



Park View High School
AP Calculus AB
 Syllabus 2019-2020

Mrs. Alina Marsh
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 Room # 2314

Google Classroom: (class code: uci991)
<https://classroom.google.com/u/0/c/MzM1OTg1Njc2OTFa>
Remind Codes: @amarshper3, @amarshper7
Edpuzzle: (class code: zamdari)
<https://classroom.google.com/u/0/c/MzM1OTg1Njc2OTFa>
WebAssign: (key: ask your teacher for this)
<https://www.webassign.net/wa-auth/class-key/enroll>
Khan Academy: (class code: XWFZVSJT)
<https://khanacademy.org>
Marshematics YouTube Channel:
https://www.youtube.com/channel/UCp6zH9lk1fKyP4iC_BOn-vA
Desmos: <https://www.desmos.com/>

Course Description

AP Calculus AB explores the topics of limits/continuity, derivatives, and integrals. These ideas are examined using a multilayered approach including the verbal, numerical, analytical, and graphical analysis of polynomial, rational, trigonometric, exponential, and logarithmic functions and their inverses. The student is expected to relate the connections among these approaches. Students are also required to synthesize knowledge of the topics of the course to solve applications that model physical, social, and/or economic situations. These applications emphasize derivatives as rates of change, local linear approximations, optimizations and curve analysis, and integrals as Riemann sums, area of regions, volume of solids with known cross sections, average value of functions, and rectilinear motions. Emerging technologies are incorporated into the curriculum as they become available. Students have the opportunity to take the AP Calculus AB Exam in May with the possibility of earning college credit.

Curriculum Objectives by Quarter (subject to change)

<p style="text-align: center;">Quarter 1</p> <ul style="list-style-type: none"> • Limits and Continuity <ul style="list-style-type: none"> ○ Students will find one-sided, infinite, and non-existent limits. ○ Students will determine the continuity of a function. • Derivatives <ul style="list-style-type: none"> ○ Students will recognize and state the definition of a derivative. ○ Students will find the derivative of polynomial, algebraic, rational, exponential, logarithmic, and transcendental functions. 	<p style="text-align: center;">Quarter 2</p> <ul style="list-style-type: none"> • Applications of Differentiation <ul style="list-style-type: none"> ○ Students will apply the derivative to find rates of change, velocity, optimization, and curve analysis. • Integration <ul style="list-style-type: none"> ○ Students will find the anti-derivative and definite integral by using appropriate integration techniques. ○ Students will approximate areas by using various techniques. ○ Students will state and use the Fundamental Theorem of Calculus.
<p style="text-align: center;">Quarter 3</p> <ul style="list-style-type: none"> • Differential Equations <ul style="list-style-type: none"> ○ Students will interpret differential equations graphically through slope fields. • Applications of Integration <ul style="list-style-type: none"> ○ Students will find the area between curves and the volumes of solids. 	<p style="text-align: center;">Quarter 4</p> <ul style="list-style-type: none"> • Applications of Integration <ul style="list-style-type: none"> ○ Students will find the area between curves and the volumes of solids. • AP Exam Review • Post AP Exam Topics.

Grading Policy

This course will follow the Math Department Grading Policy:

- Students are assigned practice daily to complete.
- Students will be assessed weekly based on mastery of the content standards.
- Within the quarter, students have the opportunity to be reassessed after they have demonstrated mastery of the standards to the teacher.
- No one assignment shall count for more than 20% of a student's final grade.
- Gradebooks will be based on total points.
- Late work will be accepted through the end of the quarter in which it was assigned.

LCPS Grading Scale:

A+	98-100
A	93-97
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	0-59

Classroom Procedures and Expectations

The Flipped Classroom:

- The traditional order of teaching will be “flipped” to create a more supportive classroom environment where students learn for understanding and receive more individualized attention.
- For “homework”, students will watch tutorials which I create and post online. These will provide the lesson and examples to help the student understand each topic at his/her own pace. Students may pause, rewind, or review tutorials at any time.
- While watching the tutorials, students will be completing a guided set of notes. This should help students maintain focus and call attention to important information.
- For “classwork”, students will be paired together based on the Entrance Quiz score. Partners will then help each other to understand the concepts via practice sets or activities. Understanding will be assessed at the end of class with an Exit Quiz. Progress Points will be earned based on partnership improvement.

Expectations:

- Be on time to class (the professional world does not accept tardiness).
- Please come prepared to each class with a willingness to learn and an open mind.
- This class is organized for cooperative learning. We believe that everyone in class is a learner, but also a teacher. Help each other learn. Teaching someone else helps you to understand the topic better!
- Keep an organized notebook.
- Daily participation is expected, so please ask questions.
- Do your best on each assignment.
- Come to class prepared for each quiz/test. Review will be minimal the day of a quiz/test.
- You are all unique and valuable; respect yourself and others.

