

Course Syllabus
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5/23/13

Academy Physics 1/2

The following areas are covered in Academy Physics

Scientific Thinking (2 weeks)
Constant velocity (3 weeks)
Uniform acceleration (4 weeks)
Newton's Laws (5 weeks)
Projectile motion (2 weeks)
Uniform circular motion (2 weeks)
Momentum (3 weeks)
Energy (4 weeks)
Rotational mechanics (1 week)
Electrostatics (2 weeks)
Electric potential (2 weeks)
Electric circuits (2 weeks)
Electromagnetism (2 weeks)
Waves (1 week)

Assessments are made for each of these topics and are an important part of the grade. Assessments are given every 2-3 weeks after each major topic. They are worth about 40 points. They generally consist of a mixture of multiple choice and free response questions. They are based upon the worksheets and labs that have been performed in class. There are no test retakes or corrections in my class. The semester finals are cumulative and are based on the previous tests

Also the class will cover buoyancy, fluids, special relativity and quantum physics.

Expectations for Academy physics

- *Students are expected in class on time with appropriate supplies.
- *Students are expected to participate and contribute to a high level of Socratic discussion
- *Each week there is a standing email homework, due date Sunday midnight. The student should send a 100 word journal or reflection on the week's physics classes.
- * Each quarter students are required to create a power point presentation on a New Scientist article. This independent research is then presented to the class.
- * Students are each required to do a science fair project. Research and data collection should be done in first and second quarters and the resultant work presented at a science fair in February.
- * The McClintock Science Bowl team is selected from Academy Physics students

By the end of the year students will have the following capabilities in physics

- Be prepared for any college course in engineering, physical science, medical field
- Have 70% of the content of the AP Physics B exam
- Have 100% of the content of the AP Physics B1 exam (2014)
- Be prepared for the Physics SAT exam

Grading

Points are roughly distributed in the following way

Final 20 % Tests 30 % Labs 10% In class work 10% Homework 30%

Grading scale 100-90 A , 80-89 B, 70-79 C, 60-69 D, below 59 F