

Physics Course Syllabus
2nd Block 10:15 – 11:45

Instructor: Mrs. Kristie Graham
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Course Description:

This Physics course will introduce you to the concepts and methods of the various fields of Physics including Mechanics, Energy, Waves, Electricity, and Newtonian Physics. Physics is basic to all the sciences. It is the search for patterns in nature. These patterns have been found to exist from the very small (subatomic particles, atoms, and cells) to the largest possible scale (stars, galaxies, and the whole universe), and everything in between. Remarkably, many of the patterns discovered so far conform to mathematical equations.

Required Materials:

1. Quad-Rule Composition Notebook
2. Charged Chromebook with reliable Internet
3. Pencil
4. Paper

Suggested Materials:

1. 3 - ring binder with pockets.
2. Work (Physics Problems) should be done in pencil except when done on a computer.
3. Scientific calculator (A graphing calculator is OK, but not necessary).
4. Separate eraser
5. Plenty of college ruled paper
6. A ruler and a protractor

Online Resources:

1. Physics Serway & Faughn 2018 online edition (log into your Launchpad or your chromebook or use this link: <https://my.hrw.com/dashboard/home>)
2. Physics Principles and Problems:
https://schoolwires.henry.k12.ga.us/cms/lib/GA01000549/Centricity/Domain/8684/Glencoe%20Physics%20Principles_and_Problems.pdf

It is a REQUIREMENT that you have your charged chromebook on test days. Failure do so will result in having to reschedule and receiving a missing grade ('0') until assessment is taken. This is the student's responsibility.

Class Rules and Expectations: These are based on 2 principles: **Maximum Learning and Mutual Respect**

1. Come to class on time every day.
2. Bring the materials listed or their equivalent every day.
3. Most days, students will receive content related homework, based on either review or new topics. Students are expected to complete their homework. In addition, it is vital that students also study their notes to master the topics for exams. Students will need to submit their homework at the **BEGINNING** of class
4. Absences put you behind. They burden both student and teacher and handicap the learning process. Please minimize any absences. You will have the same number of days to make up work after an excused absence as the number of days you were absent. It is the responsibility of the student to determine what the makeup work is.
5. Late work is a nuisance and receives half credit. Missed work will earn a grade of zero until made up. Students will need to make up quizzes, tests, and assignments prior to the end of the unit. **Students will NOT be allowed to submit missing homework, classwork, or projects after the end of the unit.** At the end of the unit, the grade earned on the unit exam will be applied for all missing work

Grading Procedures: Grades will be calculated as follows but are subject to change:

Cummulative Course Work (80%)	% of Course Grade
Practice: (Classwork, Quizzes, Homework)	40%
Assessments: (Tests, Labs- Inquiry Based, Lab Reports)	40%
Final Exam	20%

Grading Scale:

90% to 100% = A

80% to 89% = B

74% to 79% = C

70% to 73% = D

< 70% = F

Content w/ Tentative Test Dates

Physics Diagnostic 8/21

Unit 1 Kinematics 9/11

Math Basic (Dim. Analysis, Equation Manipulation, Sig. Fig, Accuracy and Precision)

1 D Motion characteristics

Kinematic equations

Motion Graphs

Scalars and Vectors

2 D Motion characteristics

Projectile Motion

Unit 2 Motion and Forces: 10/13

Forces and Newton's Laws of Motion

Free Body Diagrams

Rotational Motion and the Law of Gravity

Rotational Equilibrium and Dynamics

Energy and Momentum 11/6

Work and Energy

Momentum and Collisions

Waves, Sound, Light, and Optics 11/20

Vibrations and Waves

Sound

Light and Reflection

Refraction

Interference and Diffraction

Electricity and Magnetism 12/8

Electric Forces and Fields

Electrical Energy and Capacitance

Current and Resistance

Circuits and Circuit Elements

Magnetism

Electromagnetic Induction

Modern Physics (Possible Project Based)

Fission and Fusion

Nuclear Reactions

Uncertainty Principle

Physics Final 12/15

Extra Help:

Tutoring sessions are available on **most Fridays during the class period**; however, please see me immediately so we can correct or check any problem(s) you have. The sooner we look at the "problem," the easier it will be to correct the problem and get you on the right path. 100 % effort is the only way.

Cheating Policy:

Cheating of any kind will not be tolerated and consequences for such will result in referral to administration, contact with parent/guardian, and a possible zero '0' on the assignment, assessment, or project.

Visit the class website which can be accessed under the Academy of Advanced Studies Website for extra sources of help.