



Quakerbridge Learning Center
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Option II, Honors Physics Summer Course Syllabus

This Physics course is excellent preparation for college bound students, especially those intending a career in science, engineering, or medicine. The curriculum and rigor match typical high school honors physics classes.

The pace and scope of this course are designed for the above average student with a sound understanding of algebra, geometry, and trigonometry. It is a challenging course covering physics theories, techniques, and general principles, while leading the student to learn via problem solving, qualitative and quantitative reasoning, and experimental investigation.

The topics covered will include: Classical Mechanics; Force and Energy; Momentum and Collisions; Circular Motion and Gravitation; Vibration and Waves; Sound and Light; Electric Forces and Fields; Electric Current and Circuits; and Electromagnetism. The materials for the course are taken from Physics, by Raymond A. Serway and Jerry S. Faughn. Supplemental materials include Conceptual Physics, by Paul G. Hewitt, as well as appropriate handouts.

The course meets lab-science requirements as 20-25% of class time is dedicated to inquiry lab activities. Students will have frequent assessments of their progress in their homework and classwork; they will also have periodic formative and summative assessments, and finally a cumulative exam.