

Instructor Names: Christopher Bull and Stephanie Accetta **Time Frame:** Juniors and Seniors Day-about schedule 2020/2021; this 14 week schedule will span a full academic year due to alternating days.

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Course Description

Physics is the study of how everything works. This course will cover the following that will prepare the student for future coursework. **Topics:**

Kinematics: One-Dimensional Motion, Forces and Equilibrium, Introduction to Newton's Laws, Applications of Newton's Laws, Newton's Law of Universal Gravitation, Work and Energy, Energy Conservation, Impulse and Momentum, Mechanical Waves and Wave properties, Electromagnetic Waves, and Nuclear Physics.

GSEs/CCSS / NGS Standards/ Addressed:

PS2 (9-11)-5, PS2 (9-11)-6, PS2 (9-11)-7

PS3 (9-11) -8, PS3 (9-11)-9, PS3 (9-11)-10

ESS3 (9-11)-5, ESS3 (9-11)-6, ESS3 (9-11)-7, ESS3 (9-11)-8, Ess3 (9-11)-9

Required Textbooks, Reading and Supplementary Materials

Textbook: Holt Physics – this textbook is accessible to students via a PDF in their Google Classroom

Tutoring by appointment

Supplemental: Khan Academy Video Review

Assignment and Examination Schedule

Kinematics: One-Dimensional Motion

Scientific Notation and Unit Conversion exercises; Chapter 2 Practice Problems, Virtual Handouts and Labs and Assessments

Week

1/2/3

Kinematics: Two-Dimensional Motion

Chapter 3 Practice Problems, Virtual Handouts and Labs and Assessments

Week

3/4/5

Forces and Equilibrium

Chapter 4 Practice Problems, Virtual Handouts and Labs and Assessments

Week

5/6

Introduction to Newton's Laws

Chapters 2 & 4 Practice Problems, Virtual Handouts and Labs and Assessments

Week

6/7

Applications of Newton's Laws

Chapter 4 Practice Problems, Virtual Handouts and Labs and Assessments
Week

7/8

Newton's Law of Universal Gravitation

Chapter 7 Practice Problems, Virtual Handouts and Labs and Assessments
Week

8/9

Midterm TBA

Energy Conservation

Chapter 5 Practice Problems, Virtual Handouts and Labs and Assessments
Week

9/10

Impulse and Momentum

Chapter 6 Practice Problems, Virtual Handouts and Labs and Assessments
Week

10/11

Mechanical Waves and Wave Properties

Chapter 11 Practice Problems, Virtual Handouts and Labs and Assessments
Week

11/12

Electromagnetic Waves

Chapter 2 Practice Problems, Virtual Handouts and Labs and Assessments
Week

13/14

Nuclear Physics

Chapter 22 Practice Problems, Virtual Handouts and Labs and Assessments
Week

14

Final TBA

GRADING POLICY

Formative Assessments 35% Summative Assessments 65%

Class work 10% Unit Tests 20%

Homework 10% Projects 20%

Quizzes 15% Labs 15%

Final 10%