

MVLA
2019-20
COURSE INFORMATION SHEET

Course Title: AP Physics 1 (CA3010)

School: Mountain View High School

UC/CSU requirement: Yes/Yes, D

Textbook and/or other learning resources: *College Physics* by Openstax

Student Learning Outcomes:

Physics is the basic science. It is the study of the fundamental laws that govern the properties of and interactions between motion, matter, and energy. As such, physics underlies every other science and is very useful in helping students understand and appreciate how things work in the everyday world. The principle content areas are

- Kinematics (description of motion, including planets)
- Dynamics (Newton's laws, gravity and orbital mechanics)
- Simple Harmonic Motion
- Rotational Motion
- Conservation Laws (energy & momentum)
- Electricity & Circuits
- Mechanical Waves

This course is designed to enable students to develop the ability to reason about physical phenomena using important science process skills such as

- Explaining causal relationships, such as constructing explanations of physical situations involving the interaction of bodies using Newton's third law and the representation of action-reaction pairs of forces.
- Applying and justifying the use of mathematical routines, such as applying mathematical routines appropriately to problems involving elastic collisions in one dimension and justify the selection of those mathematical routines based on conservation of momentum and restoration of kinetic energy.
- Designing experiments, such as designing an experiment for collecting data to determine the relationship between the net force exerted on an object's inertial mass and its acceleration.
- Analyzing data and making connections across multiple topics within the course, e.g., analyzing experimental data describing the motion of an object and expressing the results of the analysis using narrative, mathematical, and graphical representations.

Assessment and Grading ([BP 5121](#) / [AR 5121](#)): To ensure that every student has an equal opportunity to demonstrate their learning, the course instructors implement aligned grading practices and common assessments with the same frequency.

1. Grading categories and their percentage weights:
Evaluations (exams and projects): 70%
Written homework, and labs 20%
Online assignments (Lon Capa) 10 %
2. Achievement evidence collected within each grading category:
There will be one midterm (exam) at the end of each unit, up to 1 project per semester, and one final exam at the end of each semester. Exams are graded based on the AP scale (1-5)
For each instructional unit, there will be 1-3 homework sets and at least one lab.
There will be 2 to 6 online assignments (Lon-capa) per unit.
3. Grading scales:
A (Advanced) : 90-100%
B (Proficient): 80-89.99%
C (Basic): 70-79.99%
D (Below Basic): 60-69.99%
F (Far Below Basic): 50-59.99%.

4. Homework/outside of class practices ([AR 6154](#)):
To be of value, homework and on-line assignments must be accomplished in a timely manner.
5. Excused absence make up practices ([Education Code 48205\(b\)](#)):
At the teacher's discretion, homework and on-line assignment deadlines may be delayed due to illness or other reasonable issues that arise.
6. Academic integrity violation practices:
Any cheating or plagiarism (as defined in [MVHS Academic Integrity Policy](#)) will be reported to the administration.
7. Late work practices:
Homework must be submitted before the graded assignment is returned. Late work is unacceptable. Online assignments must be accomplished before the window closes. The windows may be reopened, at the teacher's discretion, due to illness or other reasonable issues that arise.
8. Revision practices:
The opportunity for revision of written homework is available during peer review after it is assigned. Each numerical on-line problem will have 8 "tries" and each non-numerical on-line problem will have a minimum of two "tries." If a student receives a Basic (3/5) or below on a midterm test, he/she will be allowed (but not required) to retake the test for a maximum revised score of Proficient (4/5). If the score on the retake is lower than the original score, the average of the two scores will be entered into the gradebook for that midterm. This option is not available for projects or final exams.
9. Extra credit practices:
A small amount of extra credit may be assigned at the discretion of the teacher when it promotes the learning of course objectives.
10. Additional grading practices:
Online grade books will be updated every time a new set of scores is ready for inclusion at the end of each instructional unit (about every three to four weeks).

Instructors' email addresses:

Stephen Widmark: stephen.widmark@mvla.net
Ning Xu: ning.xu@mvla.net

Additional Information:

- Students should bring the following every day to class:
 1. A fully charged device to access the school's internet
 2. Pens and pencils
 3. 3 Ring binder with note paper
 4. Scientific calculator
 5. USB flash drive
 6. Metric ruler

Please see your teacher if you can't obtain above materials.

- Student proficiency is determined by the rubrics published by The College Board for evaluating AP Physics 1 tests.
- All returned lab reports should be kept in a portfolio as evidence of a lab experience for future college credit requirements.