Course Description:
The IB Physics SL course is a year-long, first-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 mechanics, sound, light, electricity, magnetism, and modern physics. Students will be prepared for and are expected to take the IB Physics SL Exam upon completion of this course.

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.

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

Laboratory Work
The IBO requires that science students complete 40 hours of labwork in SL classes. 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) and will be due one-week after the experiment (at the beginning of the next week's 90-minute block class).

Electronic Assignments
There will be homework and tests administered through the secure internet testing platform of ANGEL. These will often be timed assignments requiring access to a home internet connection and computer. Students without these should notify Mr. Howard so other arrangements can be made.

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

Learning Resources/Textbook(s)


Supplies needed for class:
- Pencil, pen, lined paper, graph paper, graphing calculator (TI-84 plus or equivalent), USB flash drive, ruler, compass

Availability for Extra Help:
I am available for help without an appointment any morning before school. Students who wish to receive extra help after school should make an appointment.
Make-up Work:

All missed work and assessments are the responsibility of the student when they are absent from school. A student who is absent on the class day before a regularly scheduled assessment will be responsible for completing the assignment on the regularly scheduled day and time. Students who have been absent more than two consecutive days (including the assessment day) will be given five (5) school days to make up the assessment and/or other assignments. This does not include lab reports, and ANGEL problem sets or tests where the deadline has been posted in advance. The teacher has the discretion to grant a longer period of time to make up work if there are extenuating circumstances.

Long-term projects must be turned in on the previously scheduled date. If a student is absent on that day, they must turn in the project the day they return to receive full credit. For every day late thereafter, their highest possible grade will be a 70.

Late daily assignments can be turned in for a possible grade of a 70 until the summative test on that unit. Once that unit test is over, no daily (formative) assessments will be accepted.

Grading Policy:

A = 90 – 100
B = 80 – 89
C = 70 – 79
Failing = Below 70

Summative grades are assignments/assessments such as unit tests, projects, essays, research papers, and presentations which may integrate multiple standards. These grades reflect student mastery of standards after the learning activity is completed and count as 75% of each semester average.

Formative grades are assignments such as homework, class work, quizzes, drafts or portions of essays, projects, research papers, and presentations. They provide practice while learning. These assignments, observations, and conversations are used to inform both the teacher and student about the learning process and lead to potential success on summative assessments. They count as 25% of each semester average.

Work Habits are behaviors that have the potential to increase academic achievement, promote lifelong learning, and foster personal accountability.

High School Work Habit Categories and Scoring

1: Does not meet  2: Meets  3: Exceeds

Responsibility (RE)
The student adapts to classroom practices.
1. Requires frequent redirection; strays off-task; disrupts learning environment; fails to follow class procedures.
2. Is a self-starter; remains on-task; asks questions for clarifications when needed; applies strategies for meeting learning goals; follows class procedures.
3. Displays independent initiative; maximizes opportunities; solves problems.

Participation (PA)
The student pursues learning through active involvement.
1. Disengages from the learning environment; responds only to teacher prompts.
2. Engages in activities and discussions.
3. Leads others to participate; explores new class ideas and approaches.

Assignment Completion (AC)
The student completes work by the designated time/date and according to directions.
1. Fails to complete assignments or submit work; struggles to follow directions.
2. Produces completed work on a consistent basis by the designated time/date; follows directions.
3. Demonstrates new applications and examples of standard; exceeds assignment expectations; extends personal learning.

Interpersonal Skills (IS)
The student interacts with others to create a positive learning environment.
1. Lacks flexibility when working with peers; isolates self.
2. Works well with peers; listens and speaks respectfully; questions ideas rather than the person.
3. Adjusts to a variety of classroom roles; mediates; influences others to learn.