Hillgrove High School

“One Team One Goal”

**Science Department**

**2019 – 2020 AP® Physics 1**

**Mr. John Dine**

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***Lecture:*** Monday – Friday, 90 minutes each period

***Text:*** Etkina, Planinsic & Van Heuvelen. *College Physics: Explore and Apply, 2e*. Pearson (2018).

***Course Description:*** AP® Physics 1 is designed to provide a first-year college-level algebra-based physics course for students who are interested in a high-level introductory physics class. The course is designed to provide students with a conceptual understanding of physics and skills to apply that knowledge to effectively approach and solve problems. At the end of the year each student is expected to take the AP exam at an approximate cost of $94.

***Classes:*** The course concepts will be discovered through both scientific inquiry and critical thinking. In many situations, tasks or problems will be presented to the class and groups or individuals will be responsible for predicting and/or explaining the results by connecting prior knowledge to new concepts. Students will also observe physical phenomenon demonstrated by the instructor and use concepts from the course to hypothesize on the physical results. The instructor will act as a guide through background information as students gain knowledge through active engagement in the observation and re-creation of physical phenomenon

***Classwork***: Students are expected to actively participate in all class activities and assignments. Failure to remain on-task, excessive talking, coming to class unprepared, being tardy to class, etc. will result in a significantly lowered classwork grade.

***Tardy Policy***: To avoid being counted tardy, students must be seated and ready for class when the bell rings. You will be required to obtain a tardy pass through the late arrival system (LAS) to enter the room if you arrive after the bell for 1st period. See handbook for the appropriate consequences, which may include administrative detention, Saturday school, ISS and loss of parking privileges. Regardless, you will be referred to an administrator after Four unexcused tardies.

***Makeup Work***: Students with an excused absence will have 5 days to make up missed assignments and class work. Students absent the day before any announced assignment will be expected to complete the assignment upon their return. It is the student’s responsibility upon returning from an absence to schedule a date to makeup work with the teacher. *Students, realize that make up work is your responsibility!*

***Late Work***: LATE WORK WILL NOT BE ACCEPTED!!! It is your responsibility to keep up with assignments and due dates.

***Behavior:*** As a teacher, it is my responsibility to assure that all students are provided with an equal opportunity to learn. Students who choose to deny other students that right by being tardy, disruptive, and dishonest or initiate any type of behavioral problem will be dealt with as seen appropriate by the teacher including verbal warnings, detention and office referrals.

***Extra Help Time***: Additional help with class material can be scheduled by appointment

***Technology***: Personal technology such as cell phones, tablets and other digital communication devices can only be used ***WHEN PERMITTED BY THE TEACHER*.** Use of personal technology when not permitted by the teacher will result in detention or an office referral along with the confiscation of the devices(s). During tests and quizzes technology WILL NOT be allowed and any suspected use of technology during those assessments will result in additional academic integrity charges.

***Academic Integrity*:** Cheating is considered a serious matter. The parents of a student who has been involved in cheating will be notified and the student will receive a grade of zero for the test or evaluation period, and a grade of U in conduct.

For this course, cheating is defined as, but is not limited to, the following acts:

\*Copying anyone’s answers to questions, lab activities, study guides, classwork or homework assignments

\*Taking any information verbatim from any source, including the Internet, without giving proper credit to the author, or rearranging the order of words and/or changing some words as written by the author and claiming the work as his or her own, i.e., plagiarism.

\*Looking onto another students paper during a quiz or a test.

\*Having available any study notes or other test aids during a test or quiz without the teacher’s permission.

\*Collaborating on assignments when independent work is expected. *Be certain that individual lab reports, even when performed as a group, are written in your own words.*

*\**Students displaying or using cell phones, palm pilots, PDA’s, or other digital communication devices during tests and/or quizzes will be referred to administration, and will be given a zero for that test or quiz.

***Grading:*** Final grades will be calculated using the following percentage

Tests 40%

Quizzes 15%

Homework 5%

Laboratory 25%

Final Exam 15%

***Laboratory:*** In this course, 25% of the class time will be spent performing a variety of laboratory experiments that are hands-on as well as inquiry and student-based. Students will be expected to organize a lab notebook that clearly details their procedures, data and results for each of the labs. For each lab students will be assessed by completing a lab-based free response question from the AP exam. Students will also be responsible completing a formal, written lab report equivalent to that of a first year college lab write-up once each semester. Students should keep in mind that some labs may require more than one class period to complete. Specifically, for this course, there will be an emphasis on students designing experiments to answer a given question concerning the topic in question. Students will learn how to determine variables of interest, methods of measurements and methods of data analysis.

**AP Physics I exam will be Thursday May 7th.**

**Units
1 Constant motion and balanced forces**

**2 Accelerated motion and unbalanced forces**

**3 Projectile and circular motion**

**4 Work, power and energy**

**5 Momentum**

**6 Torque, rotational inertia and momentum**

**7 SHM and mechanical waves**

**8 Electric charge and DC**