**Physics 9 ACP**

Syllabus – 2019-20

**Instructor**: **Nathan Margolin**

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Classrooms: 246, 247

Office: 358

# What will we be learning this year?

We will be learning about physics! Physics is all about how things move and work. It explains really **BIG** things like the sun, small things like you or me, and really really small things that you can’t even see with a microscope. Physics is about baseball and buses, cell phones and swimming, muscles and motors, the sun and the moon, fire and rain. When we understand physics, we understand how our world works, and then we can change it. You – yes, you! – will be solving problems, testing your ideas, designing things that work better, and connecting what you already know about the world to your new and growing understanding of physics. It’s pretty exciting!

Albert Einstein1

We will improve our understanding of physics through hands on activities, demonstrations, labs, notes, and readings. We will also develop our critical thinking, our experimental skills, and our science literacy skills.

The main physics concepts we will explore are:

1. Waves and sound
2. Light
3. Static Electricity
4. Circuits
5. Describing Motion
6. Explaining Motion
7. Momentum
8. Work, Energy, and Power
9. Heat

**Why do we care?**

Some of you may become scientists. Some of you may become teachers. Some of you may do something else entirely. But whatever you do after high school, physics is important. Physics helps us learn about how the world works, and it lets us understand how and why we can change it. Scientists are researching big questions like how to slow climate change and what the universe is made of. It is important to understand these questions and the discussions about them because it will be up to you and your community to make decisions about how we live in the world and about how to use our knowledge in the best way possible. As citizens and future leaders, understanding physics will help you make informed and educated choices that affect the entire global community. Plus, physics is awesome!

Physics, at its core, is all about recognizing and using patterns. Physics also relies on using evidence to describe and predict the behaviors of things that are too small to be seen directly. Like history, philosophy, math, and writing, physics teaches us how to make thoughtful predictions and how to support claims with evidence. When scientific and historical claims are being questioned and sources are derided as untrustworthy and fake, it is critically important to build truth using argument and evidence. Studying physics develops those skills.

**What should you bring to class?**

I expect you to bring the following materials to class every day:

* Pen or pencil
* Calculator (4-function is sufficient)
* Your Physics Notebook (preferably a composition notebook)
* A binder (to keep and organize handouts)
* Your charged laptop

You will be given a copy of the textbook *Physics: A First Course*. You will have access to both a hard copy of the book and also provided with access to an online version. You will be asked to complete readings, online assignments, and activities using this resource. You do not need to bring the textbook to class daily. The textbook must be returned prior to taking the final exam, as per school policy.

Laptops, cell phones, headphones, and other electronics may be used only as directed, and should be put away when directed as well. Cell phones must be placed in the holder at the start of class. Electronic devices may not be used at inappropriate times or in inappropriate ways, according to the WHS Acceptable Use Policy, BYOL guidelines, and my discretion.

Food and drink are not permitted in class. Water is the only exception.

**Attendance and Absences**

I expect you to be in class for the whole period every day. If you are absent, it is your responsibility to find out what you missed and to complete the work. Homework and classwork will both be available on Canvas.

In order to leave the room during class, you must first ask permission from Mr. Margolin. You may not leave the room or use the bathroom during the first 10 minutes of class, last 10 minutes of class, or during whole-class instruction time. Exceptions may be made for medical reasons.

**Classroom Procedures and Expectations**

I expect you to meet the following expectations during class:

1. Bring all materials to class
2. Be working in your assigned seat at the start of class
3. Follow directions the first time they are given
4. Uphold our community values

It is my responsibility to lead a safe and productive classroom; it is not my job to punish you. If we need to have a conversation about an incident or disruption, we will talk about the reasons behind what happened and how we can prevent such disruption in the future. We all make mistakes. The important part is to show integrity by owning the mistake and making it right.

**Grades**

According to the principles of Standards Based Grading, grades in this class will be based on how well you have demonstrated mastery of the Standards / Objectives. You are responsible for providing **Evidence** that you have met each Learning Target, as well as any steps along the way. You can demonstrate learning through **products**, like tests or projects, and also through the **process** of learning and the work you do leading up to products. Standards will be assessed using the following scale:

0 = missing

1 = Beginning (very little evidence of mastery)

2 = Approaching (you’re on your way, but not there yet)

**3 = Accomplishing (you got it!)**

4 = Exceeding (above and beyond)

Tests, quizzes, labs, exit tickets, and classwork are all examples of assessments that may be graded. Unless specified otherwise, homework will be checked for completion, not for correctness.

