

In physics we study a wide variety of phenomena, as often as possible in a laboratory setting, often using mathematics to help us understand. We will discuss the basic principles of physics and find that these form the foundation for the other branches of science. We will also study the many practical applications of physics that abound in the world around us.

This paper provides information about Physics classroom rules, procedures, and about grading. Please keep this paper, or know where to find it online.

Assignments and Notebook– assignments are posted online (www.johndilsaver.com). Solutions are also posted online. Completed assignments are to be kept in the student’s notebook. This notebook will be assessed several times during each quarter.

Quizzes. We will typically have a quiz the last time we meet that week, generally this will be either Thursday or Friday. Thursday quizzes are generally shorter and worth fewer points, Friday quizzes are larger and worth more points. Students should attempt not to miss class and quizzes. Make up quizzes should be taken during advisory, and will generally be taken from quizzes/tests your instructor has written in the past.

Practice is essential in order to learn to solve math problems. Students will have many opportunities to practice solving problems. Students are strongly encouraged to not get behind in their working of homework problems, and to continue to work on the various problem types until they achieve a thorough understanding.

Attendance: Good attendance is necessary for success in Physics. Assignments are posted at www.johndilsaver.com and on the white boards in room H243. Late work is discouraged, and will lessen the likelihood the student will perform well on the quizzes.

Help. Help exists in several forms. Assignments are posted in advance in Rm H243, and online. With block scheduling there is always a day between our class meetings. Students are encouraged to get help during advisory. A+ tutoring may be available. Further, you are encouraged to come in before or after school for help. ***Student study groups are encouraged.*** My school e-mail is johndilsaver@mail.ozark.k12.mo.us

Tardy Policy: the school tardy policy will be followed. Please carefully note the tardy/absence procedure discussed in class.

Seating and Participation: Students will sit in assigned seats. Students should come to class prepared to learn. This means coming to class with their textbook, paper, pencil, calculator, and notebook of past assignments. Students should be in their seat ready to proceed when the bell rings.

Food: Please do not eat in the Physics room. Water bottles are allowed.

Calculators. A calculator with built in trig functions is needed for Physics. Any “scientific” calculator that includes the trig functions is fine. These are available at low cost. Students are encouraged to put their name on their calculator. Do this right now. The TI 83 or TI 84 series of calculators is a good option for those students also enrolled in Trigonometry.

Class conduct. Excellent behavior is expected from Physics students. Students are encouraged to ask questions and participate in discussions. Students should arrive on time with all needed materials. Students ***must*** treat their fellow students, teacher, and facilities with respect. Disrespectful comments, whether directed towards the instructor or another student within the class are not expected and will not be tolerated. Showing that you are smart and enjoying your intellectual ability is fine. Trying to prove that you are smarter-than-someone-else is not acceptable.

Lab conduct. Students are expected to read lab instructions before coming to class. Lab work may involve working in groups, in some cases students may receive a grade as a group. Pre-lab quizzes may occur. Our lab instructions are often more extensive than those you have had in the past. It is important to carefully read and follow instructions. Do not sit on the lab tables, use the lab stools. Leave the lab equipment in the position and condition described by your instructor. Lab equipment is not to be touched until told, and then only used in the correct way as explained by the teacher. “Horsing around” with equipment, or with other students while in lab will result in immediate consequences. Working in lab is fun, and can be a fun way to learn the basic principles of science, but remember your instructor expects good student conduct in the lab. Lab work in Physics may involve more open ended questions, less “step by step” instructions and a more formal report than lab work in science classes in the past.

Lab safety. Safety is always our first concern in the lab. In order to participate in lab activities students **MUST** carefully listen to and follow all safety instructions. Our lab equipment and procedures have been designed with safety in mind, and are in fact quite safe. Lab work generally occurs in Rm H243, but may occur outdoors, on the practice field, in the gym, or elsewhere. Students are in class and are expected to be attentive and well behaved in each of these areas.

Math Background. Many Physics students are concurrently enrolled in Trigonometry. A few may be in Calculus, and some are enrolled in Algebra II. Occasionally a Geometry student attempts Physics. All of these levels of mathematical background can succeed in Physics. We use certain ideas (the basic sine, cosine, and tangent ratios) from Trigonometry; over and over. But, we will cover these topics in Physics when we need them. Physics is more challenging for those with less math background. Physics will show the student what can be accomplished with the math skills they already possess.

Technology use. Generally, the use of technology is encouraged. Occasionally we may do an exercise or part of a quiz without the aid of electronic technology. Using a cell phone to google that Albert Einstein’s annus mirabilis in 1905 involved nobel laureate quality papers on the photoelectric effect, brownian motion, and the special theory of relativity would be appropriate. Using a cell phone to text your gf or bf or bff or phfm would not be appropriate.

Semester Final: a comprehensive final will be given at the end of each semester covering all of the material for that semester. The semester final will count as 10% of the semester grade.

Grading. The students’ grade will be determined by their percentage of total possible points. Each quiz is worth points, often 20 to 50 points. The notebook and making acceptable progress on homework is worth typically 70 to 100 points. Lab work typically comprises 20% of the points in each grading period. The final exam is worth 10% of the students grade. Grades are computed on a percent scale as follows: 90 → 100% = A, 80 → 89% = B, 70 → 79% = C, 60 → 69% = D, 0 → 59% = F.

We will discuss these physics concepts this year:

Mechanics – this is the study of motion. We will learn about velocity, acceleration, force, vectors.

Waves – we study sound, light, and optics as examples of phenomena that work by way of waves

Electricity and Magnetism – static and current electricity, electric circuits, and magnetism.

Modern physics – we will study radioactivity, lasers, quantum effects such as emission spectra and other discoveries.