

# ADVANCED PLACEMENT PHYSICS 1

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Prerequisites: B in Chemistry Honors, teacher recommendation  
Completion of Algebra II or Completion/Concurrent Enrollment in Algebra II Honors  
Textbook: Etkina, Gentile, Van Heuvelen. College Physics: AP Edition. 1<sup>st</sup> ed.  
Credits: 6

## SECTION 1: COURSE BACKGROUND

### Course Description:

AP Physics 1 is an algebra-based **college-level** introductory physics course. The course is designed to be equivalent to the first semester of a typical algebra-based college sequence in physics. Major areas of study in the course include kinematics, Newton's laws of motion & uniform circular motion, energy & linear momentum, rotation, waves & sound, electrostatics, and DC Circuits.

The main goal of the course is to further develop students' problem solving and critical thinking skills through in-depth investigation of introductory physics. This course emphasizes problem solving, working collaboratively, and communicating scientifically in both written and oral form. Algebra & trigonometry is used extensively, both in developing and unifying concepts and in problem solving. The laboratory component of this course focuses on the design of experiments, with students developing skill in measuring, organizing, and analyzing data.

### Course Philosophy:

Students are **expected** to spend a considerable amount of time outside of class in homework preparation, daily studying and reading the textbook. I equate this to at least one hour EACH night (including weekends and school breaks). Lumping this time until the night before class will only hurt your understanding of the material. You need constant exposure to the material in order to have the full potential of understanding it. Late homework will not be tolerated and will receive a grade of zero. You must complete all homework assignments in order to succeed on chapter tests and the AP exam. Practice is the best method to prepare. Not only do you need to know the material for the exam, you need to know how to solve problems quickly and use deductive logic and reasoning to eliminate multiple-choice answers in order to finish the exam in the time permitted. Whether or not you plan to take the AP exam in May, you will be taking an AP exam (or many) in class for a grade.

### Calculator:

There is a limited number of scientific calculators available during class. These will be signed out on a first come-first serve basis. If you wish to purchase your own graphing calculator for this course, a TI-89 is strongly recommended. Please check with your math instructor first to make sure you can use the same calculator in math class.

## SECTION 2: STUDENT EXPECTATIONS

### Classroom Behavior:

The following behaviors are expected of students while participating in classroom activities.

- Physics can be a very challenging class at times and everyone in the course must feel comfortable to ask questions. Students need to respect themselves, their peers, and their teacher in order to create a positive environment. Questions are vital to a physics class (Mr. McGovern is a huge fan when people ask questions), and everyone must feel comfortable to ask.
- Please raise your hand when you have a question or comment. If you need to go to the bathroom, office, nurse, etc. please quietly fill out a pass without interrupting the class. Only one person may leave the classroom at a time (unless it is a medical emergency).
- Please enter the classroom quietly, find your seat, read the board for the starting activity, take out your homework for checking, and begin the starting activity.
- Please make sure that your workspace (desk and/or laboratory area) is clean when you are dismissed from class.

### Communications Expectations:

As a college-equivalent course, I will treat you as college freshmen and discuss any issues with you first. I would expect you to discuss any issues with me first for many reasons but mainly because you will have to interact with your professors next year. Since this is still high school, I understand you may feel that an escalation is necessary, but I implore you to discuss issues with me first.

### Laboratory Behavior:

The following behaviors are expected of students while participating in laboratory activities:

- Students must wear safety goggles when required to by the instructor.
- ***Sandals and open toed shoes are not permitted.***
- ***Long hair must be tied back during lab activities.***
- Horseplay will not be tolerated, and students will receive a grade of zero if inappropriate behavior occurs.
- Students will only handle lab equipment with the permission of the instructor. If lab benches have equipment ready for a lab, you cannot touch the equipment before receiving proper instructions.
- All equipment must be returned to its proper location in the laboratory before you leave.
- *Any lab equipment broken or damaged by students due to misuse is the financial responsibility of the student. The student will be charged for equipment replacement.*

### Plagiarism & Lab Activities:

You may work together on labs, class work, etc. only when I state at the beginning of the activity that it is acceptable to work with other students. The “group rule” will expire at the end of the period. The general guideline for labs is that you work in groups until the class period is over. After the period is over, ***you are to complete your lab report individually.***

### Plagiarism, General:

Please refer to section 7 of this document.

