

**IB Physics HL
Course Syllabus
School year 2017-2018**



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Course Description:

Physics is beauty. Physics is better than rock'n'roll. Physics is one of the oldest academic disciplines. Physics is in need of a revolution. New Physics is bound to show up. Physics is hard. Physics is phun. Physics is about asking fundamental questions. Physics is magic. Physics is weird. Physics is the science of matter, energy, space, and time. Physics is the underpinning of all science.

Course Units: The following is an outline of the major topics we will study this year.

1. Measurement and uncertainty
2. Mechanics
3. Thermal physics
4. Waves
5. Electricity and magnetism
6. Circular motion and gravitation
7. Atomic, nuclear and particle physics
8. Energy production
9. Option - Relativity, Engineering physics, Imaging, Astrophysics (finish what we started)

Some relevant history and philosophy of science is integrated into the curriculum to encourage you to begin understanding how and why science has progressed as it has. This class includes laboratory work. The experiments you perform will range from “recipe labs” to train you on the equipment, to student-designed open-ended experiments.

Required Materials:

Pencil, pen, paper, binder with pockets, dividers, scientific calculator.

IB Physics Grading Scale:

Letter grades will be assigned to the following percentage of points earned:

≥ 90%	A	≥ 65%	C+
≥ 85%	A-	≥ 60%	C
≥ 80%	B+	≥ 55%	C-
≥ 75%	B	≥ 40%	D
≥ 70%	B-	> 40	F

Gradebook Categories:

In this course, all assignments are **NOT** weighted equally; this means that you ARE NOT graded on total points. Assignments will fall in one of two categories:

- **Academic practice (formative assessments) will count for 20% of your grade.**

Academic practice assignments (classwork/homework) are designed to give you the opportunity to work with course material in and out of class so that you can determine your progress towards the learning targets (i.e. I need help with all of this, I need help with part of this, I have mastered all of this, etc.). Students will have the opportunity to receive feedback on these assignments (ask questions and/or given answers) and they will be given credit for work completed.

- **Academic performance (summative assessments) will count for 80% of your grade.**

Academic performance assignments (tests, quizzes, projects, formal lab write-ups) are designed for you to demonstrate your mastery of the material/skills. In other words, to “show what you know and can do.”

Missing & Late Work:

When an assignment is due (due date), you will have one week (deadline) to turn in late work to earn credit. After that time, late work will not be accepted.

Extra Credit:

Extra credit questions are occasionally embedded in tests and is not offered on request. Keep up with your work and think about your grade now, not later.

Test Retakes:

You may retake a test once. The retake must be completed within one week of receiving the original test back. There will be a final exam - you may not retake the final exam. **If a retake is done, that score will be used in the gradebook (most recent score, not the BEST score).**

Students with 504 or Individualized Education Plans (IEPs) will have grading parameters adjusted as stipulated in these plans.

Extra Help:

Please stop by my room before (7:30 - 8:15) or after (3:15 -) school.

Classroom Expectations:

You will follow all Washburn policies. I should not become aware of your personal electronic device(s) – please be sure to power down. Eating and drinking (except water in spill-proof bottle) are not allowed in the science classroom. Keep your coats in your lockers. Stow your backpacks, bags, purses, etc. on the floor.