

# AP PHYSICS

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## Class Time

Saturdays & Sundays 7:00–10:00pm (July and August)  
Class time in September TBA

## Course Material

- No textbook required
- Course outline, presentation slides, homework assignments and solutions are downloadable from school website
- Please bring
  - A pen/pencil for note-taking
  - A scientific calculator for working in-class example problems

## Course Outline

1. Topics in *AP Physics C: Mechanics*
  - (a) Kinematics and Dynamics using Calculus
  - (b) Momentum and Energy
  - (c) General circular motion and angular momentum
  - (d) Oscillation (Simple harmonic motion)—general equation of oscillatory systems, pendulums and spring-mass systems
  - (e) Universal gravitation—Newton’s law of universal gravitational, gravitational potential energy, Kepler’s laws of planetary motion
2. Topics in *AP Physics C: Electricity and Magnetism* (“E&M”)
  - (a) Electrostatics—electric force and electric field from point charges; electrical potential energy, electric potential and potential difference; charged parallel plates
  - (b) Capacitance
  - (c) Current, resistance and DC circuits
  - (d) Magnetism
3. Topics in *AP Physics 1* and *AP Physics 2*
  - (a) Fluid dynamics
  - (b) Thermal physics
  - (c) Mechanical waves
  - (d) Light and optics
  - (e) Modern physics—relativity and quantum mechanics