



Physics A & B

Grand Haven High School



Course Number: D62A / D62B

Grade Level: 11/12

Credits : 1

Prerequisite Courses : Algebra II (or concurrently)

Course Description

This course is designed to meet the State of Michigan curriculum content expectations for Physics as both a GHHS and State of Michigan graduation requirement. Physics is the most fundamental of the sciences and deals with the relationships between matter and energy. Laboratory experiments are done to reinforce Physics concepts and give first hand experiences with basic lab procedures and equipment. A student having his/her own scientific calculator is strongly recommended. Graphing calculators are helpful, but not required.

Course Objectives

Basic to moderate use and application of mathematical skill, reasoning, and problem solving are integral to this course.

The first semester content covers three comprehensive units

- 1) The Mathematical Description of Motion (Ch 1, 2, 3)
- 2) Forces and Interactions that cause Changes in Motion (Ch 4,7)
- 3) The Role of Conservation Laws to Describe Systems. (Ch 5,6)

The second semester content covers three comprehensive units that focus on the following three big ideas:

- 1) the Role of Waves in Transporting both Energy and Information (Ch 11,12)
- 2) Optical Phenomena and Applications (Ch 13,14)
- 3) Energy in Society Considerations - Electricity (Ch 16,17,18) and Nuclear Energy (ch 22)

Student Expectations

For Behavioral Expectations, see bottom of this page. All students and staff are expected to do their personal best in class daily. It is expected that students come to class ready to learn and are prepared to learn everyday. The classroom and laboratory

Building Behavioral Expectations

TEAM GH ... One Team, One Family, One Grand Haven. Be Kind. Always.

It is our expectation that ALL GHHS students, staff and parents will ... always give their best **EFFORT** in everything that they do, work hard to be **INCLUSIVE** of each other, show **RESPONSIBILITY** in class, the hallways, cafeteria and at events, and **WORK TOGETHER** at all times!

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have the potential to pose dangers to the student. Students will read and sign a Lab Safety Contract.

Communication

Students and parents have immediate access to grades by using the Parent Internet Viewer. Teachers of this course will provide communication to parents of poorly performing students. Teachers are available for parental contact by phone and email. The teacher may use a teacher blog or other online resource to facilitate learning.

Grading Policy

Please see the link for the Science Department Grading Scale

This course has two graded categories:

Assessments (Tests/Quizzes): 70% of overall grade

Homework/Labs/Classwork/Other: 30% of overall grade

Scope and Sequence

1st Semester

Chapter 1.3: Math and Physics

Chapter 2: Mathematical Model of Motion

Chapter 3: Vectors and Projectile Motion

Chapter 4: Forces and Newton's Laws

Chapter 7: Gravity and Circular Motion

Chapter 5: Work and Energy

Chapter 6: Momentum and Collisions

2nd Semester

Chapter 11: Vibrations and Waves

Chapter 12: Sound

Chapter 13: Light and Reflection

Chapter 14: Refraction

Chapter 16: Electric Force

Chapter 17: Electric Potential and Current

Chapter 18: Electric Circuits

Chapter 22: Nuclear Energy

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