

MVLA
2019-2020
PHYSICS COURSE INFORMATION SHEET

Course Title: Physics

School: Mountain View High School

UC/CSU Requirement: Yes/Yes; Subject Area D, Laboratory Science

Textbook and/or other learning resources: Pearson's *Physics* and Hewitt's *Conceptual Physics*

Student Learning Outcomes:

Course Content:

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. This course is designed to acquaint you with the basic concepts of physics. The principle content areas are Kinematics (description of motion, including planets), Dynamics (Newton's laws, gravity and orbital mechanics), Conservation Laws (energy & momentum), and Waves (light and sound, including astronomy).

Student Learning Outcomes:

We hope to develop your ability to use the scientific method of thinking, to strengthen your logical reasoning processes, to enhance your problem solving strategies, and to increase your awareness of technological issues that demand physics knowledge to be effectively understood. An equally important aspect of this course will be a constant effort to improve students' organizational and study skills, as student's ability to be independent learners will greatly increase their academic success. Thus, your expected learning outcomes lie in the development of the following areas:

Critical Thinking Skills:

You will learn to development processes which will help you think critically about scientific situations. You will set up and solve real world based problems based on valid scientific reasoning, theorems and concepts.

Problem Solving Skills:

You will continue to develop these skills as you identify the given information and apply relationships that connect the pieces of a scientific problem to produce logical and testable solutions. You will apply your scientific problem solving skills in many ways including mathematical analysis, proofs, and computer modeling to solve physics based problems in areas such as rocket flight, wave behavior, and roller coasters

Communication Skills:

You will be able to communicate an idea or line of reasoning with necessary support to others in written and oral forms. For example, you will explain problem solutions orally and produce detailed written reports on laboratory investigations.

Computer Skills:

You will be able to use computers to work with simulations of physical systems and to collect and analyze data. For example, you will use probes to collect experimental data, create and analyze graphs of data and produce cogent reports based on your results.

Experimentation and Investigation Skills:

You will perform predetermined investigations and you will have opportunities to develop your own experiments to demonstrate physical concepts. You will learn how to critically analyze both data and errors in your results, in addition to presenting your investigation in written and oral forms.

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:

Tests: 50% Lab Work: 15% Lon-Capa 20% Classwork & Homework 15%

2. Achievement Evidence Collected within each Grading Category:

Tests: This category includes one unit test for each content unit, a cumulative semester final and cumulative end of year final.

Lab Work: This category includes all assignments that involve data analysis, lab simulations and lab write-ups, There is 1 lab assignment per content standard.

Lon-Capa: This category includes problems sets completed with the online program of Lon-Capa. There is 1 Lon-Capa folder per content standard.

Homework: This category includes scientific reading & notes, written problem sets and written/online content reviews. There are multiple homework assignments per unit.

Classwork/Projects: This category includes classwork, Pogils, warm-ups and extended projects. There are multiple classwork assignments per unit.

3. Grading Scales:

A: greater than 90% B: 80-89% C: 65-79% D: 55-64% F: less than 55%.

Final grade is rounded up at 0.5% and above. ± will not appear on final grade.

4. Homework Practices/Outside of Class Practices ([AR 6154](#)):

Homework will average 15-30 min/day 3-4 days a week, in addition time to review and reflect on the content. Extended assignments or projects will require more time. What is not finished during class is to be finished at home before the stated due date. Teachers are looking for effort which means you need to show your thought process and your work (ie. writing the givens & formulas or indicating what you don't get) on each problem for the assignment to get full credit. Be sure to jot down any questions you have

so that these can be addressed in class.

Stamped Assignments: This is written work that will be stamped on your physics assignment sheet based on completion and then reviewed in class.

Turn in Assignments: This is written work that will be turned in and graded based on accurate completion.

Lon-Capa Assignments: This is online work using LON-CAPA; a web-based homework application that individualizes problem sets for each student. You will be given a login and password to access the content at <http://mvla.loncapa.net/adm/login?username=&domain>. Problem sets from LON-CAPA will open during the relevant unit and close by the end of the unit. You will have a set number of attempts at answering each online problem. If needed, please seek help before you run out of attempts. Once the folder closes, the grade will be based on accurate completion.

5. Excused Absence Make-up Practices ([Education Code 48205\(b\)](#)):

Any homework, lab or evaluation missed because of an excused absence must be completed within one week of the absence and will not be penalized. Make-up work must be turned in with a purple sheet indicating date(s) of excused absence(s) if you are absent, it is your responsibility to find out what you missed from a classmate, Google Classroom/Calendar, or absent binder. Your responsibilities also include obtaining necessary handouts, completing missing work, setting up lab or test make up times with the teacher, and turning in your missing work. Teachers will not track you down to remind you! Students *may* be entitled to make up assignments because of an unexcused absence but is subjected to a grade penalty as stated below. At the end of each grading period all missing assignments will be recorded as a zero in the gradebook due to lack of evidence of proficiency of the standard.

6. Academic Integrity Violation Practices ([MVHS Academic Integrity Policy](#)):

Honesty, trust and integrity are vital components of the education process. Examples of academic integrity violations include, but are not limited to, copying homework, allowing someone else to copy your work, plagiarism (taking or passing off another's ideas as one's own, including using Internet sources without documentation), copying

from another's exam, improperly obtaining and/or using tests, and using unauthorized notes/materials. All violations will be reported to the administration. Check with your teachers if you are unsure of their expectations.