Learning Materials (to bring to each class meeting)

- School-issued tablet and charger
- Headphones/earbuds
- 3-ring binder with dividers (suggested sections ~ Notes, Practice, Entrance/Exit Quiz, Quiz/Test)
- Lined AND Graph paper
- Sharpened pencils w/ erasers
- Color pencils and highlighters
- Textbook
- TI-83/84 calculator (recommended for home use)
- Positive attitude and willingness to learn

Parent Contact: Please email the teacher. By phone, call the Park View main office at 571-434-4500.

Before/After School Math Help: Activity busses are Monday-Thursday at 5:30 PM. I am available for extra before school by 8:30 AM in 2314. Check my page on the Park View website for the most up-to-date times for before/after school help.

Make Up Work Policy (LCPS Policy): Whenever a student is absent, whether an excused or unexcused absence or a suspension absence, if the principal requires make-up work, a reasonable amount of time, consistent with the length of the absence, will be given the student to make up the work missed. Upon return from absence, the student is responsible to initiate immediate action to make up the work. Upon such request of the student, the teacher is responsible to provide assignments, tests, and other work that must be made up and to inform the student clearly when make-up work for which grades will be given is due. Failure to complete such make-up work within the time allowed will result in a failing grade for those assignments, tests, or other work. Make-up work turned in within the time allowed will be graded on the same basis as other work.

Academic Honor Code: Park View’s goal is to promote a community of trust that will enhance student achievement and learning. Students who accept responsibility for their own academic integrity learn and take pride in genuine achievement. As members of the Park View community, we are dedicated to honesty, integrity, and doing the right thing, even when no one is watching. The Park View Honor Code represents expectations of behavior that are aligned with effectively preparing community members for success in a global society. The Park View Honor Council oversees all Honor Code violations. Students have the right to appeal any violations, as long as their appeal is submitted to the Honor Council within seven calendar days of violation notification. The entirety of the Honor Code can be found on the PVHS homepage under Site Shortcuts and/or Our School at: <http://www.lcps.org/pvhs>.

Policies are subject to change. Please read and sign the attached signature sheet.

AP Calculus AB Syllabus Signature Sheet

Student and Parent: Please fill out this form and return it to Mrs. Marsh by the second day of class.

Student Name: _____ Grade level: _____

Parent/Guardian Name(s): _____

Phone number(s): _____

Language preference for phone calls home: _____

Email(s): _____

Student – Please initial the following statements:

- _____ I have read the AP Calculus AB Syllabus.
- _____ I understand the expectations and responsibilities required for AP Calculus AB.
- _____ I will monitor StudentVUE and contact Mrs. Marsh with any concerns throughout the year.
- _____ I have joined the Google Classroom for AP Calculus AB (class code: uci991).
- _____ I have texted the appropriate Remind code to 81010 (@amarshper3, @amarshper7).
- _____ I have joined the Edpuzzle class for AP Calculus AB (class code: zamdari).
- _____ I have enrolled in WebAssign for the Calculus textbook (key: *ask your teacher for this*).
- _____ I have joined the Khan Academy class for AP Calculus AB (class code: XWFZVSJT).

Parent/Guardian – Please initial the following statements:

- _____ I have read the AP Calculus AB Syllabus.
- _____ I understand the expectations and responsibilities required for AP Calculus AB.
- _____ I will monitor ParentVUE and contact Mrs. Marsh with any concerns throughout the year.
- _____ I have texted the appropriate Remind code to 81010 (@amarshper3, @amarshper7).

Parent/Guardian – Please check ONE of the following statements:

- We have a computer with consistent Internet access at home.** Watching the tutorials will not be a problem.
- We have a computer at home, but the Internet is inconsistent.** If watching the tutorials is a problem, we will contact the teacher to make alternative arrangements.
- We have a computer at home, but do not have Internet access.** We will contact the teacher to make alternative arrangements.
- We do not have a computer at home, but my student has consistent access to the Internet** (with a smartphone, at a relative's, friend's, or neighbor's home) and watching the tutorials will not be a problem. If watching the tutorials is a problem, we will contact the teacher to make alternative arrangements.
- We do not have a computer at home and my student does not have consistent access to a computer.** We will contact the teacher and we request the following accommodations:

Student Signature: _____

Date: _____

Parent/Guardian Signature: _____

Date: _____

Student Information Record

Name: _____ Nickname? _____

Where were you born? _____

How long have you lived in the U.S.? _____ in Loudoun County? _____

What language is spoken at home? _____

Do you have a job? _____ If yes, where? _____ and for how many hours per week? _____

Do you participate or plan to participate in any sport or club at PVHS? _____

If yes, what sport(s)/club(s)? _____

How do you feel about math? _____

What is/are your goal(s) this year in this math class? _____

What can I do for you as a teacher? _____

What is your dream? _____

Is there anything in your life you feel limits your ability to reach the level of success of which you are capable?

Anything else you would like to share about yourself? _____