**Websites**

We will be using the following web platforms in physics:

* Canvas (wellesley.instructure.com) – all assignments will be posted on Canvas. This is a good place to look at individual assignments.
* PowerSchool Learning (myhaikuclass.com) – this is the primary grading platform we will use for this class. We will learn how to access this website soon.
* PowerSchool (wellesley.powerschool.com) – scores for standards and overall grades will be posted here. This is not the place to find information about individual assignments in physics.

**Late Work, Extensions, and Revisions**

Part of acting responsibly is submitting work on time. Homework will not be accepted late. (If you are absent, homework is due on the day you return.) Larger assignments, such as labs or projects, may be granted an extension **if** you ask me for an extension **before** the due date. I will consider giving extensions on a case-by-case basis.

For quizzes, projects, or other large products, you be able to show evidence of **process** in order to submit a **product** after the deadline. For example, if you have not done any of the rough drafts or revisions on time, I will not accept a late final report. This is because the **process** is essential to creating a high-quality **product**.

Most work demonstrating academic mastery can be revisedand resubmitted. The assessment grade may change based on the quality of the revision. All work and revisions are due on the day of the test/project due date for that unit. Test/project revisions are due one week after the test is returned.

Extra Credit assignments will not be available.

**Academic Integrity**

Please refer to the student handbook for the specifics on these policies.The spirit of this class is one of discussion and cooperation. One of the best ways to approach physics problems is to discuss them with your fellow students. After all, that is why we have the class organized the way we do. However, any homework or other material submitted for a grade should be essentially your own, and in the spirit of intellectual integrity, any discussion should be clearly acknowledged. A simple sentence, “I talked about this problem with Ploni and my mother” will suffice. Under no circumstances will copied work be accepted. Some specifics follow:

* On labs, DATA ONLY can be identical for lab partners; everything else **must be in your own words.**
* On anything you hand in, **full work must be shown**. If all I see are answers, they will be assumed to be copied from your neighbor.
* On homework and projects, ANYTHING you take from another source (including the internet) must be properly cited. If you paraphrase an article, cite it. If you QUOTE a section, cite it and put it in quotes. If you pull a PICTURE that you didn’t personally photograph OR draw, cite it and give credit to the author.
* If you CANNOT find out who is responsible for the website or picture, you CANNOT use it. It’s probably copied from somewhere else anyway.

**Extra Help**

I will be available for extra help after school at least one day per week (TBD) in room 247. Additionally, you may always email me with a question, and I will respond as soon as I can. The more specific the question, the more helpful my response can be. Please keep in mind that I, too, have a life; I will not respond instantly to emails.

**Respect for Human Differences**

In this classroom, as at Wellesley High School, both our diversity and commonality are celebrated. In particular, this classroom will be a **safe learning environment** for all people regardless of their gender identity, race, ethnicity, sexual orientation, religion, ability, language, and class (both socioeconomic and academic). As a result, language or behavior that is disrespectful or offensive to others will not be tolerated.

You will not receive any warning if you engage in behavior that is hostile, intimidating, or offensive to another student or to me. Rather, you will leave class immediately and go to the House office to receive the appropriate consequences. Your parents / guardians will also receive a call from me explaining the situation. In addition, an “Incident Report Form” will be completed and submitted to the administration as a record of the offense.

Behavior that may cause this type of action includes verbal or written communication, physical behavior, and/or displaying visual materials.

**Physics – 2019-2020**

**Wellesley High School**

**Mr. Nathan Margolin**

Declaration

I have read the syllabus on the attached pages. I understand the information it contains, including classroom expectations, materials needed, grading policy, and late work / revisions policy. I agree to the policies as determined by Mr. Margolin and Wellesley High School.

I will contact Mr. Margolin (margolinn@wellesleyps.org) if I have any questions or concerns about the information in this syllabus.

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Student Name Student Signature

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Parent/Guardian Name Parent/Guardian Signature

Optional Comments: