

Physics 1 + AP Physics C: Mechanics

Instructor: Claudia Reines

Weekly Classes on Wednesdays, 5:30 PM ET

Course Description

This course is aimed towards high schoolers looking to get ahead before taking AP Physics C: Mechanics. This is an introductory course that will give a basic overview of the main topics in that course. Reviews of basic calculus needed for the course will be included along with reviews from the regular high school physics class. After reviewing basic physics, the course will move on to covering topics exclusively found in AP Physics C: Mechanics.

Meeting Agenda

6/29 Meeting 1: Review of Calculus

- Derivatives
- Integrals

7/6 Meeting 2: Kinematics

- Equations
- Applications

7/13 Meeting 3: Newton's Laws of Motion

- Forces
- Circular motion

7/20 Meeting 4: Work, Energy, and Power

- Formulas
- Principle of conservation

7/27 Meeting 5: Momentum

- Conservation of Linear momentum
- Center of mass
- Impulse

8/3 Meeting 6: Rotational Motion

- Torque
- Kinematics

8/10 Meeting 7: Oscillations

- Simple harmonic motion

- Springs
- Pendulums

8/17 Meeting 8: Gravitation

- Orbits of planets and satellites

8/24 Meeting 9: Review