

IB Physics SL-1

2020-2021

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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		

For year 2, an externally assessed examination will determine 80% of the IB grade, SL: P1 (20%), P2 (40%), P3 (20%), and a complete laboratory report (Internal Assessment) will account for the remaining 20% of the IB grade.

Year 2 Topics:

5. Electricity and Magnetism 8. Energy Production	SL option: Relativity, Astrophysics, Engineering, Imaging
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Resources/Books (all links on my website: www.cooperphysics.com)

<i>Physics IB Diploma</i> , Oxford (text)	<i>Physics for the IB Diploma</i> , Tsokos (text)	<i>IB Physics Course Guide</i> (IB document)
<i>Physics</i> , Giancoli (text)	Graphing Calculator (TI preferred)	

Assessment:

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

- Engagement (5%)
- Lab Reports (30%)
- Tests / Quizzes (65%)

At the end of each semester there will be a final exam worth 10% of the entire 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.

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 Ms. Cooper 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 dates and assessments will occur on days when we have classes during blocks 1 and 3 so larger assignments can be spread out.

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

Nido's code of academic honesty must be followed at all times.

- All work turned in as individual work should be done in its entirety by the individual whose name appears on the work.
- All work assigned is considered to be individual work unless otherwise clearly stated. In lab settings, it is often acceptable to work collectively to obtain data. However, recording data, analyzing data, and reporting data will be done individually.
- Any research information taken from an outside source, including diagrams must be given credit within the report via parenthetical citations or footnotes. Typically, Nido teachers use the MLA8 format. The Purdue online writing lab can assist you with the MLA, APA, or Chicago style https://owl.purdue.edu/owl/purdue_owl.html
- All lab reports will be turned in to Turnitin.com, which will automatically check for plagiarism.
- You should NEVER, under any circumstances, send your work to another student.

Any student who is found to violate these guidelines on an assignment will be reported to the Assistant Principal and will receive a 0 on the assignment. They will have the opportunity to re-do the assignment, or an equivalent task for a maximum grade of 70%.

If you need further clarification about the academic honesty policy or class expectations, you are obligated to ask your instructor questions BEFORE the assignment deadlines, as claiming you were unclear on the expectations after the fact lacks academic integrity.