



**Advanced Honors Foundations of Physics
Abbott Lawrence Academy
2016-17**

COURSE SYLLABUS OVERVIEW

Teacher: Robert Kaiser
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Office Hours
Room: A201
Tuesday 2:45-4:00pm

Course Description:

Advanced Honors Foundations of Physics is an inquiry centered course. Major themes are mechanics, energy, vibrations and waves, light and optics, electricity and magnetism, and modern physics. Students learn through Socratic teaching, demos, readings, experiments, interactive virtual labs, and analysis of videos. Completion of this course prepares students to take the introductory physics MCAS, and introduces topics from the SAT Physics subject test.

Materials:

Textbook: *Physics: Principles & Problems*, Zitzewitz et al, McGraw Hill, 2013

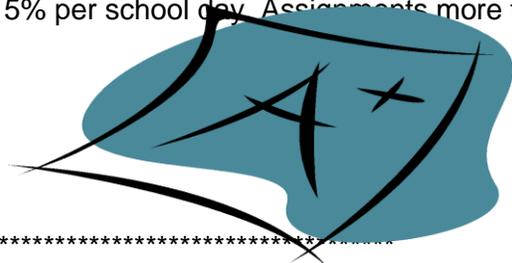
Website: <https://kaiserscience.wordpress.com/>

Suggested study guide (available from online booksellers, and Barnes & Noble)
Barron's SAT Subject Test Physics, Jansen and Young

Means of Evaluation: Students are evaluated on work done in class, homework, quizzes, tests, lab reports, papers, portfolios, or build projects. Many assignments will have a rubric.

Late Policy: Any late assignment will be penalized 5% per school day. Assignments more than one week late will not be accepted.

Assessments	(50%)
Notebooks/Classwork	(30%)
Homework	(20%)
Marking Period	(100%)



Grading Scale:

90-100% = A 80-89% = B 70-79% = C 65-69% = D 0-64% = F

Class Procedures:

Upon entering the classroom students take their assigned seat, open their notebook, and promptly begin our opening task (“Do Now”.) Students should bring a scientific calculator, pencils and erasers, colored pencils, and paper to take notes on. Math teachers may require students to purchase a specific calculator; in this class any scientific calculator will do. There are models available at Walmart, Five Below, K-Mart and Target for under \$10.

If you miss class it is your responsibility to find out what you missed, and to bring me the make-up work. You can see other students for notes from that day, and also see me. Many of our lessons will also be available on our website. Our online gradebook records missing work as a 0 until the assignment is turned in.

Classroom Expectations:

- 1) Respect your classroom: your classmates, yourself, and your teacher
- 2) Safety first.
- 3) Everyone participates – yet just one person at a time. (No talking over others.)

Special Needs, Academic Honesty, Misc:

If you have special needs please let me know. General school policies regarding academic honesty, and the student contract, apply in our course, and can be found in your student handbook. Any student caught cheating or plagiarizing will be given a zero on that assignment.

Electronics Policy:

MP3 players, cell phones, and food must remain outside of the classroom unless permission is given by the instructor. Otherwise, items will be confiscated.

About this class

How one does in this course depends on how seriously one takes it. Your grade will depend on your effort. On a deeper level, grades are not the reason that we’re here. We’re here to understand how our world works. Physics is concerned with the basic building blocks of all things – from atoms to galaxies, quarks to quasars. In a very real sense, all sciences are built on physics. Physicists love simplicity. They are constantly striving to find the most fundamental ideas that describe even the most complex of phenomena. For example, Newton found that a very small number of rules could describe all of the mechanical world – from steam engines to the motion of the planets. Not only is this idea beautiful, it’s downright amazing.