

## Welcome to AP CALCULUS AB

Mrs. Galilei

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Sign up for text messages through REMIND  
Videos for all lessons can be found on School4One  
CLASS CODE: dypcuq

Phone: 412-896-2360 ext 7913

### EXAM DATE:

**Tuesday May 5**

### CLASS RULES

- \*Be on time
- \*Bring your materials to class & be ready to learn
- \*Have at least ONE pencil
- \*No complaining that calculus is too hard
- \*Be respectful of others – not everyone “gets it” as fast as you!
- \*No cell phones unless allowed by teacher!
- \*Bring your ipad, charged, everyday

### COLLEGE CREDIT

You can obtain college credit for this course either through the AP Exam or the CHS program through Seton Hill. More specific info will be given in the fall.

### WHAT YOU NEED TO KNOW

This class is designed to help prepare you for the AP Calculus AB test in May. Here are some things you should know to help prepare you for what lies ahead:

- \*Do NOT rely on your calculator! There are non-calculator sections on the AP test.
- \*SHOW ALL WORK. Partial credit is given by me on test for appropriate work that supports your answer. The AP Test is also graded this way.
- \*DO NOT SLACK OFF. The material we cover builds on previous material.
- \*DON'T GET DISCOURAGED. This class is challenging and your brain might actually ache some days. Stick with it and keep asking questions!
- \*BE SELF-DISCIPLINED and SELF-MOTIVATED and READY TO WORK.
- \*COPYING someone else's homework WILL NOT HELP YOU.
- \*GETTING AN A in PreCalculus does NOT guarantee you an A in AP Calculus. The classes are very different. You will have to learn the THEORY behind the work. You must begin to understand the process and not just try to memorize how to solve a particular problem.

The GRADING SCALE will be:

- 75% Tests
- 20% Projects/Participation
- 5% Homework/Classwork

**\*HOMEWORK IS DUE ON TIME\***

### HOW TO SUCCEED IN AP CALCULUS

- \*Do your homework every night. Don't fall behind or save it until the night before the test.
- \*Don't copy homework! You actually have to know how to do it as I check EVERY step on tests.
- \*Don't let others copy YOUR homework!
- \*Stay positive even when you are frustrated. If calculus was easy, everyone would take it!
- \*Ask for help ahead of time, NOT the day of the test. It's too late then!!!
- \*Keep in mind that the majority of your grade is TESTS, so you have to know your



### ACADEMIC INTEGRITY MATHEMATICS



- o Do your own work
- o Take pride in your work
- o Show your work
- o Ask for help if you are confused
- o Help your peers understand their work
- o Do not copy or take pictures of someone's work
- o Do not discuss test questions or answers
- o Do not just give answers or air drop
- o Do not give up
- o Do not give your completed work to someone



"The beautiful thing about learning is that no one can take it away from you." – B.B. King





# Sign up for important updates from Mrs. Galilei.

Get information for Elizabeth Forward Senior High School right on your phone—not on handouts.

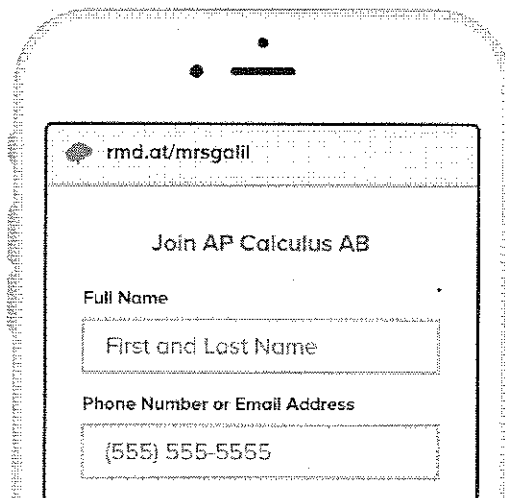
Pick a way to receive messages for AP Calculus AB:

**A** If you have a smartphone, get push notifications.

On your iPhone or Android phone, open your web browser and go to the following link:

[rmd.at/mrsgalil](http://rmd.at/mrsgalil)

Follow the instructions to sign up for Remind. You'll be prompted to download the mobile app.



