

WORTHINGTON KILBOURNE HIGH SCHOOL

AP[®] Physics 1: Mechanics

Doug Troutner

Textbook: *Physics 7th Edition - Giancoli*

Email: dtroutner@wscloud.org

OVERVIEW

AP[®] Physics 1 is a college level course designed for students planning on taking the advanced placement exam on May 8, 2018. The major topics covered in this course will include mechanics, energy, momentum, wave mechanics, and simple circuits.

REGULAR PHYSICS OPTION

If a student is experiencing extreme difficulties with the content of AP[®] Physics 1, the student and the instructor will consider a change to Regular Physics. Prior to such a move, the student needs to have demonstrated significant effort (completion of all assignments, seeking extra help from the instructor or the academic assistant.) Lack of effort on the student's part is not a reason to switch. Earning a "B" in the course is also not a reason to switch. If such a course change is deemed appropriate,

- most aspects about the class will remain unchanged. The student attends class at the same time and location as before. They are responsible for the same quizzes, labs and most of the homework assignments. The tests and exams though will be different.
- the student will lose the AP[®] designation on their transcript as well as losing the benefit of the weighted grades given to AP[®] courses.

No changes to Regular Physics will be made until the end of the first quarter to allow the student to demonstrate their effort and commitment to the coursework.

SUPPLIES

Each student will be issued a book (*Physics, 7th edition, Giancoli*).

Each student will need to bring a calculator capable of performing trigonometric functions, logarithms, and exponential functions with them to class each day. Calculators are permitted the AP[®] exam, therefore proper usage must be learned.

Each student should also have available to them graph paper, a ruler, and a protractor.

GENERAL PROCEDURES

Typical class time in AP[®] Physics 1 will consist of lecture, discussion, problem solving, and lab experiences.

STUDENT RESPONSIBILITIES

Students are expected to follow the building rules as set forth in the student handbook.

In addition, if a student is absent from class, they have the responsibility to:
get notes from a fellow student.

upon returning to class, hand in any assignments due during their absence, pick up any material passed out during their absence, and schedule a time for making up a lab or a test, if applicable.

If a student has a pre-excused absence (field trip, appointment, vacation, etc.), all assignments are still due as scheduled. If there is a lab or a test scheduled, the student must make arrangements **prior** to their absence.

ASSESSMENTS

Grades will be based upon homework, lab reports, quizzes, tests, a semester project and the semester exam. The relative weights of these assessments are:

Quarter Grade

10%	homework
20%	lab reports
70%	quizzes and tests

Semester Grade

36%	first (or third) quarter grade
36%	second (or fourth) quarter grade
8%	semester project
20%	semester exam

All assignments are posted on the weekly calendar.

Homework

Students will receive homework assignments for each topic covered. Some assignments may be graded according to completion while most will be graded for completeness and accuracy. Points for completion will only be awarded if there is some evidence of effort. An answer, by itself, does not imply effort. Homework is due at the start of class. Late homework will **not** receive credit.

Lab Reports

Most units covered will have one or more labs to introduce or reinforce the concepts. Each student will hand in an individual lab report summarizing what the student has done and learned in the lab. Neatness will also be a factor in the grading of a lab report.

In a group lab, the grading will be done by:

Each student completes their own lab report and is assigned a letter which they place at the top of their report next to their name.

All reports from the group are paper clipped together and handed in as a group.

One letter will be chosen randomly. The report from each group having the chosen letter will be graded. All group members turning in a report will receive the grade of the chosen report.

Students may ask to have their lab report graded individually if a problem exists in their group. Arrangements for individual grading must be made before the random letter is chosen.

Some labs will be take home labs. These are to be completed at home and will be graded individually.

All labs are due at the beginning of the period on the scheduled day. Any labs turned in after the start of the period, but before 3:05 pm that day will lose 20%. Labs turned in after the due date will lose an additional 20% per day.

