

AP Calculus AB

Course Syllabus

Course Overview

This course is a study of the discipline of calculus geared toward successfully completing the College Board AP Calculus Exam AB. Emphasis on student ability to master the material in this course will support the “rule of four” stressed in the College Board exam questions:

- **Numerical analysis** using data rather than equations to determine solutions, most often through the use of technology.
- **Analytic analysis** which requires traditional algebraic manipulation to arrive at solutions.
- **Graphical analysis** that requires students interpret graphical representations of unspecified functions.
- **Verbal or written interpretation** of problems where students must adequately be able to justify answers verbally and interpret word problems using calculus concepts.

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Textbook: Finney, Demana, Waits and Kennedy. *Calculus: Graphical, Numerical, Algebraic*, 3rd edition (Media Update). Boston: Pearson Education, 2010.

Other sources will be used as needed.

Materials: Notebooks, paper, graph paper, pencils. Graphing calculators required (TI-83 Plus or higher per College Board specifications). AP Test prep book optional.

Course Grading

Semester 1: Semester Grade = 45% Q1 + 45% Q2 + 10% Exam

Q1/Q2 Grades = 10% Homework + 20% Quizzes + 30% Exercises + 40% Tests

All students must take the Semester 1 Exam

Semester 2: Semester Grade = 50% Q1 + 50% Q2

Q3 Grade = 10% Homework + 20% Quizzes + 30% Exercises + 40% Tests

Q4 Grade = 100% Exercises

All students must take the AP Calculus AB Exam, but the result will not figure into the course grade! (See the CCHS Student Handbook for details.)

There will be no Semester 2 Exam for this class.

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Test Dates (subject to change):

<u>Test</u>	<u>Test Dates</u>	<u>Test</u>	<u>Test Dates</u>
1	Fri, Aug 26	7	Wed, Jan 18
2	Fri, Sep 16	8	Wed, Feb 1
3	Mon, Oct 17	9	Wed, Feb 29
4	Fri, Oct 28	10	TBA
5	Fri, Nov 18		
6	Tue, Dec 6	AP Exam	Wed, May 9

This class is intended to prepare students for the AP test but cannot fully prepare them without outside study. As with any college entrance exam, only the test makers know fully what to expect! Therefore, students must extend themselves beyond class work if they expect to do well on the test. This may include using a test-prep book from another publisher (like Barron's or Kaplan). Similar material will be used in class at times.

If this class is worthy of college credit (as the AP tests may provide), then students should expect to put in "college-level" effort. This means completing class assignments but also reviewing and practicing apart from class assignments. Sources indicate that successful students might put in 1-2 outside hours per class-hour or more for college-level classes. One source suggested 8-12 hours per course per week outside of class. Hopefully, students can be productive with their class time, but they should plan to do more than just rush through homework and spend a couple of hours studying before a test.

The class will include the usual class presentations, homework problems, periodic quizzes and tests. In addition, a good amount of learning should come from the other activities (to be broadly designated as "exercises"). These include many types of work: calculus labs, group activities, worksheets, and so on. The most significant will be the AP Test Prep work especially in Q4. This work involves working questions from previous AP Tests and similar outlets which will be graded similarly to the way the AP Test will be graded. In some cases, students can (and should!) collaborate on this work, and in others, they will work alone. As the exam approaches, graded class work will include simulated AP exams.

Details regarding the test itself including format, strategies, test registration and so on will be presented in class. However, while CCHS can help get information about if and how this test might be used for college credit, that will depend on the specific college and program entered. In some cases, AP credit may not be accepted for college credit as some want students to take their calculus class regardless of AP performance!