# AP Calculus BC 2025-2026

## Course Information

Instructor: Chris Walters
Phone: (425) 385–7132
email: cwalters@everettsd.org
Extra Help Hours: 7-7:30 AM and 2 – 3 PM

Textbook: Calculus for the AP Course
by Sullivan and Miranda ISBN: 978-1-319-24431-6
Class website: http://www.everettsd.org/jhs-cwalters
All instructional materials can be accessed through Canvas

## Course Description

AP Calculus BC is equivalent to both first and second semester college calculus courses. AP Calculus BC applies the content and skills learned in AP Calculus AB to parametrically defined curves, polar curves, and vector-valued functions. The AP course develops additional integration techniques and applications; and introduces the topics of sequences and series. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections among these representations.

This course will be offered for College in the High School credit through Everett Community College for 5 credits as MATH&152: Calculus 2. Additional information will be provided in class and from the link on my website above.

## Learning Outcomes

CHANGE
- Use derivatives to solve real-world problems involving rates of change.
- Use definite integrals to solve problems involving the accumulation of change over an interval.
- Use definite integral to solve problems involving the accumulation of change in area or volume over an interval.
- Use definite integrals to solve problems involving the accumulation of change in length over an interval.

ANALYSIS OF FUNCTIONS
- Draw conclusions about a function's behavior using existence theorems and derivatives.
- Relate the behavior of a function and its derivative.
- Apply derivative rules to simplify differentiation.
- Apply knowledge of geometry, mathematical rules, and the Fundamental Theorem of Calculus to simplify integration.
- Solve differential equations to determine functions and develop models.

LIMITS:
- Use definitions, theorems, and properties to justify claims about limits.
- Use definitions, theorems, and properties to justify claims about continuity.
- Use definitions, theorems, and properties to determine a limit and a derivative.
- Use definitions, theorems, and properties to approximate definite integrals using geometric and numerical methods.
- Use limits to show that the areas of unbounded regions might be finite.
- Apply limits to determine the finite sum of infinitely many terms.
- Use power series to represent associated functions on an appropriate interval.

MATHIEMATICAL PRATICES
- Implementing Mathematical Processes
- Connecting Representations
- Justification
- Communication and Notation

## Course Outline

1. Limits and Continuity
2. Differentiation: Definition and Fundamental Properties
3. Differentiation: Composite, Implicit, Inverse Functions
4. Contextual Applications of Differentiation
5. Analytical Applications of Differentiation
6. Integration and Accumulation of Change
7. Differential Equations
8. Applications of Integration
9. Parametric Equations, Polar Coordinates, and Vector-Valued Functions
10. Infinite Sequences and Series
11. AP Exam Review
12. Post AP Exam Learning Opportunities

## Grades: http://www.everettsd.org/lms

Classwork/Assignment: 10% Unit Tests and Projects: 90%
No changes to grades will be made based on AP Exam results

| Letter Grade | A | A – | B + | B | B – | C + | C | C – | D + | D | F |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Percent | 100-93 | 92-90 | 89-87 | 86-83 | 82-80 | 79-77 | 76-73 | 72-70 | 69-67 | 66-60 | 59-0 |

Our mission is to provide a rigorous curriculum that sets high standards and prepares all students for the future.

# Classroom Policies & Expectations

## Grading Policy

**Mathematical Explanation required for all problems: (may include the following but is not limited to)**

- Algebraic steps or verbal explanations
- Graphs, tables, or pictures that are clearly labeled.
- Calculator entries, when using a calculator.
- Correct standard mathematical notation.
- Decimal answers should be accurate to 3 places.
- Final answers can be equivalent to those provided

You can learn mathematics, but it won't happen by itself. You will have to work at it!

1. I participate in class.
2. Take and review your notes each day.
3. Attempt all problems assigned.
4. If you don't know, do as much as you can.
5. Ask questions when you don't understand.
6. Come in for additional help when you first start to struggle.

**Classwork/Assignments:**

- Expect daily assignments to practice the concepts.
- Assignments are due at the beginning of the next class, where time will be given to review answers.
- Assignments will earn 1 point for each problem
- Students are responsible for self-correcting and asking questions when they don't understand
- Late assignments will be accepted until unit test with a 15% reduction in score.
- Excused absences will have 1 week grace period before the late penalty is applied.

**Assessments (weighted to 100 points):**

- Mix of calculator and non-calculator questions
  - Desmos will be available as a calculator.
- All tests must be completed on the day they start.
- Typical scoring of questions
  - Multiple Choice questions: 2 points each
  - Short answer questions: 5 points each
    - Correct Solution (2 points)
    - Mathematical Explanation (3 points)
- If you are absent the day before a test, you will still be expected to take the test.

**Test Correction Privileges:**

- Students who are absent (unexcused) on the day of the test will lose the privilege of correcting that test.
- Students must complete test corrections within **TWO** weeks.
- Corrections will earn back ½ the points missed up to a max score of 85%.
- Must be completed in the classroom and not during class time unless all required daily work is complete.

**Extra Credit Opportunity:**

- Bonus percentage points will be added to each unit assessment for the unit's assignments.
- Overall assignment score of 97% or higher earns 3% bonus on unit assessment, 87% or higher earns 2% and 77% or higher earns 1%

## Behavior Expectations

- All school-wide and district policies as described in the Student Handbook will be enforced.
- Students are expected to be respectful towards their peers, teacher, and the classroom.
- A 5-minute hall pass will allow **one** student out of the room at a time. A legible log will be kept.
- **No Electronic Devices** (cell phone, headphones, etc.) will be allowed during class, except a calculator and a district issued device or equivalent without permission from the teacher.
- Drinks are allowed if the bottle has a closable lid (spill proof).
- Food is **not** permitted, unless required for medical reasons.

## Materials

- Textbook: available from the library for checkout.
- Notebook (paper or digital) of your choice to keep your notes and classwork organized.
- A graphing calculator, such as the TI-83+ or TI-84 is highly recommended.