

PEP Conceptual Physics
2023-2024 Syllabus
Tutor: Mrs. Amy Haney

Course Description

Like a three-legged stool, a thorough science education requires a solid foundation in three disciplines: physics, chemistry, and biology. The knowledge of physics is essential to fully understanding the other two disciplines. This course is designed to be an introduction to physics and to lay a foundation for the upper sciences. Students will study laws of motion, matter and energy, electricity, magnetism, vibrations, waves and sound, and light and optics, with a strong emphasis on mathematical equations. This course is considered a lab science.

Goals of this class:

- To gain a better understanding of the physical world and its patterns
- To develop problem-solving skills
- To better appreciate the grandeur of God's creation

Preparing for Class

With classes meeting only two hours per week, preparation outside of class is essential to success. To free up class time for interactive activities, the lecture portion of this class will be delivered through videos, which have been recorded by former PEP tutor Emily Morales.

Students should watch these videos as assigned in the pacing guide, read the associated portion of the textbook, and take notes on this material at home. With the groundwork already done, class time can be spent answering questions, doing labs, and working together.

Students should bring the following to every class:

- Textbook (*Physics – A First Course, Second Edition* by Tom Hsu, PhD; 978-1604312034 (2012) or 978-1625718471 (2018))
- Binder (about a 2" capacity) with 14 dividers (fewer if you want to reuse them each quarter or semester)
- Loose-leaf paper
- Scientific calculator (not necessarily a graphing calculator)
- Pencil and eraser and/or erasable pen
- Printed worksheets listed in the pacing guide

Grading

Letter grades will be assigned at the end of each quarter with scores based on the following assignments:

45% Home/Class Work & Labs

40% Tests

15% Quizzes

Home/Class Work & Labs

A pacing guide will be provided each quarter and will include reading/video and written homework assignments. As with all PEP science classes, students are expected to spend an hour studying outside of class on each non-PEP day (Tuesday, Thursday, and Friday).

Parents will be provided with keys to homework and worksheets. Parents should mark any incorrect answers and have their student make corrections. Once all questions have been completed correctly, a parent should sign the top of the homework assignment to signify that all answers are correct. If the student is still struggling with a question, please note this under the parent signature. For answers reached using math, work should always be shown, even if the calculation was done “in your head.” Numerical answers should include units (e.g., grams, meters, pounds).

Most labs will be completed in class and turned in on the day the activity is done. Labs will be graded by the tutor.

Tests

Tests will be emailed to parents, who will proctor them at home. Tests will be closed-book, closed-note unless specified by the tutor. Each completed test is to be signed by a parent, sealed in an envelope, and then signed by a parent across the seal.

Quizzes

Quizzes will typically be given at the beginning of class each Wednesday. These will be over recent content, including reading/videos assigned for that day. On rare occasions, a quiz may be emailed to parents, completed at home, and returned in an envelope just like tests.

Questions

Students and parents may contact Mrs. Haney any time by emailing hanypep@gmail.com. Expect a response within 24 hours with the exception of Sunday. An email sent on Saturday will probably receive a response the same day, but a reply is not guaranteed until Monday morning.

Late Work Policy

All assignments are due at the beginning of class. Assignments turned in one PEP meeting late will be penalized 20%. Assignments turned in two PEP meetings late (typically one week late) will be penalized 50%. Assignments will not be accepted beyond two PEP meetings late. Days that a student is absent are not counted as late days if the parent provides notification in a timely manner.

If a student has completed a homework assignment but does not have a parent's signature on it, the student may show Mrs. Haney the homework and email a scan of the signed homework that same day, receiving a 5% deduction. If missing signatures are a repeated issue, the privilege of turning in homework via email may be revoked.

Absences

If a student must be absent from class, a parent is expected to notify the PEP Site Administrator and tutor(s). In the case of a planned absence, a parent should make arrangements **beforehand** for their student to make up any class work, tests, or quizzes. Typically, work will be due when the student returns to class. In cases of unplanned absence (e.g., illness or family emergency), the parent or student may work with the tutor to adjust due dates based on the situation.

If a student is absent on the day a test is due, the parent should either turn in the test in the tutor's PEP mailbox or email a scanned copy of the completed test on the date it is due.

Students who are absent when a quiz is given in class will need to complete the quiz at home. A parent will need to scan the completed quiz and email it to the tutor before the student returns to PEP. (This allows for quick grading and helps the student to keep pace with the class.)

If a student is absent on the day of a lab activity, they will have an opportunity to make up this grade at the discretion of the tutor. If it is not reasonable to make up the lab, the student will be excused from completing this assignment.