



AP CALCULUS AB

INSTRUCTOR: Ms. BECHARD

CONTACT INFORMATION

Instructor: Ms. Mandi Bechard

Room: C108

The best way to contact me is through district email:

mandi_bechard@chino.k12.ca.us.

Students, please use your district assigned email when contacting me. Be sure to include the reason for contacting me and your full name in the email subject line, for example: Exam II Makeup (Student Full Name). I am committed to responding to all student and parent emails within 24 hours on weekdays.

COURSE MATERIALS

Calculus for the AP Course by Sullivan & Miranda

Materials: Thinkpad, 2 inch 3 ringed binder, pencils, pens, 3 hole puncher, calculator, paper

Students will be utilizing both Google Classroom and Delta Math for a majority of the assignments.

COURSE DESCRIPTION & OVERVIEW

AP Calculus AB is designed to be the equivalent of a first semester college calculus course devoted to topics in differential and integral calculus. AP Calculus AB focuses on students' understanding of calculus concepts and provides experience with methods and applications. Through the use of big ideas of calculus (e.g., modeling change, approximation and limits, and analysis of functions), each course becomes a cohesive whole, rather than a collection of unrelated topics. The course features a multi-representational approach to calculus, with concepts, results, and problems expressed graphically, numerically, analytically, and verbally. Exploring connections among these representations builds understanding of how calculus applies limits to develop important ideas, definitions, formulas, and theorems.

The course content is organized into eight commonly taught units, which have been arranged in the following suggested, logical sequence:

- Unit 1: Limits and Continuity
- Unit 2: Differentiation: Definition and Fundamental Properties
- Unit 3: Differentiation: Composite, Implicit, and Inverse Functions
- Unit 4: Contextual Applications of Differentiation
- Unit 5: Analytical Applications of Differentiation
- Unit 6: Integration and Accumulation of Change
- Unit 7: Differential Equations
- Unit 8: Applications of Integration

Each unit is broken down into teachable segments called topics. In addition, the following big ideas serve as the foundation of the course, enabling students to create meaningful connections among concepts and develop deeper conceptual understanding:

- Change: Using derivatives to describe rates of change of one variable with respect to another or using definite integrals to describe the net change in one variable over an interval of another allows students to understand change in a variety of contexts.
- Limits: Beginning with a discrete model and then considering the consequences of a limiting case allows us to model real-world behavior and to discover and understand important ideas, definitions, formulas, and theorems in calculus.
- Analysis of Functions: Calculus allows us to analyze the behaviors of functions by relating limits to differentiation, integration, and infinite series and relating each of these concepts to the others.

Students should develop the following mathematical practices while exploring course concepts:

- Implementing Mathematical Processes: Determine expressions and values using mathematical procedures and rules.
- Connecting Representations: Translate mathematical information from a single representation or across multiple representations.
- Justification: Justify reasoning and solutions.
- Communication and Notation: Use correct notation, language, and mathematical conventions to communicate results or solutions.

COURSE POLICIES

Classroom Behavior & Expectations

Classroom expectations are aligned with the Chino High School Wide Expectations.

