

Pensacola State College Section Syllabus  
MAC 2311\_P1403 Analytic Geometry and Calculus I

**Instructor:** Jennifer Brahier

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**Credits**

4 cc

**Prerequisites**

Appropriate placement score or completion of MAC 1140 and MAC 1114 or MAC 1147 with a grade of C.

**Course Description**

Introduces the student to elements of plane analytic geometry, differentiation of algebraic and transcendental functions, integration techniques of algebraic and trigonometric functions, and related applications.

**Offered**

FA, SP, SU.

**Distribution**

Meets AA General Education Core, Mathematics requirement.

**Textbooks:**

Thomas' Calculus; Hass/Heil/Bogacki/Weir; 9780137559893; 15th; Pearson; 2023

**Supplemental Materials:**

TI-84 Plus Graphing Calculator

**Special Requirements:**

Student Expectations—Students enrolled in this course can expect the following: 1) clearly identified course objectives; 2) productive class meetings; 3) a positive learning environment; 4) opportunities for appropriate student participation; 5) effective instruction; 6) positive and appropriate interactions; 7) assistance with meeting course objectives during and beyond class hours; 8) evaluation of student performance and appropriate and timely feedback; and 9) clear and well-organized instruction.

## **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.

## **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 policy:**

**Evaluation : Your final numerical grade is determined as follows:**

**(60%) Test Average. There will be three major test grades worth 20% each. There will be no make-up tests, however, you may use your Final Exam score to replace your lowest test grade.**

**(15%) Homework and Quizzes**

**(25%) Final Exam**

### **Student Email Accounts**

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.

### **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 falls under the Americans with Disability Act or Section 504 of the Rehabilitation Act, it is the responsibility of the student to notify Student Resource Center for ADA Services to discuss any special needs or equipment necessary to accomplish the requirements for this course. Upon completion of registration with the Student Resource Center for ADA Services office, specific arrangements can be discussed with the instructor.

### **Equity Statement**

Pensacola State College does not discriminate against any person on the basis of race, color, national origin, sex, disability, age, ethnicity, religion, marital status, pregnancy, sexual orientation, gender identity or genetic information in its programs, activities, and employment. For inquiries regarding the College's nondiscrimination policies, contact the Executive Director of Institutional Equity and Student Conduct, 1000 College Blvd., Building 5, Pensacola, Florida 32504, (850) 484-1759.

### **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.