

Welcome to AP Physics C Mechanics!

I'm excited that you signed up for this course, and I look forward to meeting everyone in the fall! This course covers kinematics, force, energy, momentum, rotation, oscillations, and gravity. It will rely on your previous understanding of algebra-based physics. In this packet, we will begin your knowledge of calculus and revisit 1D Kinematics. These will be done via Quizizz, which will include a video and questions. There will be a calculus test at the end of the first week of school, and we will review 1D before moving on to 2D Kinematics.

This summer packet is due on the first day of school. If you have any questions or need more practice problems, feel free to ask. Happy learning!

Warmest regards,
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Math Review

This course is a second-year physics course, and it will build upon your previous knowledge. Let's check in on your algebra knowledge.

1. [Algebra Review](#)

Calculus

Okay, take a deep breath! Let's jump into the deep end with calculus. Don't fret; this will just be the introduction to derivatives and integrals. We will continue working with these throughout the year!

2. [Intro to Derivatives](#)
3. [Why Derivatives are Awesome](#)
4. [Intro to Integrals](#)
5. [Applications to Physics](#)
6. [Definite Integrals](#)
7. [Averages and Other Nice Things](#)

Kinematics in 1D

Exhale! Let's begin our return to physics! Our first stop: Kinematics!

8. [Motion Diagrams](#)
9. [Reference Frames and Displacement](#)
10. [Average Velocity and Speed](#)
11. [Instantaneous Velocity](#)
12. [Acceleration](#)
13. [Motion with Constant Acceleration](#)
14. [Variable Acceleration](#)
15. [Freely Falling Objects](#)
16. [Projectile Motion](#)