**B** If you don't have a smartphone, get text notifications.

Text the message @mrsgalil to the number 81010.

If you're having trouble with 81010, try texting @mrsgalil to (646) 783-4827.

*\* Standard text message rates apply.*



Don't have a mobile phone? Go to [rmd.at/mrsgalil](http://rmd.at/mrsgalil) on a desktop computer to sign up for email notifications.

## Course Description:

An Analytical Geometry and Calculus course has been developed in conjunction with Seton Hill University and can qualify a student for college credit through the College-in-High-School Program. Plane analytic geometry and solid analytic geometry are studied intensively and then integrated with differential and integral calculus. In addition to the mechanics of differential and integral calculus, the mean value theorem, the fundamental theorems of differential and integral calculus, and ordinary and uniform continuity are emphasized. Limit theory and application of differential and integral calculus are also studied. This course follows the strict guidelines in the College Board Publication of the Advanced Placement Course Description for preparation of the AP Calculus AB Advanced Placement examination.

Note: A TI-84+ graphing calculator is highly recommended.

## Unit One: Limits and Their Properties

- Tangent Lines
- Slopes of secant & tangent lines
- Limits graphical
- Limits Algebraic

## Unit Two: Differentiation

- Derivative definition
- Derivatives with technology
- Differentiation techniques
- Chain Rule
- Derivatives of trig functions
- Implicit Differentiation
- Derivatives of transcendentals
- Derivatives of Inverses
- Linear Approximations

## Unit Three: Applications of Derivatives

- Continuity/differentiability
- Related Rates
- Straight-line motion
- Existence Theorems
- Function Analysis
- Curve Sketching
- Absolute Extrema
- Optimization
- Economic Optimization
- L'Hopital's Rule

## Unit Four: Integration

- Indefinite Integration
- U-Substitution
- Riemann Sums
- Definite Integrals
- Accumulation Function
- Fundamental Theorem of Calculus
- Definite Integrals with U-Sub
- Integrating Transcendentals
- Motion Revisited
- Average Value, 2<sup>nd</sup> Fundamental Theorem
- Inverse Trig & Integration

## Unit Five: Application of Integration

- Area Between Curves
- Volumes
- Slope Fields
- DEQ's
- Exponential Growth

**ELIZABETH FORWARD  
HIGH SCHOOL  
"BRAVE" WARRIORS**



	Classroom	Hallways/ Stairs	Cafeteria	Restrooms	Parking Lot	Bus
<b>BE SAFE</b>	Listen to staff  Maintain personal space	Walk to the right  Maintain personal space  Use an appropriate tone	Follow directions  Maintain personal space  Stay in your area  Wait for dismissal	Follow school drug free policy  Be Prompt	Follow school parking policy  Be patient and drive safe	Stay seated  Follow directions  Keep hands to self  Follow drug free policy
<b>RESPECT OTHERS</b>	Be on time  Be polite  Use appropriate language and tone	Use appropriate language and tone  Be polite  Follow directions	Use appropriate time and language  Encourage respectful behavior  Say "please" and "thank you"	Keep it clean  Follow directions  Use appropriate tone and language	Respect others property	Be on time  Maintain personal space  Use an appropriate tone  Respect others property
<b>ACCOUNTABLE</b>	Be prepared  Be honest  Do your own work  Use electronic devices only when permitted	Get to class on time  Lock lockers  Use of electronic devices only when permitted	Wait your turn  Clean up your area  Eat during assigned lunch  Use good table manners	Wash your hands  Flush  Throw garbage away	Have a pass visible  Reports incidents	Be responsible for your belongings
<b>VICTORIOUS</b>	Do your best work  Celebrate academic success	Celebrate personal and team successes	Have group pride	Report incidents	Take personal responsibility	Report incidents
<b>ENTHUSIASTIC</b>	Have a positive attitude  Take ownership of learning	Help others  Be a leader	Be appreciative	Be quick and move along	Be courteous	Have a positive attitude  Help others