

Dear Student and Parent or Guardian,

Welcome to an exciting year of science. AP Physics differs significantly from other usual high school courses with respect to the kind of textbook used, range and depth of topics covered, the kind of laboratory work done, and the time and effort required of students. We will investigate the primary workings of the physical world and the science that describes it. Along with a solid understanding of physics the primary goal of this course will be to equip students with the knowledge needed to pass the AP Exam. This course does fulfill the University of California “d” entrance requirement for laboratory science.

The primary units that will be covered in mechanics are linear and 2D motion, vectors, Newton’s laws, forces, gravity, work, energy, rotation, inertia, torque, oscillation, Kepler’s laws and momentum.

This course covers the California, College Board and CVUSD district set standards for science. Upon completion of this course students will be able to:

1. Observe and explain examples of energy transformations in mechanical and earth systems.
2. Describe, analyze, and predict the motion of most objects based on the principles of Newton’s laws of motion and the relationship between momentum and conservation of energy.
3. Engage in effective inquiry into scientific problems by asking original questions, evaluating evidence, and drawing reasonable conclusions based on this evidence.
4. Examine and explain relationships among different scientific phenomena using experimental evidence, logical argument, graphs, mathematical equations, and other resources.
5. Design and conduct an investigation based on an original question; follow appropriate safety and ethical guidelines; use finding to revise ideas and assumptions and to design future investigations.
6. Use technology, scientific instruments, and equipment to collect, store, and analyze data; analyze how technological advances contribute to scientific progress and lead to new problems and questions.
7. Evaluate proposed solutions to challenges facing the earth and its inhabitants through the application and integration of the main concept of the various branches of science.

In addition to the above standards, students at Westlake High School are expected to demonstrate the following learning results in all courses.

1. Informed and independent learners – learners who use their knowledge and passion to practice critical thinking.
2. Effective communicators – communicators who can articulate their ideas through written and non-written expression using technology.
3. Active community members – students will be informed, actively engaged members of their local and global communities.
4. Innovative and engaged students – students will be innovative, and career and college ready.

At WHS, we are also implementing the Common Core State Standards in English Language Arts and in Math. (<http://www.cde.ca.gov/re/cc/>) We will be incorporating the Next Generation Science Standards (NGSS) for physical science as well. (www.nextgenscience.org) As part of the NGSS, we will focus on three overlapping dimensions of science learning: disciplinary core ideas, science and engineering practices and crosscutting concepts. As such, students will be assessed in a variety ways including projects, labs, presentations, direct inquiry, problem solving and tests. Students will be tested both solo and in groups, with emphasis on critical listening, oral, written and demonstration of key ideas and concepts. Engineering is a key aspect of this class, so there are many projects that require “simple” construction. Often these are group projects involving time management and teamwork to complete the project to an adequate level.

Class Rules

1. Respect. Respect yourself, your classmates, and the learning environment.
2. Bring necessary materials to class each day (pencil, pen, notebook, text, etc.)
3. Be involved. This is an interactive class, so participate and have fun with science.

Grades

Grades will be calculated using a weighted grading system. Student work will be broken into three categories each earning a percentage of the overall grade.

1. Engagement and exploration (class activities and homework primarily) – 15%
2. Science and engineering practices (SEP as set by NGSS) – 15%
3. Assessments (tests, quizzes, lab practicals, projects, etc.) – 70%

A = 90% +

B = 80 – 89%

C = 70 – 79%

D = 60 – 69%

Fail < 60%

Attendance

Punctuality and attendance will affect your work habits grade. It is the student's responsibility to learn material missed in the class due to absence. Also, daily pop quizzes will not have the option of being made up. Typically there are about three to four unannounced quizzes per week. Tests must be made up promptly, equal to the number of days missed.

Safety

We will conduct labs in class and many projects at home. "Safety first" is our credo. Please be aware of your environment, the tools you are using and the appropriate safety protection including, but not limited to goggles and gloves. Students will be required to sign a safety contract and pass a safety test. Students lacking proper safety will be assigned research projects instead of hands-on projects and will not be allowed to work on labs. Improper safety during a lab or project will result in a diminished grade and possible exclusion from that lab/project depending on severity of the infraction.

Multi-curriculum emphasis

Students at Westlake High School are expected to engage in mathematic and written communication skills in all subjects. In this course students will be taught how to solve algebra, trigonometry and calculus based problems, use graphs, and calculate lab data. Students will also be required to communicate their knowledge through a variety of media, including lab reports, formal essays, oral presentations and multimedia presentations.

Makeup work

Makeup work will be allowed only on excused absences and only for an amount of time equal to the excused absence. On occasion extra credit assignments will be given. These assignments are generally more work for fewer points than a regular assignment. Late work will be accepted up to one week late at 50% credit without a late pass. Grades are posted online (Q – new version of Zangle) and updated approximately every two weeks. It is the student's responsibility to track their grades and complete any missing assignments in a timely manner. I will not accept absence as an excuse for not doing work; all missed work must be completed

Website

Students are able to access current homework assignments and grades via the Internet from home. By visiting my website, (<http://www.planetholloway.com>), students and parents can access homework and grades. Homework is assigned usually five days a week and updated daily via the website. Homework is typically four to ten problems and should require 30 minutes to an hour to complete. Grades are updated every other week.

Projects

Throughout the year we will have projects to complete outside of the classroom. Students will typically be allowed to work in groups to help keep cost and work required down to a minimum. Please keep materials inexpensive as we will probably have four to six projects this year. It is the responsibility of the student to monitor the progress of the entire group and to make sure the project meets everyone's expectations and is complete on time.

Level Change

If you feel a level change is in order during the year, we cannot guarantee that space in another science class will be available. You have to switch in to a study hall period if no room is available. It is recommended to decide if the course is right for you early as course changes are typically easier early in the semester.

Academic Honesty (Bd. Pol. 5131.9)

Definition: Academic Dishonesty is a deliberate attempt to disrupt the learning process by misrepresenting another's work as one's own. Dishonesty during tests or classwork includes unauthorized communicating; copying materials or allowing another student to copy; using prohibited notes or devices; obtaining prior knowledge of test content; and/or removing or distributing all or part of any test. Copying another person's assignment; providing homework/classwork for another student to replicate; plagiarizing or submitting a paper or project which is not one's own work; and submitting falsified information for grading purposes are also examples of dishonesty.

Consequences:

First Infraction

- - The teacher will conference with the student and record a zero for that assignment.
- - Within five school days, the teacher will notify the parent and send a referral to the appropriate administrator noting the infraction.
- - The student will be placed on contract, with the understanding that a second infraction in the same or any other class will result in the student's removal from the course in which the second infraction occurred. The contract will remain in effect for two years from the date of infraction.

Second Infraction

- - The teacher will send a referral to the appropriate administrator noting the infraction.
- - Within five school days, the parent will be notified, and the student will be removed from the course and placed in a Study Hall with a failing grade for the semester.

Advanced Placement Physics C
Instructor – Scott Holloway

Westlake High School

I have always had a passion for science. I look forward to sharing my curiosity and understanding with you. If you have any questions about the course or about your student's progress please email and I will respond with clarification.

Sincerely,

Scott Holloway
sholloway@conejousd.org

(please sign below that you have read, understand and agree with these policies)

I understand and will comply with the policies for AP physics C (mechanics),

Student Name Print

Student Signature

Period

Parent signature

Date

AP physics C (mechanics)