



# Applied Physics

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## Course Description

Applied physics provides an introduction to the basic underlying principles that govern the physical universe and explores these principles through group work, discussion, laboratory experiences, and projects. It is presented on a conceptual level with a limited amount of mathematics. However, the class is designed for students who have some familiarity with the basic rules of algebra. The laws of physics can explain how every component inside your cell phone functions and it is what makes medical imaging, modern communication and the study of stars possible.

**Text:** Conceptual Physics, Paul G Hewitt

## Topics Include:

- Motion and Projectiles
- Forces and the Laws of Motion
- Work and Energy
- Momentum
- Circular Motion and Gravitation
- Fluid Mechanics
- Thermodynamics
- Vibrations and Waves
- Sound
- Light and Reflection
- Electrical Forces and Fields
- Electrical Energy and Current
- Circuits and Circuit Elements
- Magnetism
- Subatomic Physics
- Nuclear Reactions
- Quantum Mechanics
- Relativity

## Rules and Expectations

- All school rules apply in this classroom. Please refer to your student handbook.
- You are to be inside the classroom when the bell rings, at your desk and working on the bell ringer.
- No bullying. No exceptions. Have and show respect for yourself, for the school, for me and for your fellow classmates. Be polite and use appropriate language.
- Be prepared. Bring materials to class every day. This includes a pencil, notebook AND your iPad.
- Be honest and do your own work. Integrity will get you further than cheating.
- Have a positive attitude and take ownership of your learning.
- Have only physics materials on your desk during class.

*The third violation of any classroom rule or school policy will result in a teacher detention. Subsequent violations will result in an office referral.*



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## Class Structure

Upon arrival, there will be a bell ringer projected on the screen that you will complete on Canvas with your iPad. You will have 3 minutes to complete this and submit it. This will be graded every day. In-class attentiveness and participation is vital to be successful in this class. You must remain engaged and not interfere with the learning of anyone else in the class. Class periods will end with an exit ticket.

## Electronics Policy

iPads are to be used during class only for educational purposes when permitted to do so. Under no circumstances should students be checking messages, playing games or texting during class. Keep cell phones in your pocket/purse. I do not want to see them in class.

## Grading Policy: Late assignments, Absences and Make-up Work

Bell ringers are graded daily and will be 10% of your grade. Homework and in-class work will comprise 30% of your grade. Labs and projects will account for another 30% of your grade. Quizzes and exams will make up the last 30%. Late assignments will be accepted up to five school days past the due date, after which a zero will be recorded in the grade book. A 50% penalty will be assessed on all late assignments. If absent, students have as many days to make up a quiz or test as the number of school days they missed. It is the students' responsibility to check with me when they return from an absence to check for missed work, notes, quizzes and tests. A zero will be given for any assignment if the student's absence is unexcused.

## Extra Help

Physics can be challenging, but the problem solving skills you learn in this classroom will benefit you no matter what career you end up in. To make sure that you are successful in this course, I will hold recitation sessions every Tuesday and Thursday from 2:30 to 3:00 for any student that wants help. Please take advantage of this and do not wait until you fall too far behind. I am more than willing to provide any extra help that you may need. If another time fits in better with your schedule, please let me know and we can arrange an alternative time. Stay current with the homework and ask for help whenever you encounter difficulties. I want you all to succeed.

## Remind

I will be using a free app called Remind to send out general class announcements as well as homework and test reminders. There is an app you can download as well. I will give instructions and the class code during class.



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## Academic Integrity

These standards have been adopted by the science department and will apply to all science classes.

- Try! Listen! Think!
- Be prepared for your class
- Use your iPad and phone for educational purposes only
- Do not get off task or give up
- Do not discuss test questions or answers
- Follow directions
- Be safe in the lab
- Do not cheat
- Do not damage school property

**\*Please keep the first two pages in your notebook and return only this signature sheet.**

**I have read and understand the above information**

Student name: \_\_\_\_\_

Student signature: \_\_\_\_\_

Parent or guardian name: \_\_\_\_\_

Parent or guardian signature: \_\_\_\_\_

Parents,

I will be contacting you at various times throughout the year with progress reports and updates regarding your child's standing in this class. Therefore, I need to know your email address and/or telephone number(s). Please also indicate the best time to call if I need to speak with you directly.

Email: \_\_\_\_\_

Telephone #: 1.) \_\_\_\_\_

2.) \_\_\_\_\_

Best time to call: \_\_\_\_\_