**Honors Physics**

Instructor: Mr. McManiman

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**Required materials:**

Notebook: A notebook will be needed for recording notes as well as doing practice problems in class. If PowerPoints are used, they will be available online.

Calculator: A scientific calculator is highly recommended for this course. Some type of calculator will be necessary for test days. A cellphone calculator may **NOT** be used on tests.

**Course Description:**

Physics is the study of the interactions of the world. This course provides an introduction of physics, both mathematically and conceptually. Critical thinking and problem-solving strategies will be developed throughout the course through open ended problems, application of content through lab assignments, and measurement of retention through homework, quizzes, and tests. The class will meet twice a week in person and will have online components for the other 3 days.

**Course Objectives:**

This physics course is designed to be an introduction to physics for the student. Throughout the course, students will learn about the world through the lens of a physicist. Application of this content will help the students develop abstract thinking, analytical reasoning, and problem-solving skills.

**Course Units:**

Unit 1: Units and Measurements

Unit 2: 1-D Kinematics

Unit 3: Acceleration Due to Gravity

Unit 4: 2-D Kinematics

Unit 5: Newton’s Laws

Unit 6: Circular Motion

Unit 7: Work and Energy

Unit 8: Linear Momentum

Unit 9: Rotational Motion

Unit 10: Waves and SHM

Unit 11: Electricity

Unit 12: Electric Potential

Unit 13: Electric Currents

Unit 14: DC Circuits

Unit 15: Magnetism

Unit 16: Sounds and Sound Waves

Unit 17: Optics

**Grading**:

Grades will be calculated based off the performance of the student on homework, lab assignments, projets unit quizzes, and unit tests.

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| --- | --- |
| Assignment Type | Point Value (of individual assignments) |
| Homework | 5 |
| Project | 20-75 |
| Labs | 35-50 |
| Unit Quizzes | 25-45 |
| Unit Tests | 45-75 |

The final is worth 10% of the total grade for the year.

**Online Tests and Quizzes:**

Tests and quizzes given online will be timed. They will need to be completed in one sitting in the allotted amount of time shown in the test/quiz description on Schoology.

**Make-up Work/Late Work:**

This class follows the school policy for make-up work. You have 3 days per day absent to make up missed work due to an absence. During that time, the assignment will be put in as an “M” (weighted as a 0) in the grade book until it is completed. When the assignment is collected, it will be put in as a “C” in the gradebook. If the assignment is not completed in that time, it will be put in as a 0 in gradebook and will not be able to be made up.

All work will be accepted up to the end of the school day of the day it is due with no point penalties. Late work will be accepted up to 3 school days after the day it is due for half credit (so if an assignment is due on a Tuesday, you have until Friday to turn it in for half credit.

**Availability**:

I will be available after school every day until 3:10 pm for extra help, pending unforeseen circumstances.