



Pensacola State College District Syllabus
MAC 2311_P1083
Analytic Geometry and Calculus I

Instructor: Jennifer Brahier

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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

COURSE GRADING:

Scale:	90 - 100	A	70-76	C
	87 - 89	B+	66-69	D+
	80 - 86	B	60-68	D
	77-79	C+	below 60	F

Evaluation: Your final numerical grade will be determined as follows:

(65%) - Test Average. There will be three major tests during the course. There will be NO drop grade or make-up tests; however, you may use your final exam grade to replace your lowest test grade if it is to your advantage.

(10%) -Daily Average. This grade will include all homework and projects

(25 %) – Final Exam

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: <https://catalog.pensacolastate.edu/content.php?catoid=2&navoid=47#academic-honesty>

Student Email Accounts: Pensacola State College provides an institutional email account to all students enrolled in courses for credit. This institutional email account is the official method of communication, and students must use this account 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.

Flexibility: 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.

ADA Statement: Students with a disability that qualifies under the American with Disabilities Act Amendments Act of 2008 (ADAAA) must self-identify with the Student Resource Center for ADA Services (SRC/ADA). Disabilities covered by the ADAAA may include learning, psychiatric, physical disabilities, or chronic health disorders. Students can contact SRC/ADA if they are not certain whether a medical condition/disability qualifies. SRC/ADA is located on the Pensacola campus in building 6, room 603,

ADA-services@pensacolastate.edu, 850-484-1637. Students may also complete the online intake form in the ADA Services app within the PSC apps dashboard.

Equity Statement: Pensacola State College does not discriminate against any person on the basis of race, ethnicity, national origin, color, gender/sex, age, religion, marital status, pregnancy, disability, sexual orientation, gender identity, or genetic information in its educational programs, activities, or employment. For inquiries regarding Title IX and the College's nondiscrimination policies, contact the Dean of Students 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.

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.