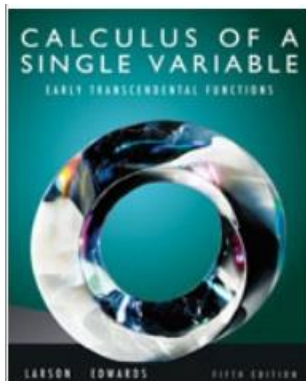


AP Calculus AB

Course Syllabus



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<http://education.fcps.org/uhs/alisonblickenstaff>

*Please note that the last 3 letter of my last name are cut off in my e-mail address.

AP Calculus AB is the equivalent to one semester of college-level general calculus I. This is a two-semester class; students must take *both* semesters in sequence to prepare for the AP exam. All students enrolled in AP Calculus are expected to commit to take the AP Calculus AB exam on May 9, 2017.

Materials Required

- 3 inch, 3 ring binder with looseleaf paper and dividers, graph paper, pens, and pencils with erasers.
- Covered school issued textbook.
- TI 83/84 graphing calculator with replacement batteries.

Expectations/Rules

- Class begins promptly when the bell rings. Be seated and ready to work for the full 90 minutes of class.
- 1st block: Students arriving to class after 7:30 must go to the Attendance Office for a pass.
- 2nd block: Students are expected to work while listening to the morning announcements.
- Be respectful to schedule, instructions and school rules.
- Cell phones/electronics will be kept on silent and kept out of sight unless instructed to use them in class.
- No food or drinks will be permitted in the classroom (water in bottles is okay).
- This college-level course has college-level expectations and procedures.

Academic Integrity – Calculus

- Cheating, copying, and plagiarism will not be tolerated under any circumstances.
- **COPYING is CHEATING.** Copied work will result in a “zero” grade for all parties involved. It is never okay to copy a friend’s long term assignment, homework, or any other assignment. The distinction between “collaboration” and “copying” will be explained in class. Cheating includes using someone’s work as a model to your own during a test or quiz, by looking at their paper, or by copying work/answers on any other assignment.
- Talking during a test or quiz will result in a “zero” grade for all parties involved, regardless of the topic of conversation.
- While cell phone use may be permitted for use at times in class, using a cell phone/electronic device for any purpose during a quiz or test will result in a “zero” grade for that assignment. No exceptions!
- Sharing calculators during a test or quiz is considered cheating. Students are to use their own calculators. *If your calculator’s batteries die during an exam, you will NOT be given a replacement and must finish the test without a calculator.* This is an AP exam rule.
- Each time a student writes their name on an assignment/quiz/test to be turned in, he/she is taking the following honor pledge: *I have neither given nor received unauthorized aid on this assignment or assessment. My name on this piece of work affirms my character and honor.* Please review the rest of the UHS Honor Code available on my website.

Text: Calculus of a Single Variable, Early Transcendental Functions, 5th edition, Larson.
 Students will be expected to have their textbook in class only when given advanced notice.

Technology

Our class will be using *Google Classroom*, where class notes, assignments, and documents will be organized. Some assignments can only be turned in via this site. All students are required to join our *Classroom* and access it daily. Most handouts and paper assignments will be available only on *Classroom* unless prior arrangements have been made with Ms. Blickenstaff for a hard copies. I will be using *Remind* (formerly Remind 101), where students will receive text message announcements and reminders of homework assignments and of important dates.

Absences

AP Calculus is a fast paced, rigorous course with heavy emphasis on problem solving. Regular attendance and punctuality are critical in this class. In an event of an excused absence, go to *Google Classroom* and pay attention to *Remind* texts. Daily class notes, important dates, and a list of assignments will be there for your use. Please use this to your advantage! You can also ask a classmate for any notes that were taken, verify with them any items on the calendar / agenda which need completed or for any changes in due dates. Bring all questions to an after school tutoring session. Be sure you find an appropriate time, before the end of class, to discuss and agree upon due dates for your make up work.

