

AP Calculus AB Course Syllabus (2021-2022)

Ms. Allen

Phone: 713-867-5100 (front office)

Email: shelby.allen@houstonisd.org

Conference Periods: A-Day - 3rd (12:30 to 2:00 pm) B-Day - 8th period (2:10 to 3:40 pm)

Course Objectives/Objectives

The AP Calculus AB course is to teach the first semester of a college Calculus course and to extend your problem solving abilities through the application of Calculus to real-life problems. In this course we will cover the two major branches of Calculus: Derivatives (rates of change) and Integrals (accumulation problems and area/volume), and how they relate to each other.

In this course we will cover eight units:

1. Limits and Continuity
2. Differentiation: Definition and Fundamental Principles
3. Differentiation: Composite, Implicit, and 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

A more detailed description of each unit can be found [here](#).

Resources for each unit can be found [here](#).

Class Resources:

- [AP Calculus AB Google Drive](#)
- [Class Calendar](#)
- More Practice: Khan Academy – [Getting ready for AP Calculus](#) and [AP Calculus](#)

Supplies needed EVERYDAY

- Sharpened pencils
- Notebook paper
- Binder (at least 1 inch)
- 3 dividers (optional)

Classroom Routine

AP Calculus AB is designed to develop students' understanding of concepts, methods, and applications through emphasizing multiple approaches to representing solutions to problems in four ways: graphically (geometrically), numerically, analytically (algebraically), and through written or verbal communication. Students will be instructed in a variety of methods, including, but not limited to:

In Class Instruction

- Class discussion
- Group work
- Individual work
- Explorations

Out of Class Instruction

- Instructional videos (as necessary)
- Online practice

Assessments

The course is organized into units, as suggested by the College Board. Students can expect several quizzes within each unit, and a test at the completion of each unit. Longer units may be further broken down into two smaller units with an appropriate test at the end of each unit. We will also have two semester exams, which will be cumulative. The second semester exam will be given as an AP Calculus AB exam and will take place around Spring Break.

A variety of review activities will be implemented before each test and exam, which will include personal progress checks. Student created notes, the textbook, and graphing calculators may be used on assessments during Distance Learning. Students may be asked to enable video while testing during synchronous class time. Some assessments may be given during asynchronous class time. (If an assessment is given during asynchronous class time, no additional work will be assigned that day.) If a student misses an assessment, it is their responsibility to schedule a time to make up the exam.

Student Expectations

As a student, you will be responsible for paying attention and participating in class discussion and in small groups. Students will be responsible for completing each assignment thoroughly, neatly and in a timely manner. If a student misses any homework or class work assignments, the student will receive a zero for a grade until the assignment has been completed and turned in. Tests and quizzes should be prepared for in advance. Students are responsible for arriving to class on time, ready to learn and prepared for the day's work. The student is expected to comply with the rules of the teacher as well as those stated in the student handbook. Remember to always do your best!

Class Expectations- All students must

1. Be respectful of all teachers, students, and oneself at all times.
2. Be on time to class. Do not stand at the door between classes.
3. Be prepared. Bring all necessary materials to class (pencils, binder with paper, completed homework)
4. Be an active learner. Participate in class activities including classroom discussions, note taking, and cooperative learning.
5. Arrange for make-up work from absences on the day of your return.
6. Take Care of personal issues before class. Use the restroom in-between periods.
7. No iPods, electronic devices, or cell phones. (They will be taken up and sent to the AP's office.)

Promptness

Students are expected to be in their seats at the bell ready to work each day. Tardy students must have a pass and will be expected to follow HSLJ tardy policy as outlined in the student handbook. Tardy students will also not be permitted to make up the daily warm-up points, regardless of whether their tardy was excused

Attendance

If you are absent, it is your responsibility to find out what you have missed by checking with me. If possible, contact me as soon as you know you will be missing class and we can keep you up to date with assignments. We can also set times for any make-up tests or quizzes which are typically given on the day of your return. You can do so by way of email at shelby.allen@houstonisd.org . On the day of your return, please see me before school or before class to get caught up (even if that period does not meet that day). Remember that missing just one block day can put you far behind.

Citizenship/Classroom Philosophy/Expectations

Every student deserves the right to an education free of interference and therefore any actions or behavior causing disruption to that education will not be tolerated. Our class time is very valuable and will not be wasted on behavioral problems. With this in mind, every student while in our classroom must adhere to the general expectations and specific policies below. All will... -

- Be Prepared
- Be Responsible
- Be a Leader and a Team Player
- Show Respect
- Communicate Clearly
- Stay Organized
- Produce Quality Work

Class Discipline Procedure

If a student fails to follow any school or class rules, or has difficulty following class expectations or procedures within the class period, the following disciplinary procedure will be followed:

- Step 1: Verbal Reminder with Written Documentation & Conference with Student
- Step 2: Written Documentation & Conference with student & Parent Notification (via written notice, phone call, voice message, or conference)
- Step 3: Referral to Office

Grading Procedures for ALL graded work

Refer to the Student Handbook

1. Attendance is part of every class work grade (assignments, quizzes, tests, etc). If a student is tardy, their grade for the day's assignment(s) will be affected.
2. Work must be turned in on the due date in order to be eligible to receive full credit

Your grade will be based on the following:

Summative Test/Quizzes_____	35%
Summative Projects_____	25%
Formative learning and practice_____	25%
Home Work_____	15%

Re-Testing Policy

Re-Testing is available for any test. In order to retest, you **MUST**

1. Attend necessary tutorials
2. Complete all relevant homework

The re-test will cover the same objectives, but will not be the original test given.

All retests must be completed within one week from the time the assessment is returned to the student.

Late Work Policy

- 10% deductions each class day for 5 class meetings (or two weeks). Teachers maintain the discretion to extend the submission period.
- Students are encouraged to submit all late work prior to the end of each progress report, and the end of each cycle. Teachers are not advised to accept any late work after the Friday before grades are due.

I am looking forward to a successful and enjoyable year. This will rely on each person doing their part to contribute to a positive learning environment and experience. I expect all of my Algebra students to always conduct themselves in a manner that best represents their positive qualities and contributes to a successful, safe, positive, and enjoyable learning environment. Prepare to work hard as you expand your knowledge further in mathematics.

Timeline is subject to change pending benchmark assessments, half-days, and student prior knowledge retention, etc.