



Overview

This course prepares students to understand and apply scientific concepts, principles and theories pertaining to our physical surroundings. The topics of mechanics, energy, electricity/magnetism, waves and modern physics are addressed in two key ideas:

- The forms and conservation of energy
- The interaction of energy and matter

Course Topics

- Mechanics
 - Kinematics
 - Dynamics
 - Circular Motion and Gravity
 - Work, Power and Energy
- Electricity and Magnetism
 - Electrostatics
 - Parallel and Series Circuits
 - Magnets
- Waves
 - Reflection
 - Refraction
 - Diffraction
 - Standing waves and resonance
 - Doppler Shift
- Modern Physics
 - The Standard Model
 - Energy and Mass
 - Wave -Particle Duality
 - Photoelectric Effect

Materials Needed

- One 2" 3-ring binder
- Loose leaf paper (college ruled preferred)
- Calculator
- Pencils

Office Hours

- **In-Person Learning:** I am available to help students almost every day before school and occasionally after school if given advance notice by the student. I am also willing to give help during school hours: Monday-Friday during periods 2, 5, and 7. It's a good idea to check with me ahead of time just be certain that I will be free as these are also times I have meetings and take care of things I cannot do while teaching.
- **Remote Learning:** Synchronous Class will be held 4 out of every 6 days of our letter cycle. **Our letter days to complete *asynchronous* work are C and F.** I will still be available for office hours during this time over Microsoft teams, in the same meeting room we use for synchronous class.

Expectations

- All students are expected to be in their seats and prepared for class when the bell rings.
- **Respect everyone in the classroom. You are expected to treat every member of this class with respect.**
- Students will be allowed to go to the lavatory when necessary. Only one student may be allowed to go to the lavatory at any given time.
- Keep the room clean and organized.
- Please no food or drinks in the room other than water.
- **No Cellphones during class. When the bell rings they should be put away until class ends with the final bell. Violators may have their phones confiscated for the period/day.**

Homework and Tests

- Assignments should be turned in on the day they are due. Late homework can be turned in at 80% of their original value. Homework that is extremely late or turned in after I've passed it back to the rest of the class is worth 50%.
- If you are absent on a day that homework is due, it must be turned in the day you return to school.
- If you are absent on the day on an exam, it is **your** responsibility to schedule a makeup exam with me.
- Assignments should be neat and legible.

Grading Policy

- Your final grade will be calculated using the following weighting scale:

Tests	Graded out of 100 points, worth 50% of final grade
Quizzes	Graded out of 100 points, counts as 30% of final grade
Labs/Homework	Graded out of 100 points, makes up 20% of your final grade

Academic Honesty

- Students caught cheating on homework or tests will receive a **ZERO** on their work for the first offense. Students will also receive a **ZERO** and administration involvement for further offenses. **DON'T** cheat, it's not worth it!!

Lab and Project Requirements

- **Students are required to complete a minimum of 1200 minutes of successful lab work. Students will not be able to take the Regents Exam if they do not meet this requirement.**
- Students are required to complete a Group IV project, which is a collaborative effort between Biology and Physics students. This project will be done once during the student's two years in IB Physics. In completing the Group IV project and additional lab work, students are required to design, perform, and analyze their own experiments. There are very strict guidelines governing lab work in the IB program. If all labs are not complete, students run the risk of receiving a very low IB grade (or no grade at all) at the end of their senior year.

➤ If you have any additional questions, please do not hesitate to contact me.

IB Physics Jr.

Please sign and return by September 18th, 2020

Please sign below to indicate that you have read this document and understand what is required of you. Parents/ guardians please go over this contract with you student and sign where is indicated. Thank you very much!

Student Name: _____

Student Signature: _____

Date: _____

Parent/Guardian Signature: _____

Date: _____

Parent's/Guardian's Number: _____

Parent's/Guardian's email _____