Late Work Policy

Assignments must be placed in the inbox **before the late bell** on the day the assignment is due to be considered “on-time.” Assignments are “late” if:

- the students forget to bring the assignment to class.
- the student leaves the assignment in a locker, car, another class, etc.
- the student is not paying attention and misses assignment collection.
- the student arrives tardy to class and misses assignment collection. Traffic jams in the hallway are not excuses for tardiness to class.
- the student tries to “catch up” with incomplete assignments during instructions and submits it later that period.

Late Work Pass policy will be discussed separately. *Note: In the event of an excused tardiness (office meeting, doctor’s appointment, etc.), it is the student’s responsibility to submit the assignment immediately upon arrival to class. The assignment is then considered “on-time.”*

Tutoring

Help is available after school, on Tuesday and Thursdays from 2:15-3:00, except those days when faculty meetings or other similar obligations prevent me from being here; which will be posted in advance. Tutoring is available to students who participate during regular class time and who have completed their assignments. Students are expected to ask questions during class and to participate in class discussion to achieve individual success in mathematics. Math Lab will be available on Mondays (Blickenstaff – Room B-117) and Wednesdays (Miller – Room C-119) from 2:30-3:30. Students are encouraged to utilize in addition to regular after school tutoring.

Grades (calculated using weighed averages)

The semester grade:

Term 1	50%
Term 2	50%

AP exam in May

Each Term Calculations:

Tests	50%
Quizzes	30%
LTA/Problem Sets	10%
Homework, etc.	10%

Term Letter assignments:

A	90 – 100
B	80 – 89
C	70 – 79
D	60 – 69
F	0 – 59

Note: This is a college-level class. Extra credit will not be offered. It is the student’s responsibility to complete work at the time it was assigned. Students and Parents can access grades at any time by utilizing the Internet-based HAC grading system, hac.fcps.org. Students are expected to keep up-to-date as to the status of grades earned. It is the student’s responsibility to keep all graded assignments. Discrepancies between assigned grades and scores entered into HAC should be addressed immediately with Ms. Blickenstaff.

AP Calculus Academic Honor Code

Since AP Calculus AB is a college-level course, students enrolled in the course will be expected to live up to college-level standards of academic integrity. Students are responsible not only for adhering to these standards but also for ensuring that their classmates do the same. Activities that interfere with the fair evaluation of a student's performance are strictly prohibited. The specific guidelines students are expected to follow are listed below:

In-class exams

- Students may not use any notes, homework, cheat sheets, or other unauthorized materials to assist them during examinations.
- Students may not give aid to or receive aid from classmates during examinations.
- Students may only use calculators on portions of examinations labeled "Calculator Active."
- Students may not discuss the content of an in-class exam until all students have taken the exam. Particularly, students who have taken an exam may not discuss its content with students who will be taking an exam on the same content at a later time with either the same or a different instructor.

Take-home exams

- Students may not use textbooks, notes, homework, computers, cheat sheets or any other unauthorized materials to assist them in completing take-home exams. These exams are to be completed "closed notes" unless otherwise instructed.
- Students may NOT use calculators to complete these exams unless otherwise instructed.
- Students may not give aid to or receive aid from any other person (including classmates, friends, family members, etc.)

Homework

- Students are encouraged to assist one another as needed while working on homework problems.
- Students may NOT copy another person's work or allow another student to copy his/her work.

Late Work Passes

AP Calculus is a rigorous, fast-paced course with heavy emphasis on problem solving. Timely completion of assignments is critical for success in this class. In the event of an emergency which prevents a student from completing an assignment, the following policies will apply:

1. Students receive two "Late Work Passes" per term. These passes can be used to submit late work without penalty.
2. The passes are distributed during the first week of each term.
3. Students must sign their names in each pass in INK.
4. Once signed, passes cannot be transferred or shared between students.
5. A Late Work Pass may not be used for being tardy to class, extended time on any assignment, Test, or quiz.
6. Late Work Pass must be stapled to and submitted with the late assignment when the work is ready to be graded.
7. An assignment with a stapled pass will be accepted without question and graded for full credit before or on the expiration time and date of the assignment. Once an assignment is passed back to the entire class, that assignment is expired, and a late pass will not be accepted.
8. Assignments left in the locker, forgotten at home, unfinished when class begins, and etc. are considered late and will require a late pass.
9. Once the two late passes are used, all missing and late assignments are assigned a score of ZERO.
10. Late work Passes will not be replaced if lost.
11. Late Work Passes expire on the date and time printed on the pass. NO EXCEPTIONS.
12. Late Work passes cannot be redeemed for extra credit or saved for the next term.

