

PHYSICS SYLLABUS 2017-2018

Teacher: Mr. Pinkstaff

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Class website: <http://pinkyscience.weebly.com/>

Office hours:

- *By appointment* before school or during lunch. After school only available during winter.

Physics is the study of decoding nature's rules. With this in mind, a conceptual approach will be emphasized in this class, enabling you to gain a better appreciation for the nature of science and how the world around you works, in order to be a more enlightened citizen. Additionally, all students will have the opportunity to earn 'Honors' credit by applying higher-level mathematics to the course content, better preparing them for future success in college physics and physics-related careers such as engineering. Frequent demonstrations, activities, and lab exercises will allow students to experience concepts, rather than passively read about them. Physics is a fascinating course and will challenge you intellectually while providing you with a wealth of practical information and tools.

COURSE CONTENT

Physics A: (Semester 1)

Intro: Math & Science

Standard 1: Motion

Standard 2: Forces

Standard 3: Vectors

Standard 4: Momentum & Energy

Standard 5: Gravity

Standard 6: Rotational Motion

Physics B: (Semester 2)

Standard 7: Properties of Matter

Standard 8: Thermodynamics

Standard 9: Waves, Sound, Light

Standard 10: Optics

Standard 11: Electricity

Standard 12: Magnetism

Final: String Theory

GRADING

As a college-prep course, students will be expected to meet stated deadlines, and re-takes will not be allowed. Grades will be determined as follows:

- Assignments (25%): Assignments will consist of textbook chapter questions, worksheets, and informal in-class lab activities. Assignments should be viewed as necessary practice in the course content. They will be treated as informal formative assessments, and feedback will be given to facilitate student growth. Late work may be submitted for half credit, until the end of that unit. Engagement in this work is critical for student learning.
- Quizzes (5%): Course content will be broken into small chunks for quizzes, allowing students to measure and get feedback on their level of comprehension. If remediation is needed, students should spend additional study time or seek peer or teacher tutoring to address any weaknesses.
- Lab/Project (20%): Select laboratory activities or projects will be designated within each unit, in order to apply and analyze key concepts. Students will submit a lab/project report, as evidence of their skill in *doing* science.
- Standards (50%): A test will be given at the end of each unit, measuring students' final (and best) understanding of content. Content will be aligned with objectives outlined at the beginning of the unit, and practiced in assignments, activities/labs, and quizzes. Students are expected to be fully prepared by the date of the test.

Grading scale:

Overall class grades will be determined using the below scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 0%-59%

HONORS OPTION

All students will have the opportunity to achieve an 'Honors' designation on their transcript at the completion of the class. Students must complete the honors coursework to at least a 70% to earn 'Honors' designation. Honors content will be designated along with the stated learning objectives at the beginning of each unit.

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POLICIES

Class Rules	Consequences for Breaking Rules
To ensure a safe and productive learning environment, students are expected to follow these few rules: <ol style="list-style-type: none">1. Follow directions and activity procedures2. Accept responsibility for YOUR actions3. Show respect to others and their property4. Do not do anything which will<ol style="list-style-type: none">a. ...disrupt the learning of othersb. ...disrupt the teacher teaching5. Electronic devices (iPod, cell phone, etc) should be turned OFF and put AWAY	If a student <i>chooses</i> to break a rule, they can expect: <ol style="list-style-type: none">1. Verbal warning2. Teacher/student conference, relocation of student3. Removal to hallway<ol style="list-style-type: none">a. Behavioral action planb. Parental contact4. Referral Severe offenses may result in immediate referral to the principal's office

ATTENDANCE & TARDIES

It is important for all students to be at class every day to maximize their learning. The occasional absences for unavoidable legitimate conflicts (family emergencies, etc) are accepted, and to be cleared through the attendance office. In the event of an absence, it is the student's responsibility to make up missed work as soon as possible. If possible, students should check in with the teacher prior to the absence; otherwise students should check the class website and communicate with classmates to check what they missed due to their absence.

Additionally, it is important to be in class and participate in "bell to bell" learning. Tardy students must check into the attendance office prior to entering class, and present a tardy slip upon entering the class. Excessive tardies will result in disciplinary action according to school policy.

COURSE MATERIALS

Textbook: *Conceptual Physics*, by Paul Hewitt. Addison-Wesley/Pearson.

Honors content will be primarily sourced from *Physics, Principles & Problems*, by Paul Zitzewitz. Glencoe/McGraw-Hill.

Students will need the following materials by the end of the first week:

3-ring binder, dividers, pencils, loose-leaf notebook paper, and a calculator (with scientific notation and trig functions; non-graphing is OK)

STUDENT & PARENT/GUARDIAN SIGNATURE

I have read and understand* the policies and expectations of Mr. Pinkstaff's Physics class

Student: _____

Parent/Guardian: _____

*Please contact Mr. Pinkstaff for clarification about any policies or expectations.