

Fairview High School
Mr. Morrison
Calculus AB/BC

Welcome to AP Calculus AB or BC. In this class, we will be covering all topics necessary to score well on the AP Test in the spring.

There are a few things you should have with you to perform your best in this class:

- 3 ring binder
- Loose leaf paper
- Pencil
- Graphing calculator (TI-84 is ideal, especially one with a newer OS)

Course descriptions are below:

AP Calculus A/B

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|---------------|-------|------------------|----------------|
| Course Number | 211 | Credit | 1.0 |
| | | Length of Course | Year |
| Grade | 11-12 | Prerequisite | Recommendation |

Description: Students who performed at a C level or higher in pre-calculus are eligible for AP Calculus. This course is a rigorous study of calculus using the AB syllabus. Students must complete a summer packet before school starts and are expected to spend 1-2 hours on daily homework. Graphing calculators are required. The grade in this course is weighted one (1) full quality point in the G.P.A. Students are required to take the AP Exam in May. The cost of the AP Exam is included in the course fees.

AP Calculus B/C

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|---------------|-------|------------------|----------------|
| Course Number | | Credit | 1 |
| | | Length of Course | Year |
| Grade | 11-12 | Prerequisite | Recommendation |

This year-long course is open to students who have successfully completed AP Calculus A/B. Participants will explore the concepts, methods, and applications of differential and integral calculus, including topics such as parametric, polar, and vector functions, and series. They will perform experiments and investigations and solve problems by applying your knowledge and skills. The course culminates with the AP Exam. More information can be found here: <https://apstudents.collegeboard.org/courses/ap-calculus-bc>

Calculator: Knowledge of a graphing calculator is a crucial piece of the course and the AP Calculus Test. Half of this test allows you to use the calculator and the other half does not; the calculator sections contain problems that may not be answerable without one (at least in the time constraints of the exam). I will be using a TI-84 with an updated operating system so that is what I recommend to help you follow along in class. I am not familiar with other graphing calculators' operating systems so please know that it will be on you to learn how to use it if you select another brand.

Text/Google: You will be given access to an online textbook for the course and I will help everyone get logged in during class in the opening days. You will also be automatically enrolled in Google Classroom for our course; you should look there for updates and assignments.

Homework: Homework will be assigned regularly and will be due the next day. Homework will generally be worth 5 points. The math department will be following a zero-tolerance policy for assignments that are not turned in when due. If an absence is excused, the student will have two days to complete the assignment and turn it in per the student handbook. If the absence is unexcused or the homework is not turned in for any other reason, a 0 will be recorded in the grade book.

Quizzes/Tests: Quizzes will typically be worth about 25 – 30 points and tests will be worth around 60 – 70. All quizzes and tests must be made up, preferably as soon as possible after the absence. The longer you wait, the less you will remember when you take it. So don't put it off!

Phones: Phones should not be used in class and will not be allowed on quizzes or tests. We will follow the school policy on phones that is currently being developed by administration.

Academic Dishonesty/Cheating: Academic dishonesty in any form will not be tolerated. The protocol for any occurrence will be that which is listed in the student handbook:

DEFINITION OF CHEATING AND PLAGIARISM

Cheating involves any of the following observed actions:

1. Using another person's work as your own.
2. Copying information (or allowing someone to copy your information) from another's test, examination, theme, book report or term paper.
3. Preparing to cheat in advance of a quiz, exam or in-class writing with such things as:
 - a) Having in your possession a copy of the test to be given by the teacher.
 - b) Using unauthorized notes, references or devices during the test, examination or written essay.
 - c) Talking while taking quizzes, tests or examinations.
 - d) Failing to follow test procedures or instructions announced by a teacher (such as no talking, no turning around in seat, raise hand to ask questions, or **any** instructions given by the teacher.)
4. Plagiarizing means, to use purposely as your own, **any** other person's idea, expression or words without giving the original author credit through citation or footnote. This includes encyclopedias. (For elaboration, see the Fairview High School Style Manual.)

CONSEQUENCES OF CHEATING OR PLAGIARISM

1. The first offense will result in failure of the quiz, test or homework. A score of zero will be recorded and parents will be notified by the teacher.
2. The second offense within a quarter may result in failure of the quarter.
3. If cheating continues in class, failure of the course will result.
4. Plagiarism on a major project, e.g. term paper, short story or portfolio, will result in the failure of the course. The student may appeal to the department chair, or designee, of the respective department. This decision is final.
5. Cheating will be reported to the Associate Principal and appropriate action will be taken.

Topics: First semester topics will include:

- Short review of Pre-Calculus topics (from summer packet)
- Limits
- Derivatives (its definition and properties)
- Implicit Differentiation
- Relationship between a function and its derivative
- Applications of the derivative

Second semester topics will include:

- The Antiderivative / Integrals
- Riemann Sums and other methods of area approximation
- The Fundamental Theorem of Calculus
- Using integration to find areas and volumes
- Slope Fields
- Differential Equations

BC Only:

- Sequence and Series
- Parametric and Polar Coordinates and their calculus

Grades: We will be using the same grading scale as most teachers here at Fairview High School:

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|--------|----|
| 93-100 | A |
| 90-92 | A- |
| 87-89 | B+ |
| 83-86 | B |
| 80-82 | B- |
| 77-79 | C+ |
| 73-76 | C |
| 70-72 | C- |
| 67-69 | D+ |
| 63-66 | D |
| 60-62 | D- |

Please also note that the final grade will be the average of the four quarters.

Tutoring/Help: 8th period is the best time to come in for help if you feel yourself starting to fall behind. That period is like last year's 1st period in that it is often set aside for office hours. If you are not available during that time, I may be able to work around your schedule so please see me as soon as you can.