Long Term Assignment Policy

Throughout the semester, students will receive weekly Long Term Assignments (LTAs) and Problem Sets. These assignments are used to review and reinforce concepts learned in AP Calculus, Precalculus, and SAT math.

1. LTAs are normally assigned at the end of the week and due at the end of the week two weeks later. In the event that there is no school on the assigned due date because of holidays, inclement weather, etc., the LTA will be due the first day of the week that school is in session. Due dates will be posted in advance.
2. LTAs are due on Google Classroom at the posted time on its due date. Answers to LTAs will be entered online. Submissions past the due date and time will count for no credit unless a Late Pass is used. Work will be turned in that same day. The work should be placed in the inbox bin before the bell to begin class rings. Do not be late!
3. Problem Sets will be turned in to the inbox bin before the late bell on the day it is due.
4. Students may collaborate on LTAs, but copying will not be tolerated.
5. While LTAs are selected response questions, work should be done and shown in full on a separate sheet of paper.
6. Only the selected response answers will be graded and they will be entered online. If work is not turned in, a score of "zero" will be assigned. Partial credit will not be given for work shown on the separate sheet of paper.
7. Students should NOT wait until the night before to begin their LTAs. Students are highly encouraged to begin work on their LTAs as soon as they are assigned.
8. Questions will not be taken the morning an LTA is due. Students should plan ahead and have their questions answered during one of the after school sessions.
9. Field trips, sporting events, planned holidays, religious observances, club meetings, etc., are NOT excuses for turning in an LTA late. Students should plan ahead and turn their LTA in early.
10. If a student loses his or her LTA, he or she may download the LTA form from the class website. I will not hand out replacement LTAs.

AP Calculus AB

Content:

Chapter 1: Preparation for Calculus

- 1.1 Graphs & models
- 1.2 Linear Models & rates of change
- 1.3 Functions & their Graphs
- 1.4 Fitting models to data
- 1.5 Inverse functions
- 1.6 Exponential & Logarithmic Functions

Chapter 2: Limits and their Properties

- 2.1 Preview of Calc
- 2.2 Finding Limits numerically & graphically
- 2.3 Evaluating Limits Analytically
- 2.4 Continuity and One-sided Limits
- 2.5 Infinite Limits
- (4.5 Limits at Infinity)

Chapter 3: Differentiation

- 3.1 The Derivative & Tangent Line Problem
- 3.2 Basic Differentiation & Rates of Change
- 3.3 The Product & Quotient Rules and Higher-Order Derivatives
- 3.4 The Chain Rule
- 3.5 Implicit Differentiation
- 3.6 Derivative of Inverse functions
- (4.8 Linear Approximations)
- 3.7 Related Rates

Chapter 4: Applications of Differentiation

- 4.1 Extrema on an Interval
- 4.2 Rolle's Theorem & The Mean Value Theorem
- 4.3 Inc. & Dec. Functions & 1st Derivative Test
- 4.4 Concavity & The 2nd Derivative Test
- 4.7 Optimization Problems

Chapter 5: Integration

- 5.1 Antiderivatives & Indefinite Integration
- 5.2 Area
- 5.3 Riemann Sums & Definite Integrals
- 5.4 The Fundamental Theorem of Calculus
- 5.5 Integration by Substitution
- 5.6 Numerical Integration
- 5.7 Natural Logarithmic Function & Integration
- 5.8 Inverse Trigonometric Functions

