

Physics Class Information and Syllabus: 2023-2024

Dr. Sinha, E137
Conference period: 3rd

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Syllabus: Physics

Instructor: Dr. Suspa Chowdhury Sinha (SCHOWDHU@HOUSTONISD.ORG)

Class Information:

Physics is a science that deals with the properties, changes, and interactions of matter and energy in the **PHYSICAL** world. The course covers kinematics, thermodynamics, wave behavior, sound, light, optics, static charges, electric current, magnetism, atomic structure and nuclear physics. This class is designed to meet the level of rigor necessary to prepare students for post-secondary endeavors, as outlined in The Westside Way for requirements to graduate on the *Recommended Degree Plan*. You are expected to be engaged with the coursework, exude effort in accordance with the level of this class, and seek help as soon as you encounter any challenging work throughout the course.

Materials Needed to Be Successful:

- ☐ McGraw-Hill Physics Principles & Problems
 - ❖ Can be accessed from CANVAS under "Digital Resources" Scientific Calculator, every day (preferably NO Casio models!)
- WABBIT must be downloaded to your laptop and will allow to you perform all of the calculations necessary for this course.
- ❖ Cell phones, tablets, or iPods are not acceptable for use as a 'calculator'.
- ☐ Single subject notebook (required)
- ☐ Ruler and plastic protractor
- ☐ Pens, pencils and erasers
- ☐ Other supplies necessary for projects will be announced as the year proceeds

Grading and Related Policies:

- **70% Major Grades (Tests and Projects)**
- **30% Minor Grades**
 - Class work/homework, weighted x1
 - Labs & quizzes, weighted x2
 - "Check" grades (*see policy below*)

Tests: Since Major grades are 70% of your class average, your six weeks grade will strongly reflect how you perform on tests. Testing days for science classes are Mondays, and Wed/Thursday block days. Notice for tests will always be posted at least a week in advance.

Test Re-Takes: Any student scoring *below 70* on a test may attend the test retake. Always attempt to do your best the on the original test; the maximum grade that will be entered into the gradebook for a retake is an 70. There are no retakes offered for projects. Dates, times, prerequisites and location for test retakes will be posted.

Classwork / Homework: Tasks such as daily work, homework, participation, lab cleanup, etc. may be check graded. Assignments may be graded based on the number of questions you get correct (traditional grading), *or* as a check grade (completion grading). You may not know in advance what type of grade will be assigned so always complete all assignments to the best of your ability.

Late Work: Assignments have due dates and each assignment is planned with a specific timeline in mind to help you to acquire the learning necessary to demonstrate mastery on assessments. It is important that you exert deliberate effort to stay on track with the due dates for your work. **Late work will only be accepted as long as the answers have not been posted, or if the assignment has not been graded and passed back.** Late work will receive a 10 point reduction if received after the time that it was due, with an additional 10 points deducted for each day that follows.

Make-up Work: It is very helpful to correspond with me via email or telephone if/when you know that you will be absent. You are responsible for getting and turning in *YOUR OWN* make-up work. Find the appropriate folder for the day(s) that you missed on Canvas, and also in the classroom. You are allowed the same number of days missed to turn in makeup work. Missed tests must be made up before they are unlocked on Canvas; if you fail to meet this requirement, you must follow the appropriate steps for retakes.

Tutoring and Helpful Websites:

Tutoring: Mon/Tuesday – 12 noon & Wednesday – 11:35 am

- ☐ Always check CANVAS for information that I regularly post.
- ☐ www.physicsclassroom.com/class is a very helpful website with tutorials on a variety of physics topics that we will be learning throughout the year.

Classroom Expectations:

The following rules have been established so that this classroom remains an orderly and pleasant place to learn this challenging subject :

- **No food or beverages are allowed in the classroom**, except bottled water in a container with a closed cap.
- Ask questions and seek help as soon as you are having a problem with the material. Challenge yourself to continuously improve; a positive attitude goes a long way in my class and **effort is commendable!**
- Use class time to its greatest extent; you should avoid absences, tardies, and excessive restroom breaks. Restroom policy will be discussed in class.
- You are expected to be fully attentive to what is going on during the time that we have for this class period. Therefore, listening to
- Non-instructional use of phones and headphones are not permitted.
- Respect the personal space and property of other students in your class, and of the teacher.

Physics Scope & Sequence

Grading Period	Content/Major Topic
1 st Six Weeks	<ul style="list-style-type: none">▪ 1-D Kinematics (Ch. 2 & 3)▪ Vectors and 2-D Kinematics (Ch. 5, 6 & 8)▪ Project
2 nd Six Weeks	<ul style="list-style-type: none">▪ Gravitational Force (Ch. 7)▪ Forces, Free-Body Diagrams & Laws of Motion (Ch. 4)▪ Project
3 rd Six Weeks	<ul style="list-style-type: none">▪ Energy, Work & Power (Ch. 10 & 11)▪ Momentum & Impulse (Ch. 9)▪ Project
4 th Six Weeks	<ul style="list-style-type: none">▪ Thermodynamics (Ch. 12 & 13)▪ Vibrations, Wave Properties & Behaviors (Ch. 14)▪ Project
5 th Six Weeks	<ul style="list-style-type: none">▪ Sound (Ch. 15)▪ Electromagnetic Waves & Optics (Ch. 16, 17, 18 & 19)▪ Project
6 th Six Weeks	<ul style="list-style-type: none">▪ Electric and Magnetic Forces (EMF) (Ch. 20 & 21)▪ Circuits (Ch. 22, 23, 24, 25 & 26)▪ Project