

Florida Department of Education  
CURRICULUM FRAMEWORK - GRADES 9-12, ADULT

**Course Number:** 1202310  
**Course Title:** Advanced Placement Calculus AB  
**Credit:** 1.0  
**Will meet graduation requirement for Mathematics**

**Basic assumptions regarding mathematics education:** all students will have access to calculators and computers; classroom activities will be student-centered; all courses will have increased emphasis on estimation; and evaluation will include alternative methods of assessment.

- A. Major concepts/content:** The purpose of this course is to study algebraic and transcendental functions and the general theory and techniques of calculus.

The content should include, but not be limited to, the following:

- the content specified by the Advanced Placement Program.

- B. Special note.** None

- C. Intended outcomes.** After successfully completing this course, the student will be able to:

1. Identify and apply properties of algebraic, trigonometric, exponential, and logarithmic functions.
2. Apply the concept of limits to functions.
3. Determine derivatives of algebraic, trigonometric, exponential, and logarithmic functions.
4. Determine derivatives of the inverse of a function.
5. Determine the relation between differentiability and continuity.

6. Demonstrate an understanding of the application of the derivative to problem situations.
7. Identify increasing and decreasing functions, relative and absolute maximum and minimum points, concavity, and points of inflection.
8. Determine antiderivatives of algebraic, trigonometric, exponential, and logarithmic functions.
9. Apply antiderivatives to solve problems.
10. Use the techniques of integration.
11. Determine approximations of definite integrals using rectangles or trapezoids.
12. Apply knowledge of integral calculus to find the area between curves and the volume of a solid of revolution.