# Physics Syllabus

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**Course Description:** The Physics Georgia Standards of Excellence are designed to continue the student investigations of the physical sciences that began in grades K-8, and provide students the necessary skills to be proficient in physics. These standards include more abstract concepts such as nuclear decay processes, interactions of matter and energy, velocity, acceleration, force, energy, momentum, properties and interactions of matter, electromagnetic and mechanical waves, and electricity, magnetism and their interactions. Students investigate physics concepts through experiences in laboratories and field work using the science and engineering practices of asking questions and defining problems, developing and using models, planning and carrying out investigations, analyzing and interpreting data, using mathematics and computational thinking, constructing explanations and designing solutions, engaging in argument from evidence, and obtaining, evaluating, and communicating information.

FIRST SEMESTER

- One-Dimensional Motion
- One-Dimensional Forces & Newton's Laws
- Two-Dimensional Forces
- Two-Dimensional Motion
- Circular Motion
- Work, Energy, & Power
- Momentum

SECOND SEMESTER

- Harmonic Motion & Waves
- Sound Waves
- Light Waves
- Electrostatics
- Electric Circuits
- Electromagnetism
- Nuclear Changes

For more detailed standards, please go to: https://www.georgiastandards.org/Georgia-Standards/Documents/Science-Physics-Georgia-Standards.pdf

**Required Materials**: 3-ring binder Scientific calculator Pencil or Pen (blue/black) Paper (lines & graph)
**Recommended Materials**: Highlighters/Colored Pencils Notebook Dividers (10-12)

**Textbook:** Zitzewitz, P. (2017) *Physics: Problems and Principles.* Columbus, OH: Glencoe/McGraw-Hill (Cost: $78.07)
*Students will have online access to the textbook outside of the classroom.

**Grading:** Grades will be updated weekly and available to parents and students via the infinite campus parent portal. Students and parents should check grades regularly. The *Semester Average* will be determined as follows:

| | |
|---|---|
| **Major Assessments** | **45%** |
| **Minor Assessments** | **20%** |
| **Daily Work** | **15%** |
| **Final Exam** | **20%** |

Students may re-take two unit tests per semester except those in which cheating occurred or were not originally completed. The re-test should be completed within one week of the original assessment and will be the grade entered in the gradebook. This course includes a cumulative exam at the end of each semester.

**Google Classroom**

To encourage blended learning, online assignments will be posted weekly through Google Classroom. At least one Google Classroom assignment per week will be graded and entered in Infinite Campus. Students should be familiar with how to navigate the online platform, communicate with their teacher, and submit assignments on time. If there are technology limitations, please notify the teacher.

**Honor Code:** Assignments or tests containing material copied from another student will receive NO CREDIT. Students who willingly allow others to copy their work or answers also will receive NO CREDIT. Parents/guardians will be notified should their student lose credit for any class grade due to an honor code violation.

**Procedures and Expectations:**

**Students are expected to adhere to the VHS Student Code of Conduct at all times**

Classroom Behavior

- Arrive ready for class (notebook, pencil/pen, homework); be an active participant in class and lab every day.
- Treat everyone with respect. Be polite toward the teacher and your classmates.
- Food and drink are not permitted (except water in closed containers in the classroom).
- Take pride in the classroom by helping to keep it clean.
- BYOD: Electronic devices may be visible/used ONLY on days when the teacher grants permission.

Attendance

- Students should make every effort to be in class every day. If absent**, it is the student's responsibility to obtain missed assignments/notes from a classmate or teacher**. See the missing assignment crate in the classroom.
- An absence the day before an assignment deadline or announced test DOES NOT warrant an extension.
- If a test is missed, it is the student's responsibility to schedule a day to make-up the test within 5 school days. If a lab is missed, it will be the teacher's discretion if an alternate assignment or make-up lab is provided.
- If you are not in the classroom when the bell rings you will be marked tardy. Disciplinary action for tardies will follow the student handbook.

