

Honors Physics Syllabus

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Text *Physics 5th Edition, Giancoli; Conceptual Physics, Hewitt*

Required Supplies: Scientific calculator, pencils, colored pens, college rule paper and graph paper (no torn/frayed edges on assignments please), textbooks

Course Objective

Honors Physics is a comprehensive, college preparatory program that provides a basic survey of basic physics principles such as kinematics, projectile motion, basic mechanics, energy, momentum, rotational motion, simple motion, electricity, magnetism, waves, and light. Inquiry-based lab experiments, projects, analytical calculations, and scientific discourse will be strongly emphasized.

Grades: Grades will be determined by the following scale (they will not be rounded up):

Homework/Labs/Projects: 25%	A+	97-100	C+	77-79.99
Quizzes: 20%	A	93-96.99	C	73-76.99
Tests: 30%	A-	90-92.99	C-	70-72.99
Midterm: 10%	B+	87-89.99	D	60-69.99
Final: 15%	B	83-86.99	F	below 60.00
	B-	80-82.99		

Classroom Expectations: All of my classroom expectations can be summarized in one phrase:

Choose to do what is right.

1. Choose to respect yourself and your classmates, and your teacher.
2. Choose to do your best.
3. Choose to be punctual, prepared, alert, and open to learn.
4. Choose to exercise academic integrity.
5. Choose to engage in class discussion.

If you do not choose to do what is right, there will be progressive disciplinary action: verbal warning, parent phone call, detention, referral, suspension – depending on the severity and repetition of the offense. Citizenship grades are dependent on class participation, lab and class behavior, number of tardies, courtesy to others, and your accountability.

Quizzes and Tests

Quizzes will be given frequently (~1/week) and tests will be given at the end of each unit. Quizzes and tests will allow you to show what you have learned and apply it in a variety of situations with multiple-choice, true-false, matching, problem solving, and/or short answer questions. Any material and concepts covered in lecture, homework, assigned reading, and labs may appear on tests and quizzes. We will have class time the day before each test dedicated to review for the exam. Quizzes and tests will be announced so make every effort to be present during these times – if you are absent the day of the test, you will be required to make up the quiz or test within the number of days absent plus one upon your return from school. It is your responsibility to contact me to schedule a day to take a make-up test. You will be allowed to use scientific calculators on some quizzes and exams – however, storing information on calculators or sharing of calculators is **not allowed** during the test.

Midterm and Final

Midterms will be given approximately halfway through each semester and will cover the first and third quarters, respectively. Finals will be given at the end of each semester and will cover the whole semester's material. While the second semester final will primarily test the second semester material, you may be asked to draw on tools and knowledge gained during the first semester.

Homework

Homework will be assigned and checked regularly. Assignments will be graded quantitatively (completion of the assignment) and qualitatively (quality of the work). Homework is due and will be checked at the beginning of class on

the due date. We may correct some assignments and/or go over some homework questions during class, which you may make corrections and markings in a different colored pen than you used for the original assignment. **Do not copy** another's work. You will be responsible for keeping your assignments and then assembling them into a **homework packet**, which will be clearly labeled, fastened, and turned in on the day of the unit test.

If you are absent when homework was assigned, it is **your responsibility** to get the assignment from the teacher before or after class, and it is **your responsibility** to get any notes you need to complete the assignment from a classmate. Make-up work will be due within the number of days of your absence plus one after your return to school.

Laboratory Expectations and Safety

Our lab activities will give you experience in research, experimental design, scientific writing, and technical skills, which will be useful in most college courses and beyond. Labs will be conducted in small groups, where each student will have an important role to play in the group. Each student will then independently write and submit their **own** lab report. Complete any pre-lab work and pay attention to in-class instructions on the experiments and write-up so that your time in lab will go smoothly.

