

UNIVERSITY OF CENTRAL FLORIDA
Department of Mathematics

MAC2233 Concepts of Calculus Spring 2007

ENG3 0111 MW 6:00-7:15pm

Contact information

Instructor: Dr. Eleftherios Gkioulekas, Department of Mathematics

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Office hours: MW 1:00pm-3:00pm; F 3:00pm-4:00pm

Office location: 201A MAP

Course information

Text: S.T. Tan, "Calculus for the Managerial, Life, and Social Sciences", 7th edition

Prerequisites: Successful completion of MAC1105 College Algebra or their equivalents are required prerequisites for this course.

Course Goal: The main objective of this course is to introduce the student to the limit, derivative, and integral and demonstrate some applications of these topics to the real-world problems encountered in business, management, and life sciences.

Core Topics

Review of Logic
Review of Equations/Inequalities
Functions and domain
Algebra of functions
Compositions
Supply and demand functions
Limits and continuity
Exam 1
The derivative
Instantaneous rates of change: Velocity and acceleration
Tangent lines
Marginal analysis
Implicit differentiation and related rates
Relative extrema and the first derivative test
Concavity, inflection points, and the second derivative
The second derivative test
Curve sketching
Optimization problems
Exam 2
Exponential and logarithmic functions
Compound interest
Logarithmic differentiation
Exponential growth, learning curves
Exam 3
Antiderivatives and the integral
The area problem
The fundamental theorem of calculus
Average value of a function
Surplus problems
Exam 4

Policies

Grading: There will be 4 in-class tests, and a comprehensive final exam. Additional homework will be assigned, but will not be collected or graded. The time and location of exams will be announced in class and on the web. The questions on the exams will be similar to your homework problems. Exams count for 75% (with lowest exam score dropped) and final exam for 25%. However, if the grade of the final is greater than the combined grade, then your course grade will be the grade of your final exam. The final exam will be comprehensive.

Final course letter grades are given on the standard grading scale: A: 90%-100%, B: 80%-89%, C: 70%-79%, NC: 50%-69%, F: 0%-49%. Plus/minus grades will not be assigned. This class is approved for the No Credit (NC) grade. An NC grade will be given under the following circumstances, as detailed by Department of Mathematics policy: regular class attendance; must take all quizzes, tests, and final exam, with an overall average of at least 50%. Students not eligible for an NC grade will receive an F for the course. I may or may not curve your course grade at my discretion.

Make-ups: There are no make-up exams. In the case of documented absences due to family emergencies, illness or official university functions, the final exam will be used as a make-up exam. For unapproved absences, a score of zero will be entered in the gradebook. **Each student MUST take the final exam at the scheduled date and time.** Students who do not take the final exam will receive an F for the course.

Regrading policy: If you believe that a mistake in grading has been made you may request that your paper be regraded. Such request must be submitted **in writing** within one week from the day the graded test has been returned in class, and must be accompanied by the original (unaltered) paper. If you make any changes to the paper your request will be denied. Please note that if you request regrading, all problems are subject to review. Thus, your overall grade may be increased or decreased. I will be sparing with partial credit to discourage “haggling”.

Calculator Usage: Calculators are neither required nor encouraged in the class. Only a scientific non-graphing, non-programmable, small-screen calculator is allowed during exams. You are allowed to push only the $\boxed{+}$, $\boxed{-}$, $\boxed{\times}$, $\boxed{\div}$, $\boxed{0-9}$, $\boxed{\cdot}$, $\boxed{=}$, keys. Any unauthorized calculation that involves approximation (e.g. approximation of roots, exponentials, logarithms, etc.) will prompt me to mark the whole question wrong.

Attendance and Classroom Conduct: Students are expected to attend each lecture; some attendance records may be collected and used to verify NC grade eligibility. Common courtesy requires that students arrive in class on time, and stay the entire class period. Turn your cellphones and pagers off. Please treat your classmates and instructor with respect and courtesy.

Revisions: This syllabus may be revised. If it is revised, this will be announced in class, and on the web site, where the revised syllabus will be made available.

Academic integrity: Plagiarism and Cheating of any kind on an examination, quiz, or assignment will result at least in an “F” for that assignment (and may, depending on the severity of the case, lead to an “F” for the entire course) and may be subject to appropriate referral to the Office of Student Conduct for further action. See the UCF Golden Rule for further information. I will assume for this course that you will adhere to the academic creed of this University and will maintain the highest standards of academic integrity. In other words, don’t cheat by giving answers to others or taking them from anyone else. I will also adhere to the highest standards of academic integrity, so please do not ask me to change (or expect me to change) your grade illegitimately or to bend or break rules for one person that will not apply to everyone.

Disability Access Statement: The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students with disabilities who need accommodations in this course must contact the professor at the beginning of the semester to discuss needed accommodations. No accommodations will be provided until the student has met with the professor to request accommodations. Students who need accommodations must be registered with Student Disability Services, Student Resource Center Room 132, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations from the professor.