



Pensacola State College District Syllabus

MAC 2311_P2072

Analytic Geometry and Calculus I

Instructor: Greg Bloxom

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Semester Hours: 4 credit hours

Prerequisite(s): Appropriate placement score or completion of MAC 1140 and MAC 1114 or MAC 1147 with a grade of C.

Course 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 of integration and area.

Semester Offered : Fall, Spring, Summer.

Course Designations: Meets AA General Education Core, Mathematics requirement.

General Education Core Course Standard: Per Florida Statute 1007.25, "Mathematics courses must afford students a mastery of foundational mathematical and computation models and methods by applying such models and methods in problem solving."

Textbooks: Thomas' Calculus Early Transcendentals; Hass/Heil/Weir; 9780137615780; 15th; Pearson; 2023

Supplemental Materials: TI-84 Plus Graphing Calculator

Course Learning Outcomes:

1. Determine finite, one-sided, and infinite limits of a function.
2. Determine continuity, discontinuity of a function.
3. Differentiate polynomial, trigonometric, exponential, and logarithmic functions.
4. Differentiate functions implicitly.
5. Apply the concept of derivative to problems involving graphing, optimization, related rates, linear approximations and other applications.
6. Integrate polynomial, exponential, and logarithmic functions.
7. Apply the concept of integration to problems involving areas under the graph of a function.
8. Approximate the value of an integral using numerical integration.

Methods of Evaluation

Grade calculation: Your final grade is based on your (1) 4 quizzes, (2) homework assignments, (3) midterm exam grade and (4) final exam grade.

Points break-down:	homework	20%
	portfolio	20%
	mid-term	30%
	<u>final exam</u>	<u>30%</u>
	Total	100%

General Education Student Learning Outcomes:

Critical Thinking: The student analyzes, evaluates, and, if necessary, challenges the validity of ideas, principles, or data in order to develop informed opinions, probable predictions, or defensible conclusions.

Scientific and Mathematical Literacy: The student properly identifies and applies scientific or mathematical principles and methods.

Information Literacy: The student effectively locates, evaluates, and applies information from a variety of sources.

Academic Dishonesty Statement	Pensacola State College is committed to upholding the highest standards of academic conduct. All forms of academic dishonesty, to include plagiarism and cheating, are prohibited. Penalties for academic dishonesty include but are not limited to one or more of the following: the awarding of no credit on the assignment, a reduction in the course grade, or the assignment of a final course grade of F and removal from the course. See the College Catalog for more details: Academic Integrity
ADA Statement	Students with a disability that falls under the Americans with Disability Act Amendments Act of 2008 or Section 504 of the Rehabilitation Act should contact the Student Resource Center for ADA Services to discuss academic accommodations. Appropriate academic accommodations are determined on an individual basis with careful consideration of the course learning outcomes and the documentation of the disability. For more information, students should visit the Student Resource Center for ADA Services on the Pensacola campus in building 6, room 603; call 850-484-1637; email ADAservices@pensacolastate.edu ; or complete the online intake form in the ADA Services app within the MyPSC apps dashboard.
AI Statement for Writing Emphasis Courses	Because writing emphasis courses focus on the foundational skills of critical thinking, rhetorical awareness, and information literacy, the work presented by students must be original. As such, the use of generative AI for graded assignments is prohibited unless specifically authorized by the instructor. The instructor reserves the right to assign a failing grade to an assignment determined to exhibit markers of generative AI use. In such instances, the student may challenge the failing grade and is responsible for demonstrating the originality of a submitted text. Continued registration in the course will be understood as acceptance of this policy.

Emergency Statement	In the case of severe weather or other emergency, the College administration maintains communication with appropriate state and local agencies and makes a determination regarding the cancellation of classes. Notices of cancellation will be made through the College's PSC Alert system and on the College's website.
Flexibility Statement	It is the intention of the instructor to accomplish the objectives specified in the course syllabus. However, circumstances may arise which prohibit the fulfilling of this endeavor. Therefore, this syllabus is subject to change. When possible, students will be notified of any change in advance of its occurrence.
Nondiscrimination Statement	Pensacola State College does not discriminate against any person on the basis of race, color, ethnicity, religion, sex (as defined by applicable federal and state law), national origin, age, disability, genetic information, pregnancy, or marital status in its educational programs, activities, or employment. For inquiries regarding the College's nondiscrimination policies, contact the Civil Rights Compliance Officer at (850) 484-1759, Pensacola State College, 1000 College Blvd., Pensacola, Florida 32504.
Security Statement	Pensacola State College is committed to encouraging all members of the College community to be proactive in personal safety measures. In case of emergency, students should ensure that they are aware of the building exit closest to each of their classrooms, as well as all alternative building exits in case circumstances require using a different route.
Student Email Statement	Pensacola State College provides an institutional email account to all students enrolled in courses for credit. PirateMail is the official method of communication, and students must use PirateMail when communicating with the College. In cases where companion software is used for a particular class, email may be exchanged between instructor and student using the companion software.