

DP Physics – Year 1

Signal Mountain Middle/High School - Room 2233

Mr. Chris Raynolds

raynolds_chris@hcde.org

In this 2-year class, we will be covering the IB Physics standards. We have a mix of Standard Level (SL), Higher Level (HL), and non-Diploma Program students. Regardless of your level, you will be prepared for the final Physics papers (exams) at the end of the 2-year class.

Materials Needed

- Something to write with
- Something to write on
- Something to do math on (i.e. calculator)

I don't mind iPads or laptops...but you will find that it's really tough to take Physics notes on them due to the equations, graphs, etc...

We do have calculators that students can use in class (black and white nSpires)...but it's really best if you have your own so you can get used to it at home and school.

Grade Information

50% - Tests

50% - Everything else (daily work)

Class Rules

1. "Don't act the fool!"

2. "Refer to rule 1"

Diploma Students are expected to know how to act. Any actions or behaviors that don't meet this standard will be dealt with via parental and (in extreme cases) administrative action.

SL vs. HL

Students have the option of taking this class at the Standard Level or Higher Level. If you intend to major in a science-y major in college, you should take HL.

The only difference between SL and HL in the DP Sciences is that the HL students cover a little extra content in some chapters. The IA is the same and the labs are the same.

You will not need to worry about which version of DP Physics you are taking until after Christmas of your Junior year – there is no HL material in the first semester. After this time, if you are taking SL Physics, you will have the option of doing a reinforcement assignment (more work on the SL material or a lab for SL students) while we cover HL material. This extra time isn't a large portion of class and any student, even if they are taking SL Physics, has the option of covering HL material.

Please ask me if you have any questions. If you aren't sure of which level to take for Physics, I would suggest HL – it's a little more work but the additional material is interesting.

Schedule of Topics

Fall 2016

Motion and Energy
Forces and Momentum
Thermal Physics

Spring 2017

Fields
Circuits
Electromagnetism

Fall 2017

Astrophysics
Waves – Part 1
Waves – Part 2

Spring 2018

Nuclear Physics
Quantum and Particle Physics

What does a typical chapter look like? What's required?

On the first day of the chapter, I will pass out a paper listing

- Standards for the chapter
- A copy of the appropriate equations
- Schedule for the chapter

We don't have enough time for all of the practice and comprehension you will need in class. Students will be responsible for keeping up with reading the book and working practice problems. There are many problems throughout the book that offer not only the problems, but also the solutions...these are essential!

On the test date, I will take up...

- All problems done during the chapter (this could potentially change...)
- A 1-page cheat sheet created by the student to summarize the chapter
- Notecards created by the student for each underlined term on the standards.

Each of these will be a daily grade. The cheat sheets and notecards will be kept in the classroom so they may be used for the final exams at the end of the senior year.

The textbook doesn't contain typical "end of chapter" problems that students can use for review and self-assessment. Instead, they use actual IB problems. While good to work on, there might only be 3 problems per test. Additional problems will be provided on ManageBac that students are expected to complete before the end of the chapter. These problems will be checked on the day of the test.

Class Material Management

Students will be expected to check on class materials and assignments on the ManageBac system. All assignments, due dates, resources from class, messages, etc... will be housed on the class' ManageBac account.

If there are any technical issues or questions about accessing ManageBac or submitting work digitally, the student needs to clear up the issue **before** the due date of an assignment.

Parents will have access to the ManageBac account starting around Fall Break when the school rolls out parental access to this incredible resource.

Other Assorted Things...

- Don't cheat. I will hammer you if you do. Refer to SMMHS' Academic Honesty Guide if you have questions about what to do or not to do. If you're not sure if it's cheating or not...it is.
- If a student is absent, they are required to gather make up work. If a student misses some assignment due to an absence, I will enter "abs" into my gradebook. This counts as a zero (and PowerSchool shows it as a zero) but it indicates that a student can complete later for full credit.
- Late work will be accepted without penalty unless it becomes a habit or it is an excessive tardy. Penalties will be added to a class that shows excessive tardiness in turning things in.

Who's the Best?

We're the best!