

Ernest Righetti High School
Science Department
Summer Assignment for AP Physics 2021-2022

Mr. Rodriguez crodriguez@righetti.us

Righetti Physics Page: <http://crodriguez.righettiscience.com>

Dear AP Students and Parents:

Welcome to AP Physics! This is a College Board approved course offered to juniors and seniors who wish to continue their studies in physics. Students taking AP Physics must have satisfactorily completed math analysis and a year of college preparation physics or chemistry, as well concurrently being enrolled in calculus. The concepts covered in this course are chosen to coincide with a college level physics and prepare the student for the *College Board AP Physics Exam* in May. As an AP student, you are expected to read and understand concepts on your own, show initiative, work independently, and submit quality work at all times. The class is two semesters in length and is the equivalent to the first year college level physics course. In order to adequately prepare for this course, you will need to review the complete the following problems in this packet. If you have not previously completed a college preparation physics course, you will also need to complete the supplemental problems to help you learn the content covered in this course.

What you need to do:

- You and your parent must sign the attached stub and email it to Mr. Rodriguez prior to the start of the school.
- [Download a pdf file of *Physics: Principles with Applications* textbook from Mr. Rodriguez's website.](#)
- All assigned problems are due at the beginning of the school year, and you are expected to answer all verbal questions in complete sentences and show work on all mathematical problems. For those who have not previously completed college preparation physics, you are required to also complete the supplemental problems.
- Keep in mind that many concepts discussed within these assigned pages are supported by online notes at the Righetti Physics Page at <http://crodriguez.righettiscience.com>

Review Practice Exercises from the AP Physics Text: Answer questions completely with supporting evidence. Show work!

Chapter 1: Assigned Review Exercises: P. 16-18 #1, 2, 4, 8, 9, 12, 15, 19, 26, 29

Chapter 2: Assigned Review Exercises: P. 39-44 #1, 5, 15, 16, 20, 23, 25, 28, 33, 34, 42, 47, 62, 74, 80

Supplemental Problems: These problems are also required for students who have not previously completed college preparation physics.

Chapter 1: Assigned Supplemental Exercises: P. 16-18 #3, 13, 14, 16, 18, 22, 27, 36, 41

Chapter 2: Assigned Supplemental Exercises: P. 39-44 #2, 3, 6, 14, 17, 18, 24, 26, 37, 39

Advanced Placement Physics Course Syllabus: 2021-2022

I. General Information:

Course: AP Physics 1 *A/B*

Instructor: Mr. Rodriguez

Room: 111

Phone: Classroom: 937-2051 ext. 2111

Google Voice: (805) 270-5479

Text: Giancoli, D. (2005). *Physics: Principles with Applications*, 6th ed. Upper Saddle River, NJ: Prentice-Hall.

Materials: Calculator (mandatory). The College Board does not allow certain graphing calculators on exams, and the same applies for any test or quiz taken in this course.

Website: <http://crodriguez.righettiscience.com>

Canvas: <https://smjuhsd.instructure.com/login/saml>

Email: crodriguez@righetti.us

Email is the preferred method of contact, as the phone is not answered during class time.

II. Course Description:

AP Physics is a rigorous year long college level laboratory course designed to familiarize the student with the five major units to be covered at an introductory collegiate level: mechanics, fluid mechanics and thermal physics, electricity and magnetism, waves and optics, and modern physics. By signing up for AP Physics you are expected to take the College Board's *Advanced Placement Physics Examination* in May.

III. Grading Procedures and Regulations:

General: Grades are based upon chapter tests (100 points), quizzes (30 points), laboratory reports (15 points), nightly homework (~3 points), and participation (1 point/day) Grades will be calculated using the point system. A final exam will be given at the end of the semester and will be worth 200 pts. A student will be exempt from the final if s/he maintains a 92% test and homework average, **AND** the completed final review for the semester. All work done in AP Physics must be done as neatly as possible as illegible or disorganized assignments will receive a reduced grade.

Grading scale: A: 90-100%; B: 80-89%; C: 70-79%; D: 60-69%; F: below 60%. Grades are calculated by dividing the number of points earned by the number of points possible. The grade earned in physics is an accurate measure of what you have learned so grades are **not** subject to negotiation at any time.

Tests: Tests are given every two to three weeks generally after the completion of each chapter. Announced and unannounced quizzes are also given periodically. Calculators and other materials are not to be shared during tests. Not following test taking policies (such as talking during your test or while others are still working) will result in loss of points.

Laboratories: Laboratories are an integral part of AP Physics and are worth 15 points each. Each student must complete each laboratory to fully reach the course objectives and to receive credit for laboratory reports. Laboratory reports are submitted online.

Homework: Homework is assigned most nights and is due the next day before the bell rings unless otherwise instructed. Always check the board for the night's assignment. Homework that involves mathematical calculations must be done in pencil or digitally with work shown completely. If you are having difficulty with the assigned homework, submit your attempts and then ask questions during class or make arrangement to get help. Nightly homework assignments are posted on Mr. Rodriguez's website.

