

COURSE TITLE: **IB Physics HL Year 2**

TEACHER NAME: Nick Wansley

E-MAIL: nwansley@forsyth.k12.ga.us

ROOM: 363

PHONE: 770-781-2264

EXT: 100363

Forsyth County Schools Course Syllabus 2020/2021

Course Description: The IB Physics HL course is a year-long, second-year physics course that satisfies the physics requirement for graduation. This is a rigorous mathematical approach to an in-depth study of matter in motion, similar to a college-level, algebra-based introductory physics class. Emphasis is placed on electromagnetic induction, thermodynamics, particle and nuclear physics, wave phenomena, and modern physics.

The course design is based upon lecture, class discussion, problem solving, laboratory, and evaluation. Demonstrating knowledge in physics will be accomplished by discussion, short answer assignments, and evaluations. Problem-solving skills will be evaluated through assigned exercises and evaluations. Critical thinking skills will be demonstrated through creating laboratory hypotheses and procedures for testing those hypotheses, as well as through data interpretation and scenario evaluation. Laboratory investigations will be written up in a report

Standards: The Georgia state standards for physics can be found at this website: www.georgiastandards.org. Detailed descriptions of the IB syllabus will be available on the itsLearning platform.

Required Assignments:

- Summative Assessments (75% of semester average)
 - o End of unit tests
 - o Lab Reports
 - o Midterm and Final Exams
- Formative Assessments (25% of semester average)
 - o Homework
 - o Class work
 - o Lab activities

Laboratory Work

There will be a laboratory assignment nearly every week during the 90-minute block class. You will work with your lab partners during the class to collect and evaluate the data required for preparing the lab report. The lab reports are individual assignments (not to be completed with your lab partners). Sometimes these will be due at the end of the lab period and sometimes they will be due one-week after the experiment (at the beginning of the next week's 90-minute block class).

Electronic Assignments on itsLearning

There will be homework and quizzes administered through the school's secure online learning platform. These will often be timed assignments requiring access to a home internet connection and computer. Students without these should notify Mr. Wansley so other arrangements can be made.

Availability for Extra Help: I am available in IF or at 7:30 am.

Makeup Work: Make up work is defined as work assigned during a student's absence, not work assigned prior to an absence. The student has five (5) school days upon returning to school to complete make-up work. The teacher has the discretion to grant a longer period to make up work, if there are extenuating circumstances.

Initials _____ (every page initialed by parent)

Updated June 2020 dp

Grading Calculations:

Non-EOC Course Average = 50% (1st Sem. Course Work) + 50% (2nd Sem. Course Work)
1st and 2nd Semester Course Work = 75% Summative + 25% Formative

Grading Policy:

A = 90 – 100

B = 80 – 89

C = 70 – 79

Failing = Below 70

Formative Assessments include, but are not limited to homework, class work, practice tests, rough drafts, and sections of projects/research papers/presentations.

Summative Assessments include, but are not limited to unit tests, final projects, final essays, final research papers, and final presentations.

The group 4 project

The group 4 project is an IB required collective project between all science classes. The aim of the project is “To encourage an understanding of the relationships between scientific disciplines and the overarching nature of the scientific method.” ALL students are required to complete the group 4 project once in order to earn their IB diploma. Additional information will be provided as it is available.

International Mindedness and Theory of Knowledge

In Topic 8, students will investigate the provisions of energy and how it is a global issue. Political policy and emotion can obscure scientific assessments about energy resources, which students will use their research abilities to determine the pros and cons of each source type.

Learning Resources/Textbook(s): All learning resources, both print and digital, are meant to support and enhance the student learning experience of this class. Below are the names of the textbooks and websites that will be used in this course. Some of the web-based resources require parent permission per federal regulations. Federal laws that guide parent permission requirements are as follows:

- **Children’s Internet Protection Act (CIPA):** The school is required by CIPA to have technology measures and policies in place that protect students from harmful materials including those that are obscene and pornographic. Any harmful content contained within inappropriate sites will be blocked. <http://fcc.gov/cgb/consumerfacts/cipa.html>
- **Children’s Online Privacy Protection Act (COPPA):** COPPA applies to commercial companies and limits their ability to collect personal information from children under 13 years of age. No personal student information is collected for commercial purposes. <https://www.ftc.gov/tips-advice/business-center/guidance/complying-coppa-frequently-asked-questions-0>
- **Family Educational Rights and Privacy Act (FERPA):** FERPA protects the privacy of student education records and gives parents the right to review records. Under FERPA, schools may disclose directory information in certain circumstances. <http://www2.ed.gov/policy/gen/guid/fpco/ferpa>

Please review the resource list. Each website related to the curriculum resources is provided along with their privacy policies. Should you have any questions regarding these resources immediately contact the course teacher via email or phone.

Name of Resource*	Digital	Privacy Policy
Physics: Principles & Problems - Glencoe (2009)	Open Source eReader	Terms of Service
College Physics by Serway/Chris Vuille	AP Physics Cengage/NGLsync	https://www.cengage.com/privacy
College Physics - Reasoning and Relationships - Cengage (2015)	AP Physics Cengage/NGLsync	https://www.cengage.com/privacy
Physics for Scientists & Engineers - Cengage (2014)	AP Physics Cengage/NGLsync	https://www.cengage.com/privacy
OpenStax	On-level Physics Algebra-based College Physics	Terms of Service
Georgia Virtual School	On-level Physics AP Physics I AP Physics II AP Physics C Electricity AP Physics C Mechanics	http://www.gavirtuallearning.org/terms.aspx
Discovery Education	Classlink Access SP1-SP6	Discovery Media Terms of Use
NewsELA Physics	Classlink Access CLEVER	NewsELA Privacy Policy
CK-12 FlexBook: Physics	Classlink Access CLEVER	CK-12 Terms of Use
Georgia Public Broadcasting Streaming Inquiry Labs	GPB Chemistry & Physics	GPB

*** The following resources are county approved. These resources may vary by school due to sequencing, pacing, curriculum design, and/or individual needs of students.**

Parent Initial for Approval **	Name of Resource	Website	Privacy Policy
	M.I.T. OpenCourseware	M.I.T. Science, Technology, & Society	
	Physics and Engineering Solutions	Relevancy Textset	
	Veritasium	Veritasium Channel	
	TED-ED	TED-ED Channel	
	Kurzgesagt	Kurzgesagt channel	
	Kognity Online Book	Kognity website	Terms

**** The following resources are web-based resources that require parent permission. By signing the syllabus, the parent is approving these resources. Should you have any questions regarding any of these classroom resources, please contact your student's teacher via email.**

I, _____, have read this course syllabus and approve of its contents.
I agree to allow my student to use each of the classroom resources listed in the learning resource section. I will support my student following the classroom expectations outlined in this course

Initials _____ (every page initialed by parent)

Updated June 2020 dp

syllabus. I agree that I am the person who is legally allowed to consent for my student whose name is listed below.

Student's Name (Print)

Parent's Name (Print)

Parent Signature

Date