

# AP Physics 1 Course Syllabus

[REDACTED] / Rapid City Central High School

## Course Overview

AP Physics 1 is an Algebra-Based class that is supposed to match the challenges of an introductory college class in physics.

## Required Material

- Pencil or Mechanical Pencil, Pack of Dry Erase Markers, Highlighters
- 3 Ring Binder (At least 3 inch)
- Binder Dividers (At least 6)
- Page Protectors (At least 50)
- Scientific Calculator or Graphing Calculator (NOT one that holds storage!)

## Class Expectations

- Arrive to class on time and prepared
- Show a willingness to cooperate and work with others
- Be respectful and understanding of peers and teacher
- **Phones are not allowed unless specifically needed for a lab**

## Consequences

- 1) Verbal Warning
- 2) Parent/Guardian Contact
- 3) Administrative Contact

Grade Scale	
A	100 - 90
B	89 - 80
C	79 - 70
D	69 - 60
F	59 - 0

## Quizzes and Tests

Quizzes and tests must be completed individually by each student. If a student is absent on the day of a quiz or test, they will take it in class the following day. You may only retake a quiz or test if you have worked through the classwork for the tested material and turned it in.

## Homework

Homework will be checked on the day of a quiz or a test. Answers for the Homework will be given online, it is your responsibility to show the work. Zeros are given for homework that is missing or has a minimum amount of effort given.

Working with other students, the instructor, or both on homework is encouraged. *However*, work that is turned in must be unique to the individual; blindly copying is prohibited and serves no purpose to the student and will be given a 0.

## Labs

In order to do the experiments in this course, each individual must follow the safety guidelines for general lab behavior, detailed in a separate sheet. Lab worksheets are due on the next lab day, unless otherwise noted.

Lab exercises will be done collaboratively with partners or a group of three. Each lab member will be responsible for filling out their own lab worksheet. However, group members should help each other collect data and discuss answers to questions.

Preferences for who students would like to work with for Lab will be collected discreetly. However, the teacher will have the final say for the Lab groups. These Lab groups will be for the whole year except for extreme circumstances.

## Projects

Once a marking period there will be a project given out. Most projects will be engineering based and will incorporate building things with your hands. Projects will be done in pairs or as individuals but will be encouraged to get help from classmates. Projects will count either as a double lab grade or a test.

## Office Hours

The instructor is generally available every day of the week immediately following school, with the exception of Professional Development Days and other obligations. The instructor can also be available before school, upon request. Please email to schedule extra help.

## Additional Resources to Help Ace the Class

[www.youtube.com/@physicsburns](http://www.youtube.com/@physicsburns)

[www.youtube.com/flippingphysics](http://www.youtube.com/flippingphysics)

[www.khanacademy.org](http://www.khanacademy.org)

<u>Units</u>	<u>Topics</u>	<u>% of Exam</u>	<u>Number of Classes</u>
Kinematics	1-D Kinematics, Vectors, and Projectile Motion	12% – 18%	28 - 35
Dynamics	Newton's Laws	16 – 20%	15 – 18
Uniform Circular Motion and Gravitation	Uniform Circular Motion	6 – 8%	8 – 10
Energy	Energy and Work	20 – 28%	20 – 23
Momentum	Momentum	12 – 18%	12 – 15
Simple Harmonic Motion	Simple Harmonic Motion	4 – 6%	7 – 10
Torque and Rotational Motion	Rotational Motion	12 – 18%	18 – 23