Consequences

- Minor disruptions/infractions will receive warnings, conferences, and/or parent phone calls.
- Repeated minor offenses will result in detention to be served in room 1210 from 2:50 – 3:15. Be prepared to do homework or tasks assigned by the teacher.
- An office referral will occur for major disruptions/infractions, failure to serve assigned detention, or after repeated detention assignments.

**Course Goals:**

The purpose of this course is to make you a knowledgeable and capable student of physics. This course is also designed to make you a critical thinker, with an ability to think logically and to apply problem solving skills in any setting. You will be challenged in ways you've not experienced before. Therefore, the following policies have been put in place to help you develop your fullest potential and make you college and career ready.

- While grades are important, the greatest focus is your learning and understanding. So, when you are concerned about your grades, it is imperative to ask about what you did not understand rather than just how to bring up your average. You may choose to confer with myself or your classmates for help. Tutoring is designed to address any misunderstandings or misconceptions you may experience.

- You have the opportunity to receive full credit on any assignment that is submitted on time.
  If you choose not to avail yourself of this opportunity, recognize that you may have points deducted from the assignment. Work deemed extremely late may not be submitted at all and will receive a grade of zero.

- You will be afforded many opportunities to demonstrate your learning; therefore, extra credit assignments will not be provided.

**Suggested Study Techniques:**

1. **Take ownership of your learning**.
2. Prepare for class before coming by reading over your notes **DAILY** soon after you have written them.
3. Be attentive and actively participate in class.
4. This is a math-based science class – don't get behind!! If you are having trouble with the material – get help early. If math is a weakness for you, consider regular tutoring. Do not wait until test day!!!
5. Work **all** the problems. When studying for a test, **rework** them – don't just read them over.
6. Study frequently and in small doses. Cramming does not foster long term understanding!
7. Organize & participate in study groups. Your peers can be an excellent source of help!
8. The online textbook can be accessed through the student SSO Portal.
9. The following are recommended online resources:

- Physics Classroom (www.physicsclassroom.com)
- Khan Academy (www.khanacademy.org)
- Mr. P's Flipping Physics (www.flippingphysics.com)

*"The function of education is to teach one to think intensively and to think critically. Intelligence plus character – that is the goal of true education."*

~ Martin Luther King, Jr.

**Course: Physics** **Teacher: Kristi Cannon**

_____ _____
PRINTED STUDENT NAME PERIOD

**LAB SAFETY CONTRACT**

General Lab Safety Rules

- Follow all written & verbal instructions as provided
- Wear proper eye/clothing protection at all times.
- Conduct yourself in a responsible & safe manner in the laboratory environment.
- Be knowledgeable of equipment, safety symbols, & techniques required for each lab.
- Know where/how to get help in an emergency, including the location of the first aid, safety shower, eye wash, fire extinguisher, and fire blanket.

Students must pass a lab safety quiz with an 80 or higher to be permitted to participate in lab activities.

**QUESTIONS**

1. Do you wear contact lenses? __ YES __ NO
2. Are you color blind? __ YES __ NO
3. Do you have allergies? __ YES __ NO If so, list specific allergies:

4. Is there any medical condition that I need to be aware of? If so, please list:

I have read, understand, and agree to follow the lab safety rules outlines above, located in the lab safety materials, and any others provided in the future. I will conduct myself safely & appropriately at all times in the lab environment. I understand that failure to do so may result in not receiving credit for the lab and/or an office referral.

_____ _____
STUDENT SIGNATURE DATE

**PARENT ACKNOWLEDGMENT**

I have read the information provided in the course syllabus and understand the policies, procedures, and expectations. I will support Mrs. Cannon's efforts to ensure my student is successful in this class. I acknowledge that my student must abide by the lab safety rules as outlined above and any others provided by Mrs. Cannon. I have contact information to communicate with Mrs. Cannon if needed:

Email: kristina.cannon@hcbe.net Phone (478) 218-7537, Ext. 64669

_____ _____
PRINT PARENT NAME PARENT PHONE #

_____ _____
PARENT SIGNATURE DATE

_____ _____
PARENT EMAIL #1 PARENT EMAIL #2

COMMENTS: _____

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