

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT



AP Physics 1

Board Approval Date: May 16, 2024	Course Length: 2 Semesters
Grading: A-F	Credits: 5 Credits per Semester
Proposed Grade Level(s): 11, 12	Subject Area: Physical Science Elective Area (if applicable):
Prerequisite(s): IM3 concurrent or completed Highly Recommended: Chemistry or Honors Chemistry	Corequisite(s): N/A
CTE Sector/Pathway:	
Intent to Pursue 'A-G' College Prep Status: Yes	
A-G Course Identifier: (d) Laboratory Science	
Graduation Requirement: No	
Course Intent: District Course Program (if applicable): AP	
<p>The Folsom Cordova Unified School District prohibits discrimination, intimidation, harassment (including sexual harassment) or bullying based on a person's actual or perceived ancestry, color, disability, race or ethnicity, religion, gender, gender identity or gender expression, immigration status, national origin, sex, sexual orientation, or association with a person or group with one or more of these actual or perceived characteristics. For concerns/questions or complaints, contact the Title IX Coordinator(s), Equity Compliance Officer(s) and Section 504 Coordinator(s) :</p> <p>Donald Ogden, Associate Superintendent – Human Resources, Title IX Coordinator (Employees) & Equity Compliance Officer dogden@fcusd.org 916-294-9000 Ext 104410</p> <p>Jim Huber Ed. D., Assistant Superintendent – Educational Services, Title IX Coordinator (Students), Section 504 Coordinator & Equity Compliance Officer jhuber@fcusd.org 916-294-9000 Ext 104625</p>	

COURSE DESCRIPTION:

AP Physics 1 is designed to be equivalent to the first semester of an introductory college-level algebra-based physics course. This course is useful for potential engineering, pre-med, science, and computer science majors, as well as anyone interested in Physics. The course covers Newtonian mechanics (including rotational dynamics, and angular momentum): work, energy, and power; and fluids. This course will prepare the student to take the Advanced Placement Examination for Physics 1. This course meets UC/CSU (Laboratory Science-d) requirements. AP Physics allows time for thorough, in-depth, student centered inquiry activities allowing students to carry out careful experiments and design laboratory practical work to answer real world questions.

DETAILED UNITS OF INSTRUCTION:

Unit Number/Title	Unit Essential Questions	Examples of Formative Assessments	Examples of Summative Assessment
1. Kinematics	How can the motion of objects be explained or predicted?	*Labs *AP Classroom Progress *Checks *Quizzes *Problem Sets *Worksheets *Lab questions *Motion on a Ramp	*Quizzes *Labs *Exams
2. Dynamics	How can Newton's Laws of Motion be used to predict the behavior of objects?	*Labs *AP Classroom Progress *Checks *Quizzes *Problem Sets *Worksheets *Lab questions	*Quizzes *Labs *Exams
3. Circular Motion and Gravitation	How can Newton's Laws of Motion be used to predict the behavior of objects? How can the acceleration of gravity be modified?	*Labs *AP Classroom Progress *Checks *Quizzes *Problem Sets *Worksheets *Lab questions	*Quizzes *Labs *Exams
4. Energy	How is energy exchanged, transferred, and transformed within systems? How does the Law of Conservation of Energy govern the interactions	*Labs *AP Classroom Progress *Checks *Quizzes *Problem Sets *Worksheets *Lab questions	*Quizzes *Labs *Exams

	between objects and systems?		
5. Momentum	How does the Law of Conservation of Momentum govern the interactions between objects and systems?	*Labs *AP Classroom Progress *Checks *Quizzes *Problem Sets *Worksheets *Lab questions	*Quizzes *Labs *Exams
6. Simple Harmonic Motion	How does the presence of restoring forces lead to simple harmonic motion?	*Labs *AP Classroom Progress *Checks *Quizzes *Problem Sets *Worksheets *Lab questions	*Quizzes *Labs *Exams
7. Rotational Motion	How can balanced forces cause rotation? How does the choice of system and rotation point affect the forces that can cause a torque on an object or a system?	*Labs *AP Classroom Progress *Checks *Quizzes *Problem Sets *Worksheets *Lab questions	*Quizzes *Labs *Exams
8. Fluids	Is it possible for energy or mass to be created or destroyed in systems involving fluids?	*Labs *AP Classroom Progress *Checks *Quizzes *Problem Sets *Worksheets *Lab questions	*Quizzes *Labs *Exams

ESSENTIAL STANDARDS:

<https://apcentral.collegeboard.org/media/pdf/ap-physics-1-course-and-exam-description.pdf>

RELEVANT STANDARDS AND FRAMEWORKS, CONTENT/PROGRAM SPECIFIC STANDARDS:

Link to Common Core Standards (if applicable):

Educational standards describe what students should know and be able to do in each subject in each grade. In California, the State Board of Education decides on the standards for all students, from kindergarten through high school.

Link to Framework (if applicable):

Curriculum frameworks provide guidance for implementing the content standards adopted by the State Board of Education (SBE). Frameworks are developed by the Instructional Quality Commission, formerly known as the Curriculum Development and Supplemental Materials Commission, which also reviews and recommends textbooks and other instructional materials to be adopted by the SBE.

:<https://www.cde.ca.gov/pd/ca/sc/documents/ngsshspysicalscidci.pdf>

Link to Subject Area Content Standards (if applicable):

Content standards were designed to encourage the highest achievement of every student, by defining the knowledge, concepts, and skills that students should acquire at each grade level.

<https://apcentral.collegeboard.org/media/pdf/ap-physics-1-course-and-exam-description.pdf>

Link to Program Content Area Standards (if applicable):

Program Content Area Standards apply to programs such as International Baccalaureate, Advanced Placement, Career and Technical Education, etc.

TEXTBOOKS AND RESOURCE MATERIALS:

Textbooks

Board Approved	Pilot Completion Date (If applicable)	Textbook Title	Author(s)	Publisher	Edition	Date
<i>Yes</i>		<i>College Physics for the AP® Physics 1 & 2 Courses</i>	Stewart	Bedford, Freeman, and Worth	3rd Edition	<i>1/1/2023</i>