

OHHS Science Department

Course Syllabus



Course Name: AP Physics 1

Course Code:

Description:

AP Physics 1 is a year-long algebra based college level course. The first semester focuses on the physics principles inherent in translational and rotational kinematics or how things move, dynamics or why things move, momentum, work, conservation of energy and oscillations. Second semester focuses on mechanical waves, sound characteristics, basic electrostatics such as electric charge, electrical forces, electric fields and potential difference (aka voltage). The course finishes with a study of basic circuits including current, resistance, Ohm's law and DC circuit analysis.

Prerequisites:

- Successful completion of two trimesters of Biology or Chemistry.
- Concurrent enrollment in or successful completion of two trimesters of Algebra II or Pre-Calculus.

Course Resources:

- Textbook: Wolfe, Gregg, et al. *College Physics for AP Courses*. Open Stax 2018
- Additional Resource: Fullerton, Dan *AP Physics I Essentials*. Silly Beagle Productions, 2014
- Recommended: Jacobs, Greg (2018). *5 Steps to a 5: AP Physics 1*. McGraw Hill 2018
- Student responsibility: scientific calculator

Course Outline:

0. Math and Graphing Skills Review
1. Kinematics
2. Dynamics
3. Uniform Circular Motion and Gravitation
4. Energy
5. Momentum
6. Torque and Rotational Motion
7. Simple Harmonic Motion
8. Mechanical Waves and Sound
9. Electric Charge and Electric Force
10. DC Electrical Circuits

Major Assessments:

- One formal lab report within each unit
- Summative assessment (written exam) at the end of each unit.
- Participation in each of three Saturday Study Sessions (or completion of all packets covered at the session if absent)

Laboratory zero period:

The College Board requires that formal lab investigations be completed during a continuous two-hour period. To accommodate this, class will meet during zero period once per unit. Dates of these zero periods will be announced at the start of each unit.

Extra Help: Opportunities for tutoring will be available after school Tuesdays, Wednesdays and Thursdays by appointment.

Re-Do Policy:

“Re-Do” Policy is applicable only after a legitimate first effort! After we have negotiated that a rewind is needed the following will guide our efforts.

1. Formative assessments - Includes practice problems and worksheets which are recorded on the Unit Checklist and may not be resubmitted for credit. Also includes quizzes which may be retaken within one day of assigned date. All Formative assessments are due the day of the Unit Exam.
2. Tests – Students may retake tests and receive a new score commensurate with their effort if the following requirements are met:
 - a. complete all assignments from the unit and get them signed off on the unit checklist.
 - b. complete additional work related to areas they did not show proficiency.
 - c. explain solutions to all problems missed on the original test before retaking test.
 - d. do retest within one week of getting original test results
3. Labs: Circumstances and time of year often dictate the opportunity to improve on a lab score. We will negotiate this opportunity on an individual basis.
4. All work must be completed by the end of a trimester. Revision of work will not be permitted from one trimester to the next.

Grading Scales		Weights	
A	90-100	Categories	Percentages
A-	85-89.9	Formative Assessments	30%
B+	83-84.9	Summative Assessments	50%
B	77-82.9	Labs	20 %
B-	75-76.9		
C+	73-74.9		
C	67-72.9		
C -	65-66.9		
D+	63-64.9		
D	55-62.9		
F	0-54.9		

OHHS Plagiarism Policy:

Any student, who knowingly turns in any work that has been done by someone other than himself or herself, and fraudulently represents it as his/her own, shall be considered to have cheated. Cheating also includes: aiding someone else in cheating, the use or preparation of written, pictorial, or other materials not authorized by the instructor during a test or assignment, the use of testing materials obtained previous to the test date, or plagiarism of any kind. Refer to individual teachers expectations for each class violation. Students found cheating will also be subject to an office referral, which could result in a suspension.

Attendance:

Attendance is important for success in any chemistry class. Students who miss class often miss information and work that can not be made up. As a result students who miss class generally fall behind and their grade suffer.