

ROSLYN HIGH SCHOOL

DEPARTMENT: SCIENCE

NAME OF COURSE: ADVANCED PLACEMENT PHYSICS C (Mechanics and Electricity and Magnetism)

GENERAL DESCRIPTION OF COURSE

This course is designed to prepare students for both the AP Physics exam in Mechanics and the AP Physics exam in Electricity and Magnetism. It applies both differential and integral calculus. Calculus is an essential tool for this course and it is recommended that students are in AP Calculus BC (or higher) for this course.

MAJOR TOPICS COVERED

- ❖ Kinematics
- ❖ Newton's Laws of Motion
- ❖ Work
- ❖ Energy
- ❖ Power
- ❖ Systems of Particles
- ❖ Circular Motion and Oscillations
- ❖ Electrostatics
- ❖ Conductors
- ❖ Electric Circuits
- ❖ Magnetic Fields
- ❖ Electromagnetism

TEXTBOOKS

College Physics for Engineers, Serway and Vuille, Prentice Hall

REQUIREMENTS

To be successful in this college-level course, students must be responsible, dedicated, and self-motivated. Study skills are emphasized early in the course and are reinforced throughout the year. Regularly assigned homework will be demanding and time consuming. The course culminates with the AP Physics C: Mechanics and the AP Physics C: Electricity and Magnetism exams as well as a course final examination.

GRADING PROCEDURES

Grades are determined predominantly by unit tests. Laboratory reports, participation, and written assignments contribute to the overall grade. The final grade is computed as the average of the four quarters' grades. College credit may be available through Adelphi University as well (Fees apply).