Laboratory write-ups/reports should be organized like so:

- I Title
- II Introduction (Background information)
- III Purpose
- IV Hypothesis
- V Materials and Methods (Equipment, Procedure, Diagrams)
- VI Results (Observations, Graphs, Tables, Images)
- VII Discussion (Analysis, Error Discussion)
- VIII Conclusion

You have the unique opportunity to perform inquiry-based laboratory experiments based on what we are discussing in lecture, but with this opportunity comes responsibility. We all must take care to ensure the health and safety of ourselves and others. Below is a list of important lab safety regulations:

- 1) Follow all written and verbal instructions carefully. If you do not understand part of a procedure, ask your teacher before proceeding.
- 2) Do not touch any equipment, chemicals, or other materials in the lab until instructed to do so.
- 3) If your hair is long enough to tie into a pony tail, do so.
- 4) Dispose waste material in the proper location – waste paper, towels, and other trash must be discarded in wastebaskets, any chemicals must be discarded in labeled waste containers. Run water over matches before discarding them in wastebaskets.
- 5) In case of fire, **stop, drop, and roll**. Someone else must retrieve a fire blanket to roll in, but do not wrap a blanket around someone standing up. Get under the safety shower instead if you are near it.
- 6) **Always** tell your teacher if you have an accident or injury, including spilling, scratches, broken materials, burns, cuts, or contact with corrosive liquid (acid or base).
- 7) Clean up spills immediately.
- 8) If you come in contact with a chemical, remove contaminated clothing immediately and put the contaminated area under running water (sink or shower) for at least 15 minutes.
- 9) Wear safety goggles at all times when doing an experiment involving chemicals or sharp objects.
- 10) If you get a chemical in your eyes, wash your eyes in the eye wash for at least 15 minutes. Do not direct the faucet water directly into your eye as the water pressure may cause more damage.
- 11) **No eating or drinking** allowed in the lab.
- 12) No practical-jokes, running, pushing, or other such horseplay.
- 13) Do not do any experiment other than those you have been assigned unless we have discussed it and you have my permission.
- 14) Wash your hands before you leave the lab. Avoid touching your eyes and face, and do not apply make-up in the lab.
- 15) Always remove electrical plugs by the plug and not the cord.
- 16) Remember to stay calm and have fun!

If you miss a lab due to absence, we will have exactly **one** lab make-up day per lab that I will schedule with any absent students. If you do not show up to the make-up day without letting me know in advance, you will receive a zero for the lab assignment.

Academic Integrity

- 1) Work based on any written material must be restated in your own words.
- 2) Do not plagiarize – claiming work that is not yours as your own.
- 3) Do not give homework or homework solutions, lab reports, quizzes, or exams to others to copy.
- 4) Use of electronic devices on quizzes and exams is forbidden.
- 5) Do not cut and paste information from the Internet or elsewhere and claim it as your own.
- 6) Do not cheat on assessments.
- 7) Discussion of content on quizzes or exams with another student from any period (including other physics students not in my classes) is not allowed.

If a student fails to follow these rules on academic integrity, they will receive no credit for the assignment, their parents will be contacted, their citizenship grade will drop, and any future or past letters of recommendation will be canceled or colleges will be contacted if letters were already sent. Multiple offenses may lead to removal from the class or other disciplinary action at the discretion of the teacher, the school administration, and the student’s guardian(s). Please contact me or see me outside of class if you have any questions related to plagiarism or cheating.

Technology

In this class, we will utilize technology and media in our investigations, discussions, and other in-class tasks. Our model of “**choosing to do the right thing**” still applies here:

- 1) Be respectful to yourself and other students by not distracting yourself or others with the technology. When you distract yourself, you and those around you will likely take more time to complete a task and will likely be unable to complete a task as thoroughly as they could.
- 2) Understand that the technology is used for your academic benefit and is provided at the discretion of your teacher.
- 3) The teacher reserves the right to confiscate cell phones that are out and/or ringing during class. Please silence your phone and leave it in your bag until the end of class.

Please refer to the Technology Acceptable Use Policy, the Chromebook Handbook, and the school’s Discipline Policy for more direction on technology use. Inappropriate use of Chromebooks, laptops, tablets, cell phones, or other technology may affect your final citizenship and academic grades.

Conclusion

If you have questions about anything we cover in this course, would like some extra review for a test or quiz, want to learn more about how to make physics concepts applicable to your life, I would be happy to meet with you. Because our topics build off each other, it is best to ensure you understand each topic fully as we go along. I would also love to provide extra online resources to you. If you are interested in trying a particular lab or experiment, let’s discuss to see if we can make it happen or if it is in the scope of our class. You are all highly capable and talented students and I am looking forward to investigating our natural world with you!

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My signature indicates I have fully read, understood, and agreed to these policies and expectations of Mrs. Robertson’s Honors Physics course, and assume full responsibility for any and all repercussions as a result of non-compliance.

Student Name: _____

Student Signature: _____ **Date:** _____

Parent Signature: _____ **Date:** _____