Quizzes

Each unit will have several quizzes. The date and topics covered on the quiz appear on the course calendar. There are no "make-up" quizzes. If you are absent from class for an excused reason, you are exempt from the quiz.

Tests

Students will demonstrate their knowledge of a unit's topics through tests. Tests will be given at the end of a unit, approximately every three weeks.

Project

Each semester, the students will be assigned a project. The project will be completed at home and can be done individually or, for some projects, in small groups. Projects are due on the scheduled date regardless of a student's attendance at school that day.

Exam

A semester exam will be given at the midpoint and end of the course. The format of the exam will be similar to that on the AP[®] exam.

AP[®] Exam

The AP[®] exam will be administered on May 8, 2018. Many colleges will award college credit for qualifying scores on this exam. The score has no effect on a student's grade in this course.

Grading Scale

Floating 90 - 80 - 70 - 60.

ACADEMIC INTEGRITY

All students are expected to demonstrate the utmost in terms of honesty and academic integrity. The following examples, although not exhaustive, can be used as guidelines:

Homework

Although students are encouraged to "work together", not all types of "working together" are ethical.

- Two students, both contributing to the discussion, arrive at an answer. **ETHICAL**
- One student, without his paper present, asking another what steps are necessary to solve a problem. **ETHICAL**
- One student, with his paper present, asking another what steps are necessary to solve a problem. **CHEATING** (The difference is that the student doesn't have the opportunity to actually understand before writing it down.)
- One student possessing someone else's paper while the owner of the paper is not present. **CHEATING**
- If you are getting an answer to a math problem without actually punching the numbers into your calculator, you are **CHEATING**.

Lab Reports

Take home labs, since they are to be done individually, are viewed as homework assignments in terms of academic honesty issues. In-class, group labs are meant to be discussed as a group although each person will turn in their own report. Having one person do the report and the other members merely copying their work is not acceptable.

Quizzes, Tests, Exams

All of the following, although not exhaustive, are **CHEATING**.

- Looking at someone else's paper, regardless of whether or not any answers are used.
- Asking for, or giving, information about the material covered on the test/exam.

In any instance of cheating, the person offering the information receives the same penalty as the person seeking the information!

In addition to receiving no credit for the assignment, penalties may include: academic probation, detentions, out-of-school suspension, loss of course credit, denial of school scholarships, loss of commencement exercise privilege, and a notation on the student's transcript.

TIPS FOR SUCCESS

Notes

You are the expert on how you best learn. Watch. Listen. Take notes. Study.

Homework

Begin the problem sets as early as possible. Do as many of the problems as you can and write down questions on those which you can't do so you may ask in class. If you haven't started the assignment, you can't ask good questions.

Quizzes, Tests

Make a summary page of all formulas and concepts learned during a unit. Pretend to be making a cheat sheet for the test and put down everything you think will be useful.

Make flash cards of all formulas, units, and vocabulary words.

Find every worksheet completed during the unit and rework every other problem without looking at your solutions.

Form a study group. Discuss the concepts learned in the unit and explain them to each other. Give each other sample problems to work out.

Make up a list of sample problems similar to the problems on the worksheets. Be sure to include problems and short answer type questions. Try to anticipate the short answer questions which will be on the test.

Keep a list of vocabulary words and units we learn. Write a sentence or two about each to describe what it means, when it is used, and how it relates to other concepts.

General

Don't allow yourself to fall behind. Do your homework on a timely basis. Come to class prepared with good questions. If you are having problems, see me or the academic assistant as soon as possible.

Academic Integrity Statement: *In this class you will neither give nor receive unauthorized aid in class work, quizzes, examinations, preparation of reports or projects, or in any other work that I use to evaluate you without specific permission for collaboration or without proper citation.*

Worthington Kilbourne Code of Conduct Honor Statement: *"As a student of integrity at WKHS, I have neither given nor received unauthorized aid on this assignment."*