

## E.L. Haynes High School Physics

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### Course Overview

“If you're scientifically literate, the world looks very different to you and that understanding empowers you.”

- Neil Degrasse Tyson, Astrophysicist

- ▶ This course has been designed to prepare students for success in future science and mathematics courses and has been aligned with Newtonian Mechanics portion of the AP Physics B exam. The format of this course is structured to assist students in acquiring the necessary knowledge and skills to solve complex multi-step problems. Students will be required to work independently as well as in collaborative groups and to communicate their learning through calculations, written reports, and oral presentations.

### Essential Questions of Course

Throughout this course we will seek to answer the following *essential questions*:

- ▶ How is an understanding of physics useful and applicable to our daily lives and future careers?
- ▶ How can observations, experiences, and experimentation help us to better understand and describe the natural world?

### What we will explore?

This is an introductory Problem Based Learning course in algebra based physics. Problem Based Learning (PBL) is a pedagogical approach that uses meaningful, lifelike situations that students can learn from. Students will work collaboratively to solve authentic problems in kinematics, dynamics (Newton's laws), conservation of momentum, work/energy, and rotational dynamics.

### Assessment and Feedback

- ▶ Assessment will be used to help students and teachers identify areas of strength and areas for growth and to create instructional plans for students.
- ▶ Student performance will be evaluated based on standards, which are established for the course. The standards will evaluate demonstration of scientific inquiry, laboratory skills and knowledge of course content. Students will be assessed on the following scale of performance indicators:

- 4.0 – Advanced
- 3.0 – Proficient
- 2.0 – Developing
- 1.0 – Area of Concern

Students must earn a score of 3.0 or higher in order to receive credit for the course.

The grades will be broken down into several different categories:

- ▶ Formative assessment (35%) – This will include work that facilitates student learning. Students will receive feedback on formative assessments and will have multiple opportunities to demonstrate their understandings. Formative assessments may include warm ups (catalysts), homework, laboratory exercises, and other class assignments.
- ▶ Summative assessment (50%) – This will include work on which students will demonstrate their learning. Students will use feedback from formative assessments to improve their understanding of course topics, which they will then demonstrate on summative assessments. Summative assessments will include quizzes, tests, and problem based learning assignments.
- ▶ Work Hard habits (15%) – In order to support their progress in class, students will need to work hard! 15% of their course grade will be based on timely submission of high quality homework, class participation, preparation for class, and timely submission of work. Students will be involved in tracking their own “work hard” progress so that they can reflect on how their work habits support their overall success in class.

Each quarter will count toward students’ final grades. Additionally, students will take a final exam, which will be 20% of their final course grade. This final exam will be distributed at the beginning of the school year.

### **Course Materials**

Textbook: Principles of Physics by Kinetic Books (digital text on laptops)

Students will be expected to access the following materials in class every day:

- ▶ Laptop and power cord
- ▶ Binder
- ▶ Notebook paper (students should have at least one pack of loose leaf paper)
- ▶ Pen/pencil

We also recommend that students have:

- ▶ USB memory drive
- ▶ Graph paper
- ▶ Color pencils

### **Course Norms and Expectations**

- ▶ Students are required to complete homework each night. If students are unprepared with homework, they will be assigned to the Responsibility Center, where they will have time to complete the homework under the supervision of an adult.
- ▶ Students whose actions are habitually disruptive may be assigned a Refocus session, in order to correct unproductive habits.
- ▶ Electronic devices may only be used with the permission of the teacher. Phones should be turned off and kept away unless they are being used for instructional purposes in class.
- ▶ Students may not eat food other than fruit/vegetables outside of lunch time; only water can be consumed in

class.

- ▶ There is no gum on school property.
- ▶ Students will have 3 passes to use every quarter. Teachers will provide three passes on the first day of the quarter; they will not be replaced if lost.

### **Academic Integrity**

Academic integrity lies at the center of our commitment to our core values at E.L. Haynes High School. Learning is predicated on a relationship between teacher and learner. We expect each student to participate in their learning by demonstrating excellence in their work. We expect students to have the courage to ask for assistance, to have the curiosity to research their ideas, and, above all, to do their best in their work.

Violation of the Honor Code can take several forms, including but not limited to, plagiarism, cheating and copying. Any of the following forms without full acknowledgement of the original source counts as a violation of the Honor Code:

- ▶ Direct duplication by copying (or allowing to be copied) another's work, whether from a book, article, web-site, another student's assignment, etc.
- ▶ Inclusion of images, text, or other forms of media in whole or in part from the internet or other electronic resource without proper citation.
- ▶ Duplication in any manner of another's work during a quiz, text, or exam.
- ▶ Having and working from any unauthorized documents or resource during class time, including cheat-sheets, calculators, the internet or any other resource.
- ▶ Paraphrasing another's work closely, with minor changes, by which the essential meaning, from and/or progression of ideas are maintained.
- ▶ Piecing together sections of the work of others into a new whole.
- ▶ Submitting one's own work that has already been submitted for assessment purposes in another subject or at another school.
- ▶ Producing assignments with other people (e.g. another student, a tutor) that should be your own independent work (including turning in duplicate science lab reports; the data may be the same, but that is all that is permitted).
- ▶ Using frequently quoted phrases without citation.
- ▶ Pressuring others to violate the Honor Code.
- ▶ Presenting group work as individual, independent work, or presenting an individual's work as a group.
- ▶ Falsifying, creating and fabricating information, data, or sources.
- ▶ Unauthorized use of Spanish Translation websites.

Upon submission of every assignment throughout the year, students will be required to sign the E.L. Haynes High School Honor Pledge:

*On my honor as an E.L. Haynes student, I have neither given  
nor received unauthorized aid on this assignment.*

## **Absences**

Students with excused or unexcused absences are responsible for work missed and are expected to make it up for their own benefit.

*\* Teachers are not required to provide opportunities for students to make up missed work.*

Students who exceed 10 days of absences will be required to go through the E.L. Haynes Attendance Appeal Board (ELHAAB) to determine further action.

Procedures for monitoring and compliance of compulsory attendance:

1. All absences will be investigated daily.
2. A written notification after missing 5 days in a quarter will be sent to the parent/guardian.
3. After 6 absences in a quarter, a mandatory conference will be held with the student, a parent, the Advisor, and the Assistant Principal. At this time, the student will be placed on an attendance contract. Please note: After the Mandatory Attendance Conference, no further notes will be accepted unless for medical or legal excuses. If a parent fails to attend that Mandatory Attendance Conference, the record will be filed with Child and Family Protective Services.
4. Any absence after the Mandatory Attendance Meeting will result in referral to the school social worker who will work with the court system.

## **Tardiness**

Being prompt to all school commitments is an important expectation of each student. Students are required to be at school on time. Should a student arrive late during the morning meeting, he/she is required to apologize to the community for being late. If a student is late to class and it is unexcused the student will be assigned to a Refocus Session which will be held either after first dismissal at 4:15 PM that day or during Office Hours at 8:00 AM the following morning.

A parent/guardian will be notified in cases of habitual tardiness. Habitual tardiness is defined as 3 or more tardies. The parent/guardian and student will be expected to implement a plan to correct the problem. Should there be a reason that prevents a student from being on time, the parent/guardian should call the office or send a signed note to explain the situation.

Depending on the specifics, the tardy will be determined to be excused or unexcused according to the School Policies.