Chapter 6: Differential Equations

- 6.1 Slope Field & Euler's Method
- 6.2 Differential Equations: Growth & Decay
- 6.3 Differential Equations: Separation of Variables
- 6.4 The Logistic Equation

Chapter 7: Applications of Integration

- 7.1 Area of a Region Between Two Curves
- 7.2 Volume: The Disk Method

Students & Parents – Signing up for Google Classroom & Remind

Google Classroom:

- Go to <https://classroom.google.com/>.
- Sign in, or create a new account (only if you don't already have one).
- Enter class code: **sqp2sl**

Remind:

To receive messages via text, text **@apcalcbab** to **81010**. You can opt-out of messages at anytime by replying, 'unsubscribe @apcalcbab'.

Trouble using 81010? Try texting **@apcalcbab** to **(240) 650-8550** instead.

Or to receive messages via email, send an email to **apcalcbab@mail.remind.com**. To unsubscribe, reply with 'unsubscribe' in the subject line.



AP Calculus AB Notebook Requirements

On your syllabus, part of the required materials for AP Calculus AB is a 3-ring binder with dividers. The sooner you begin organizing your notes, assignments, past quizzes, handouts, etc., the easier it will be to find things when preparing for the AP Exam in May. Here is how you need to organize your binder:

11 binder labels:

1. Course Information
2. Formulas/Handouts
3. LTAs/Problem Sets
4. Prerequisites (Ch. 1)
5. Limits (Ch. 2)
6. Derivatives (Ch. 3)
7. Applications of Derivatives (Ch. 4)
8. Integration (Ch. 5)
9. Applications of Integration (Ch. 7)
10. Transcendental Functions (Ch. 6)
11. AP Review

We will have binder checks various times throughout the year for a grade. So start getting organized!!

Student Printed Name: _____

block: _____

Textbook # _____

Calculus AB Signature Page

After reading the class requirements statements for each category that were either given in class or viewed from the documents posted on the teacher webpage, check off the boxes for each policy to indicate your agreement to each policy. Once each policy has been read, sign and date the end of the document, and then return it to Ms. Blickenstaff by Friday, August 26th.

Class Syllabus & Late Work Policy

I have read and understand the syllabus, grading policy and Late Work Policy for the Calculus class for which I am enrolled. Note: each student will receive 2 Late Work Passes for each term (1, 2, and 3). They are only valid for the term they are issued.

Honor Pledge

I have read and understand the guidelines listed on the provided class copy. I pledge to abide by these guidelines and ensure, to the best of my ability, that my classmates do the same. I understand that I may face serious consequences, including receiving a failing grade, if I violate this Honor Code. My honor pledge is verified each time I write my name on a piece of paper for class.

Long Term Assignment & Homework Policy

I have read and understand the Long Term Assignment & Homework policies for the Calculus class for which I am enrolled. Homework will be graded on completion and will be checked sometimes unannounced. I understand that Homework and independent work is a necessity for success in this class.

Technology Policy

I understand that our class will frequently utilize Google Classroom as our class website, which will have all of the daily notes and homework assignments uploaded, as well as Remind to receive text message reminders. Other assignments, LTA's, Problem Sets, and some answer keys will be posted for use at home. I am expected to join our Google Classroom and use it when absent or otherwise instructed to use it. I understand that I am to access assignments online unless arrangements are made with Ms. Blickenstaff to receive hard copies. I also understand that unless otherwise instructed, all electronics should be silenced and out of sight during class.

Textbook Contract

I agree to:

- Maintain the condition of the book by keeping it covered at all times.
 - Return the book at the end of the year in the same condition it was issued
 - Pay expenses for damages or loss to the textbook.
-

I understand that by signing this document at this time, I am well aware of the policies for the Calculus class for which I am enrolled. My signature binds me to the UHS Honor Code.

Student signature: _____ Date: _____

----- Parent Section -----

Please sign below stating that you have read the guidelines and procedures described in the documents provided to your Calculus student in preparation of their AP Calculus AB course, as represented by the students in their statement above.

Parent Signature: _____

Preferred Parental contact:

Email: _____

Phone: _____

Printed Name: _____