### Gmail, Google Classroom, Google Drive, & PowerSchool:

It is your responsibility to check Gmail & Google Classroom ***every day.*** You also need to check PowerSchool to see your current marking period grade. It is your responsibility to report any errors in your grade. *Note that grades are posted before assignments are returned.*

### Field Trips:

As stated on the field trip permission slip, it is your responsibility for any make-up work you missed. Please note that if you miss the day prior to a test/quiz, you will take the test/quiz as scheduled. **Students will not be given permission to attend a field trip during AP exam review (between spring break and the AP exam).**

In order to attend any physics-sponsored field trip, you must have at least a 70% in the current marking period, have only earned 2 or less teacher detentions (excluding cell phone detentions), have only earned 2 or fewer “Wednesdays” from **any** teacher, and have not been suspended during the current academic year.

### SECTION 3: GRADING

#### Homework:

Homework will be assigned regularly as a method to assess understanding. Homework will be completed on loose-leaf paper and will be submitted via a Google Form by taking clear pictures of your work. Homework will not be graded for accuracy. Students will not have an opportunity to correct a missing submission. Homework is not accepted late.

#### Concept Map:

You are required to keep building your concept map as you review for each unit test. Additionally, you are required to keep an updated version of your concept map in the shared Google Drive folder. Study guide slides are due the day before the unit test. Connection slides will be due after the completion of the final unit.

#### Online Tutorials (Khan):

If you score below a 70% on a unit test, you might be required to complete the next unit's tutorial to better prepare for upcoming tests. Additionally, you are to complete tutorials on tests you scored below a 70% on as part of your AP exam review assignment in April.

#### Marking Period Calculation:

Grades will be calculated using total points earned divided by total points possible.

<i>Assignment Category</i>	<i>Typical Points Possible</i>	<i>Graded on</i>	<i>Correctable?</i>
Unit Tests	100	Accuracy with AP Curve	Yes: For Some Points
Labs	30	Accuracy	No
Projects	60 - 120	Accuracy	No
Daily Homework	2	Participation	No
Homework (AP Workbook, AP Classroom)	1 per question	Participation	No
Group AP FRQ Question	7 - 12	Participation	No

#### Final Exam:

<i>Category</i>	<i>E2 (Final Exam)</i>
Practice AP Exam (administered in April)	70%
Concept Map <ul style="list-style-type: none"><li>Study Guide due before each unit test</li><li>Connections due in March/April</li></ul>	29%
June Exam on Post AP Topic(s)	1%*

*\*Students who qualify for Final Exam exemption as per Governor Livingston guidelines can be exempt from the June Final Exam only. All students will complete the practice AP exam and submit a concept map for a grade. All students will have an E2 grade reported on PowerSchool counting as 10% of the final course grade.*

#### Common Deductions:

- Using a Pen for Math
- Submission not Stapled
- No zero in front of decimals (i.e. 0.1 versus .1)
- No unit (i.e. 5 m/s versus 5)

#### No Credit Scenarios:

- Assignment Required to be Typed (including Lab Reports) not Typed
- Disruptive Behavior during Assessment

## SECTION 4: ABSENCE POLICY

### Labs/Graded Assignments/Collected Homework/AP Questions:

You are expected to submit all missing labs, graded assignments, collected homework and/or AP Questions the day you return to school, regardless if class meets or not.

### Lab Activity:

If you are absent on a day where a lab activity occurred during class (not necessarily only on “lab days”), it is your responsibility to schedule a make-up time the day you return. Failure to do so will result in your lab report automatically being one day late. Failure to schedule a make-up time in two days after returning to school will result in a grade of zero.

### Tests:

If you are absent for the entire school day, you are expected to meet with me the day you return to schedule a missed test. You should plan on making up the missed test during your next class meeting, study hall, or lunch the day you return. ***If you are absent for only the class period or for a part of the school day*** (i.e. you are late to school because you did not wake up on time), ***you are expected to make up the assessment during lunch***. Failure to do so will result in a zero. ***The make-up exam may or may not be different than the original exam.***

### Quiz (Homework or AP):

If you miss a Homework Check Quiz or Quiz FRQ, you will be exempted from that assessment. You are encouraged to complete the assessment on your own in preparation for the unit test.

### Take Home Assessments/Extra Credit Assignments:

On the extremely rare occasion that you are offered extra credit (usually in the form of test corrections) or there is a take home assessment, these items will not be accepted late for any reason. If you will not be in school on the due date, your parent/guardian or friend must bring the assignment to me on the due date. Be aware that extra credit is just what it sounds like – extra credit. It is not required for the course. If it is late or you are absent from class when there is an in-class opportunity, there are no make-ups. No exceptions.

### Location of Missed Handouts:

Please check the absent folder when you are absent for every document you missed (except for quizzes and tests).

### Absent Protocol:

Please follow the following protocol when you are absent.

