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**AP PHYSICS OPTIONS**

**Why more Physics?**

9th grade Physics serves as an excellent introduction to Physics. At the junior/senior level, you can expect to enhance your knowledge of previous Physics concepts and extend to other fascinating concepts. Many majors require or strongly recommend Physics. Engineering, Chemistry, Geology, Zoology, Mathematics, Medicine, Architecture, certain specialties in Law and Business are just some of the major areas. Having a background in Physics will give you a competitive edge in the workforce.



**OPTION 1: AP® Physics 1: Algebra-based** is a first-semester college-level course designed to provide advanced students with the conceptual framework and factual knowledge to solve algebra-based physics problems and laboratory investigations. Advanced algebra skills are need to solve mathematical equations related to physics. If you enjoyed Physics in 9th grade and want to prepare for an AP**®** test, this is the course for you. The course will provide a solid foundation for students wishing to pursue future studies in medicine, science and engineering.  Topics include mechanics,

fluids, thermodynamics, electricity, circuits, magnetism, waves, optics, modern, and nuclear physics.  The course will prepare students for the AP Physics 1 exam. (**Grades:** 10, 11 & 12; **Credit:** 1; **Type:** Physical Science) *Prerequisite: Completion or concurrent enrollment in Algebra 2*

**OPTION 2: AP® Physics C** is a first-semester **college-level** course designed to provide advanced students with the conceptual framework and factual knowledge to solve **calculus**-based physics problems and laboratory investigations. Calculus skills are needed to solve mathematical equations related to physics. The course will provide a solid foundation for students wishing to pursue future studies in medicine, science and engineering. Topics include Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, momentum, and power; and wave theory. The

course will prepare students for the AP Physics C: Mechanics exam.

(**Grades:** 11 & 12; **Credit:** 1; **Type:** Elective Science)

*Prerequisite: Physics 1 or AP Physics 1 & Concurrent enrollment in Calculus*

**Who should take it?**

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|  | **6645 Physics 2** | **6648 AP® Physics 1** | **6650 AP® Physics C: Mechanics** |
| Math Suggestion | Completion or concurrent enrollment in Algebra 2 | Completion or concurrent enrollment in Algebra 2 | Concurrent enrollment in Calc BC orsuccessful completion of Calc AB |
| Major Concepts | Waves & OpticsElectricity & MagnetismAtomic & Nuclear | Newtonian MechanicsWork, Energy, & powerMechanical WavesSoundIntro to Electric Circuits | Linear & Rotational DynamicsEnergy & MomentumWave Theory |
| Suggested Majors | All College-BoundStudents | Medical FieldLife SciencesLawNon-science majors | Physical SciencesAstronomyEngineeringMathematics |
| Difference | Less content & depth than AP Physics 2 | Algebra based | Calculus based |
| Formal, WrittenLab Notebook | No | Yes | Yes |