

Troy High School Course Profile

Course Title: Physics

Course Prerequisites: Refer To Registration Presentation

Course Description: Physics is a laboratory science course for the college-bound student. The course emphasizes detailed knowledge of the central concepts, principles, and basic factual material on the following topics: motion, forces and energy, electricity and magnetism, forces at a distance, waves and electromagnetic radiation, earth's energy, stars and the origins of the universe, energy transfer and conversion. Physics aligns with the California Next Generation Science Standards and fulfills a student's physical science high school graduation requirements.

Students entering this course should have a mastery of the following concepts and possess the following skills:

- Note taking
- Graphing
- Algebra based math skills
- Listening and speaking skills
- Nightly reviewing
- Reading Comprehension

During this course students will continue to develop mastery of the following concepts and possess the following skills:

- Mathematical solutions to problems and evaluation of concepts
- Understand Newton's laws and how they relate to real life situations
- Energy calculation and transfer
- The relationship between electricity and magnetism
- Using graphs to analyze data and interpret results
- Using models to explain dynamic functions like those of earth's energy

Workload Expectations for this course (list typical amount of homework, projects, presentations, papers, etc.):

Units in College Prep Physics are typically span 3- 4 weeks. Each semester contains approximately 4-5 units of study.

For each unit students are expected to:

Read the notes taken in class, and review notes nightly

Complete homework (approx 30 minutes nightly)

Complete 1-2 laboratory activities per unit

Create Graphs and data tables

Use data and evidence to support claims

Answer questions from laboratory work or activities

Participate in class discussions, engage in scientific discourse, take notes, make meaningful contributions to group work and activities

Take 1-3 Quizzes

Take 1 Comprehensive Exam per unit

1 comprehensive final each semester

1 Project at end of semester