

IB Physics SL-1

2018-2019

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Course Outline

First Year		
PHYSICS AND MEASUREMENT		WAVES
1.1 Measurements in physics	Covered throughout the semester.	4.1 Oscillations
1.2 Uncertainties and errors		4.2 Travelling waves
1.3 Vectors and scalars		4.3 Wave characteristics
MECHANICS		4.4 Wave behavior
2.1 Motion		4.5 Standing waves
2.2 Forces		ATOMIC-NUCLEAR-PARTICLE PHYSICS
2.3 Work, energy & power		7.1 Discrete energy and radioactivity
2.4 Momentum and impulse		7.2 Nuclear reactions
6.1 Circular motion		7.3 The structure of matter
6.2 Newton's law of gravitation		
THERMAL PHYSICS		ELECTRICITY
3.1 Thermal concepts		5.1 Electric fields
3.2 Modeling a gas		

An externally assessed examination will determine 80% of the IB grade (HL: P1 - 20%, P2 – 40%, P3-20%.) and a complete laboratory report (Internal Assessment) will account for the remaining 20% of the IB grade.

Yr2 Topics:

5. Electricity and Magnetism 8. Energy Production	SL option: Relativity, Astrophysics, Engineering, Imaging
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Resources/Books

Physics IB Diploma, Oxford
Physics, Giancoli

IB Study Guide: Physics, Kirk
Graphing Calculator (TI preferred)

Physics for the IB Diploma, Tsokos

Assessment:

The course grade for each quarter will be approximately based on the following assessments:

- Engagement (5%)
- Lab Reports (25%)
- Tests / Quizzes (70%)

At the end of each semester there will be a final exam worth 10% of the entire semester (each quarter is 45% of the semester).

Homework

Homework will be assigned each class day. If a student is absent for one class, they are responsible for completion of two assignments the day that they return to class: the old assignment that was due on the absent day and the new assignment that was assigned on the absent day. If a student is absent for 2 or more consecutive days from school, they must arrange a time schedule with their teacher for completion of missed work.

Quizzes

There will be periodic 20-minute quizzes. If a student is absent for one class, they are responsible for taking the quiz on the day that they return to class. This is to ensure that students do not fall behind in the chapter. All missed quizzes must be completed. In the case of longer absences, makeup quizzes must be scheduled immediately upon returning to school.

Exams

Exams will be given at the end of each unit. Exams will be announced several days in advance. If a student is absent for one class, the exam will be taken on the first day (block 1 or 3) that they return to school. For longer absences the exam will be scheduled upon return.

Labs

Practical work is graded according to criteria set by the IB. These criteria are *Personal engagement, Exploration, Analysis, Evaluation and Communication*.

Completion of the Group 4 project is also part of the internal assessment. It is a collaborative project between all of the science disciplines (i.e. Group 4 IB courses).

Late Work Policy

This late work policy is intended to encourage **proactive communication** between teachers, students and parents. For this reason, should students communicate with Mr. Supplee at least 2 days **prior to the assignment's scheduled due date**, whether due to absence, sick days, or any other reason, discretion may be used on the leniency of the assignment's due date.

If there has been no prior communication, the following rules will be applied:

- Assignments that have already been reviewed in class will generally **not be accepted** and will receive a zero.
- All major assignments due at 3:30.

Amount Late	Penalty	Maximum Score
Up to 48 hours	10% reduction in grade	90
48 to 96 hours	40% reduction in grade	60
96+ hours	Minimal credit	30