- Check on Google Classroom to see what topic(s) you missed.
- Ask a classmate for a copy of the notes and any example problems. If you missed a lab, you need to check the extra help/makeup calendar and email me when you will make up the lab. If you missed a test, you need to email me with lunch and/or study hall options. If you do not have lunch or study hall options, you will make the test up during class.
- Read the relevant section(s) in your textbook based on the electronic class calendar.
- Upon return to school, check the absent folder for any documents distributed during your absence.
- Ask a classmate to explain any questions you might have. *This allows your classmate to have a better understanding of the material as well by having him/her explain it to you.*
- If your classmates cannot assist you, then come in to see me for extra help or email me the question(s) you have.

## SECTION 5: LATE POLICY

### Collected Assignments:

Assignments (other than homework problems) can be submitted one day late for a maximum of half credit. If class does not meet one day after the due date, you must submit the late assignment on the drop day. If you wait until the next time class meets, the assignment will not be accepted.

To be clear, the assignment is due at the start of the period and is considered late after class has started. If you arrive to school late (after class met) or leave school early (before you would go to class) for any reason, you are required to submit any work that day or it will be counted late.

## **SECTION 6: DISCIPLINE & PENALTIES**

*This is a college-level advanced placement course and this section of the syllabus should not need to exist. There should be absolutely zero behavioral problems in this course.*

### **Infractions:**

- Disruptive Behavior
- Inappropriate Language
- Insubordination
- Damaged/Destroyed Lab Equipment
- Cell Phone Usage
- Other inappropriate behavior as determined by the instructor.

### **Detention Times:**

Depending on the infraction, the instructor will issue a detention for one of the meeting times below:

- 7:30 – 7:45 am the following school day
- 10:53 – 11:15 am
- 11:19 – 11:45 am

### **Detention Rules:**

- No talking
- No non-verbal communication
- No iPods/MP3 players
- No cell phones
- No portable gaming devices
- No food or drink
- No sleeping
- Students must bring schoolwork to complete or a book to read while at detention.
- Arrive to detention on time. You cannot be late to detention.

### **Missed/Make-up detention:**

As per school policy, you have one make-up opportunity. The make-up is automatically scheduled for the next school day after the original detention. Failure to attend the detention and make-up will result in an automatic conduct report referral and subsequent office detention.

**SECTION 7: ACADEMIC DISHONESTY**

Students found participating in (an) Academic Dishonest activity(ies), as defined below, will be reported to the Governor Livingston administration in accordance with the student handbook and subjected to disciplinary action as determined by the administration (including, but not limited to, loss of credit for the assignment). Additionally, students will be banned from participating in any extra credit activities for the duration of the course, will have any previous extra credit activities stripped from the academic record, will be ineligible to attend the annual Physics Day trip to Six Flags Great Adventure, and will forfeit the privilege of requesting a letter of recommendation for college.

*The following definition of academic dishonesty will be used in this course. It is adapted from the University of Colorado at Denver and Wikipedia.*

Academic Dishonesty (also known as academic misconduct or academic fraud) is defined as any type of cheating that occurs in relation to a formal academic exercise. It may include, but is not limited to plagiarism, fabrication, deception, cheating, bribery, sabotage, impersonation, or complicity.

- Plagiarism: the use of another person’s distinctive ideas or words without acknowledgement (word-for-word copying, interspersing/rewriting of one’s own words here and there while copying another’s work, fabrication of references, submission of another’s work as one’s own, neglecting quotation marks on material that is otherwise acknowledged)
- Fabrication: falsification of data, information, or citations in any formal academic exercise
- Deception: providing false information to an instructor concerning a formal academic exercise (i.e. giving a false excuse to missing a deadline or missing an examination)
- Cheating: any attempt to obtain assistance in a formal academic exercise (the possession, communication, or use of information, materials, notes, study aids or other devices not authorized by the instructor - i.e. copying from another’s paper or receiving unauthorized assistance from another during an academic exercise or in the submission of academic material, asking another student for the contents of an exam already administered to the student you are asking)
- Bribery: giving assignment answers or test answers for money or a service (i.e. you tell me what’s on test B and I’ll tell you what’s on test A)
- Sabotage: acting to prevent others from completing their work
- Impersonation: assuming a student’s identity with intent to provide an advantage for the student (i.e. logging into an electronic submission system as another student and completing their work)
- Complicity: knowingly contributing to another’s act of academic dishonesty (i.e. willingly providing information that should not be shared in order to give an advantage to another student or allowing a student to sign their name to work they did not participate in completing)

*By signing below, I certify that I have read and understand the procedures and requirements for AP Physics I.*

\_\_\_\_\_  
Student (Print Name)

\_\_\_\_\_  
Student (Sign Name)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Parent/Guardian (Print Name)

\_\_\_\_\_  
Parent/Guardian (Sign Name)

\_\_\_\_\_  
Date