7. Late Work Practices:

Any assignment not stamped or submitted on the day it is due is considered late and subjected to a grade penalty as stated below (except for excused absences). Special circumstances will be considered on a case by case basis.

Stamped Assignments: Late stamped assignments may be stamped until the assignment sheet is collected. Late stamps will incur a 50% penalty. After the assignment sheet is collected all missing stamps will be recorded as a zero in the gradebook. It is your responsibility to bring me the assignment sheet and your work for stamping.

Turn in Assignments: Late turn in assignments will be accepted until the end of the grading period. Work submitted late will incur a 10% penalty. Late work submitted in the 4 weeks preceding the end of the grading period will incur a 50% penalty. At the end of each grading period all missing assignments will be recorded as a zero in the gradebook. To submit a late assignment, fill out a purple late sheet, attach it to the late assignment and submit it to the box.

LON-CAPA Assignments: Lon-Capa assignments will NOT be accepted late. At the end of each grading period all missing LON-CAPA problems will be recorded as a zero in the gradebook.

8. Revision Practices:

Homework Revisions: The revision policy allows students to improve their assignment grades (50%) by showing enhanced understanding of content and extra effort. Assignments where revisions will be accepted to improve the grade will be denoted with a *star in the grade book. Revisions must be completed on a separate piece of paper with the correct answer explained using physics concepts/terms and or math derivations. Revisions must be stapled to the original work, be signed by a teacher or tutor on a blue revision sheet and be turned in by the end of each grading period.

Test Corrections: To improve understanding of physics content and to learn from previous mistakes, student's test scores may be improved (up to 10% based on original score) through test corrections/revisions; an alternative method of showing understanding. Test corrections must be completed in class, on a separate piece of paper with the correct answer explained using physics concepts/terms and or math derivations. Revisions must be stapled to the original test and kept in the classroom at all times.

9. Extra Credit Practices:

Extra credit may be offered in physics and will be based on performance on class tasks, assignments, and standards. All students will have the opportunity to earn extra credit when applicable.

10. Additional Grading Practices:

Grade Book Update Policy: Grades will be posted on SIS and both students and parents may use their school given ID and password to access SIS online. Students are responsible for checking their grades regularly and notifying teacher of mistakes ASAP. Grade information on SIS will be updated a minimum of once during each grading period or as major assignments are graded. You may contact your teacher at any time via email for additional grade reports.

Additional Information:

Classroom Rules and Expected Behaviors:

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Our classroom is a place where people work together to a common goal in an atmosphere of mutual respect and trust. As adults, you know what behaviors are appropriate in such a setting. Students are expected to abide by district/school conduct guidelines. Refer to the "Handbook of School Policies" with regard to specific rules.

Classroom Rules and Expected Behaviors in Class: Throughout the year you will be given many opportunities to learn from each other while working together. You are expected to help each other learn physics by sharing ideas and explanations of difficult concepts at appropriate times. While in the classroom everyone is expected to show respect to every other person in the class. This includes allowing only one person to speak at time, listening attentively, and taking responsibility for your space. Everyone is expected to participate in class discussions, remain on task and work collaboratively with others.

Classroom Rules and Expected Behaviors in Lab: While in the lab we are dealing with very expensive and sometime dangerous equipment and materials. Everyone is expected to follow district rules for safety in a science classroom and treat the equipment with care. There is to be no horseplay and you are to leave the lab in better condition than you found it; minding to clean up all personal items. Anyone who is not following lab rules or safe operating procedures (see Lab Safety Guidelines) will be denied access to the lab and will lose credit for the experiments being done. ***There is no food or drink allowed in the lab area or near the computers.**

Leaving the Classroom:

Anytime you leave the classroom you need to sign out on the sheet by the door indicating your location. This is imperative to help find you in case of a campus emergency. You may only leave class for 5 min and you need to return promptly to ensure you do not miss instruction. Please allow only 2 people out of the room at any given time.

Electronics Policies:

You may NOT have any electronics (iPod, cell phone, Laptop) out during class without permission for it to be used as an educational tool. Use must be in line with the MVLA Digital Device and Behavior Policies. While working in a digital and collaborative environment, students should always conduct themselves as good digital citizens by adhering to the following: 1. Respect Yourself. 2. Protect Yourself. 3. Respect Others. 4. Protect Others. 5. Respect Intellectual Property.

6. Protect Intellectual Property. ***Please note: Pictures or Videos of students and class activities may NOT be posted online.**

Getting Class Information:

There are several places to find information for this class. A record of each day's activities including the daily agenda, class announcements, directions on making up missed work, warm-ups, notes, examples, homework, and web resources may be found in absent binder, Google classroom and Google calendar:

Absent Binder:

A daily update will be made to the absent binder that sits on the teacher's desk. Every time you miss class you need to see the absent binder.

Google Classroom & Calendar:

A daily update will be made to the physics Google classroom and calendar. See your teacher for the access code. Add the physics Google calendar to your calendar.

Teacher Website:

You may visit my MVHS teacher website at <https://www.mvla.net/Page/4963>. Here you will find course information, wellness resources and links to the online Hewitt Textbook, and Lon-Capa. A full copy of the physics workbook is also available to print if needed.

Seeking Help:

Do not let yourself get behind; if you feel yourself getting behind, please seek help as soon as possible. Contact your teacher to find out the best time to get help or make an appointment. In addition, there are both adult and peer tutors available in the tutorial center on campus. Tutorial center info & a list of available tutors can be found by contacting the tutorial center coordinator.

Instructor's Email Address:

Gina.Dunsmore@mvla.net