- **Be Respectful:** Disrespect of any kind will not be tolerated. Students will respect themselves, and show respect to the instructor, their classmates, and the classroom. Behave with maturity and respect by actively listening when someone else, whether the instructor or a peer, is speaking. Respect our classroom by refraining from eating and drinking in the classroom, disposing of trash in the proper receptacles, cleaning up after laboratories, and treating books and classroom supplies with care. Immaturity during labs and field work is a safety concern and will not be tolerated and may result in a significant loss of points, an automatic "Unsatisfactory" in citizenship, and/or additional consequences. Offensive, crude, or obscene language will not be tolerated. The school dress code, including the wearing of hats, sweatshirt hoods, and sunglasses in class, as outlined in the student handbook will be enforced at all times.
- **Be Responsible:** Enrollment in an AP level course means students are responsible for their own success. Come to class prepared and ready to learn. There is no excuse for lack of materials, lack of preparedness, or ignorance of information addressed in class and/or posted on the Google Classroom. Students are expected to be in their seats by the time the late bell rings and will be marked tardy if they are not. Students are expected to use the restroom, if necessary, during passing periods before or after class.
- **Be Present and Engaged:** The course functions best when everyone is present, both physically and mentally, and actively participates. The use of electronic devices (e.g., cell phones, smart watches, Chromebooks, earbuds/headphones) outside of teacher direction poses a huge distraction to student learning and is thus strictly prohibited. Cell phones must be off/silent and away unless you are given explicit instruction to use your phone for some course purpose. Cell phones must be kept off and in plain view for the entirety of the period on exam days. Failure to do so will result in a score of zero on the exam.

Academic Integrity

Each student in this course is expected to abide by Chino Valley Unified School District and Chino High School policies on academic integrity. It is expected that students will not cheat, lie, plagiarize, or commit other acts of academic dishonesty. You are encouraged to work with your peers to study course content. As such, some assignments will have evidence of collaboration. I expect that much of the group work that you complete will be similar across members of the same group. Outside of this, all other assignments in this class, including assessments and homework, are expected to be done individually and to be original work. Students agree that by taking this course, all required papers may be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site. Any violation of this policy is unacceptable and will not be tolerated. Students found to have committed an act of academic dishonesty shall be subject to Chino Valley Unified School District and Chino High School discipline policies. Consequences may include, but are not limited to, the following: a zero grade on the assignment, project, assessment, or any other activity where the academic dishonesty occurred, parent notification, and disciplinary action (e.g., administrative detention, Friday Work/Study, ALC, suspension.)

Late/Make-up Work

All assignments are due at the beginning of the student's respective class period. Any assignment not turned in at the beginning of the period is considered late. Assignments turned in **one day late** may be eligible to receive a maximum of half credit. Assignments turned in after this will not receive credit. In the event of an absence, students are responsible for communicating with and obtaining missed assignments from the instructor immediately upon their return. If a student has an impending or planned absence or if their absence is over an extended period, inform the instructor and submit a request with the attendance office for assignments to be sent home. Students who miss school work because of an unexcused or excused absence shall be given the opportunity to complete all assignments and assessments missed during the absence that can be reasonably provided. As determined by the teacher, the assignments and tests shall be reasonably equivalent to, but not necessarily identical to, the assignments and tests missed during the absence. Students shall receive full credit for work satisfactorily completed within a reasonable period of time, as determined by the teacher. If a student misses class and does not subsequently turn in an assignment, take an assessment, or fulfill another class requirement which he/she missed, the student's grade will be lowered for nonperformance. For makeup tests, students will be required to do test corrections to allow themselves the opportunity to retake the test for up to full credit. Students will have to retake the test within a 1 unit time period. Overall, please communicate with the teacher.

EVALUATION OF STUDENT ACHIEVEMENT

Students' grades will be composed of three categories. The three categories are as follows:

Grading Components:

Assessments (Tests, Daily Quizzes, and Semester Final)	70%
Assignments (Classwork and Homework)	30%

Letter grades follow the Chino Valley Unified School District adopted scale: 90-100% = A, 80-89.9% = B, 70-79.9% = C, 70-79, D, 69-60. Failing grades are based on student performance scoring less than 60%.

Grades will be updated weekly and can be accessed online via the student and/or parent Aeries Portal

ACKNOWLEDGMENT OF COURSE POLICIES

Signing of this page serves as an acknowledgment that both student and parent/guardian have read and understand the course expectations as outlined above. In addition, the signature of this page indicates familiarization with the Biomedical Science and Technology Academy policies found in the school handbook.

Student Name (Print) & Date

Student Signature

Parent/Guardian Name (Print) & Date

Parent/Guardian Signature