Makeup policy: You are given one week to makeup laboratories (due to excused absences). If you are absent on a lab day, plan immediately when you will make it up. Failure to makeup assignments within a week will result in a zero grade. One make-up test will be given for each 6 week grading period. This will be a unit test covering all material assigned during the previous 6 weeks in class and will be given during the last week of the grading period, during class time. The score earned on this test will be entered in place of all missed test and quizzes (excluding unexcused absences.) No other make up opportunity will be offered.

Mr. Rodriguez makes every attempt to NOT give tests on days when it is known in advance that several students will be out of class for school sponsored events, BUT, there is no special dispensation for students who miss tests for these reasons. Athletes will be expected to use the make up test day if they are out on the first test day. Students who have no required make ups may take this test as an option to improve their weakest test or quiz score. Work missed for unexcused absences such as cuts may not be made up.

Cheating: Any form of cheating in physics will receive a zero grade for that assignment and disciplinary action. Copying or sharing homework, laboratory reports, or during tests is considered cheating. During

tests, the person providing the information (knowingly or not) **as well as** the cheater will receive a zero grade, so cover your work during testing.

Citizenship and discipline: Students at Righetti High are assigned a citizenship grade, either (S)atisfactory, (N)eeds improvement or (U)nsatisfactory, at each grading period. Students requiring repeated reminders to follow class rules can expect to receive an unsatisfactory citizenship grade. Any behavior that the teacher deems unacceptable will result in a private discussion with the student with loss of participation points; then, if necessary a parent notification and/or dismissal from the class for the day. If the infractions continue, disciplinary action will follow in accordance with the school's discipline policy, as described in the student handbook.

Notebook and note taking: Notebooks are not graded but it is highly recommended that you take detailed notes (on lectures and readings) and keep all notes, assignments, and laboratory reports in an organized notebook or binder. It is good academic practice to review all notes for current material daily.

Electronics: Tablets must remain away during class unless otherwise instructed by the teacher. Tablets are to be used for appropriate educational purposes only. Tablets being used for any other purpose along with all cell phones and music players will be confiscated if they are out during class. Parents will have to come pick them up.

IV. Classroom Expectations and Contract.

Here are a few simple but important rules for success in this class:

- Make sure you bring any materials needed every day. This includes pencils, calculators, *and* your tablet (fully charged and functional)!
- Attendance is mandatory and necessary for success in this class. All absences must be excused, and you must notify me at least one week in advance to obtain permission to participate in a school activity that occurs during this class. Remember that you lab group must carry on if you are absent doing an experiment.
- Enter the class quietly, turn in homework and read the board before the bell rings. Refrain from loud talking or boisterous behavior in the classroom during passing period (or at any time.)
- To be considered on time, you must be in your seat, with all supplies, and prepared to learn before the bell rings. After the bell rings either begin work or wait quietly for the day's instruction without unnecessary conversations. Expect to be marked tardy if you are not ready to begin class. Do not get out of your seat and wait by the door towards the end of the period; wait to be excused!
- During laboratories, stay with your group and do not "roam" the room and mingle with other groups. You must remain "on task" during class time, as we do not have time to socialize. Students simply do not excel in physics when they use the class period as a social hour.
- Speak respectfully, always have respect for other's ideas and never interrupt anyone at anytime (especially the teacher). Help maintain a distraction-free learning environment during lectures and demonstrations by not talking during them. Furthermore, you are expected to contribute intelligently when called upon during class discussions.
- Please adhere to Righetti High's dress code.
- Keep all personal belongings put away during class time, this includes work from other classes, makeup and mirrors, notes, and any electronic devices (except calculators, of course).
- Help keep the room clean. Food, drink, candy, gum, or sunflower seeds are not permitted in the laboratory at any time. All trash will be kept off the floor (and the furniture) and do not write on anything that does not belong to you.
- Laboratory materials become the financial responsibility of the student when checked out for use during the experiment. Be careful with all the equipment!
- "Horseplay" cannot be tolerated during labs. Students whose actions are deemed by the teacher to represent a safety hazard will be immediately ejected from the classroom. Stern disciplinary action will follow. Such students will not receive credit for that experiment and may not be permitted to take part in further lab activities.
- Any behavior that the teacher deems unacceptable will result in a private discussion with the student; then, if necessary a parent notification and/or dismissal from the class for the day. If the infractions continue, disciplinary action will follow in accordance with the school's discipline policy, as described in the student handbook.

Cut along this line and email a copy of this stub to Mr. Rodriguez before school starts.

STATEMENT OF UNDERSTANDING

I have read the preceding rules and guidelines for the AP Physics class and understand its contents.

Student's name: _____

Student's signature: _____

Date: _____

Parent or guardian's signature: _____

Date: _____