

# Physics

## Syllabus

The goal in Physics is not only to create some familiarity with the subject, but to also prepare you for collegiate level physics. The limits of this preparation are your abilities, resources, and background. These classes will require you to work and think about the ideas and concepts presented. For most of you these classes will present a real challenge, but one which can be met by continuous DAILY work. The grades you receive will be the ones you earn. Your grade will be based on a percentaged point system so it will be easy for you to keep track of your grades. Students are encouraged to keep track of their grades.

EXAMS - I believe in comprehensive semester exams which will be about 20 % of your semester grade.

WORKSHEETS - are rare due to the types of problems involved.

HOMEWORK - Homework is expected to be done and will always be gone over in class. The intent of homework is not to create busywork, but to strengthen concepts presented in class and should not take more than one-half to one hour to complete most of it. I view these assignments as instructional tools for you to practice on and a graded assignment (quiz/test) always follows.

SPECIAL PROJECTS- Some topics we cover, cry out for a special project to demonstrate an understanding of the concepts. Currently I plan on projects on sound, toys, mobiles, and possibly Cedar Point. Point values will vary depending on the complexity of the project.

LAB REPORTS - Labs in Physics are used to help you understand the current concepts. Lab reports are used to explain how you obtained your results and how it coincides with the idea being tested. Proof comes through calculations. Formal and informal lab styles can be used . On the average of at least one lab per week with varying points. Each lab will be recorded with a net value of 50 points. Final lab reports must be done in ink or typed/word processed. I will accept your reports on either paper or computer disks if you have a program that I can read on my systems.

QUIZZES - usually follow smaller divisions of the unit ranging from 25 to 50 points. Quizzes will usually be problem solving with a few short answer essays.

TESTS - at least two tests per nine weeks will be given, preferably three, each worth 100 points. You will need to provide paper to do problems and essays as I have found that, due to handwriting styles, the space usually provided is not

large enough for all of you to complete them. A review day will precede each test to answer any questions and wrap up the chapter. I will retain the tests for future use.

**GROUP WORK** - Students will be divided into small groups for all of the lab work involved in this class. It is suggested that all members of the group work on the lab work individually and use the group to verify answers. Too many mistakes are made by careless errors to blindly take anyone's answer without verifying the work. Non-productive members of the group may be ejected to work on their own. Depending on class size, no group shall be larger than four members. Members may petition to move to a different group, having fewer than four members, by submitting their request, in writing, with an explanation for the reason for the move. I have the final decision in the makeup of the groups.

**I BELIEVE IN LIMITED EXTRA CREDIT!**

**PLAGIARISM** - The school has a very strict viewpoint on claiming credit for work that is not yours. All assignments not labeled as group projects/assignments are expected to be done by the individual student. Any similarity between your work and someone else's will result in the loss of credit by all involved parties.

**DUE DATES** - Due to the nature of the work, most labs will have a more lenient due date than Chemistry. A grace period of one week will be allowed for any late papers, with a letter grade deduction for being late. The grace period will not be extended because of short illnesses. Work handed in after the grace period will lose half its point value. **NO LATE WORK WILL BE ACCEPTED AFTER the last Monday of the nine-weeks. DUE DATES ARE YOUR RESPONSIBILITY AND I WILL NOT ALWAYS REMIND YOU OF LATE WORK.**

The absence and tardy policies of the school will be strictly enforced. You are tardy if you are not visibly in the room, ready to begin, when the bell rings. Repetitive, excused tardies will be questioned. It will be your responsibility to find out and complete assignments you miss by first checking with your peers and then, if they don't know, me. Grace period will not be extended. Tests and quizzes will be made up during studyhalls or after school. If you miss only the day of the test, you will take it the day you return unless we start a new chapter instead of going over the test. If you miss only the review day, you are expected to take the test with the class.

I expect you to come to class prepared to work. That means with paper, for notes and pop quizzes, something to write with, and a calculator, when we are working on math related materials. Any style of calculator is acceptable but if you are planning on taking more math classes, I would suggest a scientific calculator.

Let me know if you need some extra help and we will arrange a time to meet. I

stay late after school and can come in a little early, if need be. The one thing I am not is a mind reader so communication is essential.

NOTE: I have one set of rules for both classrooms 224 and 226. Therefore there is no food or drink allowed in either classroom. I am not opposed to gum, as long as it is chewed quietly and remains in your mouth. I am not opposed to hard candy that you can stick in your mouth and leave it there. I will not allow anything else.

Text: Physics: Principles and Problems by Paul Zitzewitz, and Robert Neff; Copyright 1995 by Glencoe (MaGraw Hill), New York Accompanying Laboratory Manual. Topics Covered: 1. Mechanics: motion and forces. 2. Work, power, and energy. 3. Waves: sound and optics. 4. Electric circuits: Parallel and Series. 5. Magnetic Fields. These are general categories which break down into a myriad of different sublevels. For example forces will break down into composition and resolution of force vectors, friction, centripetal and centrifugal force and motion, collisions in two dimensions, gravitational forces, and torques. Labs and class projects will be used to support these topics. Students will be expected to read chapters and take notes from information discussed in class. See sections on grading policy.