.
2. Disciplinary action in the case of cheating will be administered in accordance with college policy.
3. The student must have prior consent of the instructor before leaving the class early. If you must leave class early, notify the instructor before the beginning of class. We do not conduct "open" classrooms where individuals may arrive and exit at their discretion. This activity is

disruptive to those trying to learn and will not be allowed. If you leave early without prior notification to the instructor, you will not be allowed back in the classroom without first obtaining permission from Mrs. Reynolds, Division of Mathematics Chair.

4. The instructor is not to allow talking or other distractions to occur at inappropriate times. Use of electronic communication devices (including, but not limited to, cell phones, Ipods, PDA's, MP3/Music players, Blackberries, etc) are allowed in the classroom only at the discretion of the instructor and must be used only as they directly relate to the class. Talking or other disruptive behavior (including ringing cell phones) are distractions to other students and have no place in a college environment. Students who engage in such behavior will be asked to stop. If the behavior continues, the student(s) will be asked to leave and confer with Mrs. Reynolds, Division of Mathematics Chair, concerning the nature of the behavior before being allowed back in the classroom. No electronic devices will be allowed in the classroom on test days with the exception of an approved calculator.
5. No food or drink is allowed in the classroom.
6. Infractions of discipline may be handled by the instructor as final authority. The student has a right to appeal.

XV. 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 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.

XVI. GENERATIVE ARTIFICIAL INTELLIGENCE (AI) POLICY

See the student handbook for further information. Students with questions about acceptable use should consult their instructor.

Prohibited Use of AI: The use of AI-generated content is strictly prohibited in all assignments, class work, and throughout all stages of the work process, such as brainstorming, outlining, or drafting. This includes, but is not limited to, tools such as ChatGPT, Copilot, and Grammarly's AI function. Use of AI tools will be treated as a violation of academic integrity and may result in penalties, including a zero on the assignment and additional disciplinary actions as outlined in the college's academic integrity policy.

XVII. USE OF ARTIFICIAL INTELLIGENCE (AI) TOOLS

The Math Division at GCSC discourages you from utilizing AI as a substantial source of your learning. You are expected to do your own work in this course and will be graded on your mastery of the material herein. Although AI can be an outside resource for problem solving, it may not be a reliable source. What is most important in a math course is that you personally learn the step-by-step processes that it takes to find solutions to problems, to analyze data sets,

to create mathematical models, and to apply what you have learned, in theory or through formulas, to applications of mathematics found in real-life instances.

For graded assignments (tests, quizzes, or otherwise), you will not be allowed to use any AI tools, such as chatbots, text generators, paraphrasers, summarizers or solvers, to complete any part of your assignments. Using AI tools for graded assignments will be considered a form of academic dishonesty and could result in a grade of zero for the assignment and disciplinary action. If you have any questions about what constitutes acceptable uses of AI tools, inside or outside the classroom, please consult your instructor.

XVIII. HB233 STATEMENT

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 in the GCSC Student Handbook.

XIX. LEARNING MANAGEMENT SYSTEM (LMS) NOTIFICATION

For its LMS, Gulf Coast State College uses Canvas, which basically is a website which permits instructors to post online materials for their students. Course evaluations will also be administered via Canvas.