

# Physics

## Policy Statement.

Mr. Dilsaver.

Text – Physics, Principles and Problems

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.

**Attendance and Behavior-** Good attendance helps insure success in this class. Students are expected to pay close attention in class. Students are expected to make up work quickly. It is the responsibility of the student to make up missing work in the time allowed. Assignments are posted on the assignment boards in Rm H243. Use your student day planner to keep track of what is assigned. Use advisory. Students who miss class can easily learn their assignments in advance and turn work in on time.

**Homework.** Students are expected to complete work on time. . When class must be missed for a school related reason students are allowed to make up work for full credit, otherwise expect half credit on late work Learning to complete assignments on time is important in any area of life.

**Late work** – Late work is strongly discouraged. Realizing students have many responsibilities to meet I will accept late work under the following conditions: (a) late work earns partial credit, (b) students are responsible for grading their own late work. Work later than “5 SIS columns late” will not be accepted. This will be explained in class.

<b>Student Names in online gradebook</b>	<b>A3</b>	<b>A4</b>	<b>A5</b>	<b>A6</b>	<b>A7</b>	<b>A8</b>	<b>A9</b>
Student one	10	12	15	31	6	12	14
Student two	10	--	12	--	--	12	12
Student three	9	10	--	28	6	12	--
Student four	--	12	13	31	6	--	14

For example, in the spreadsheet shown above: The missing paper for student three for A9 could be turned in for full credit, as could the missing A8 for student four. The missing A7 for student two is currently worth  $\frac{3}{4}$  credit. The missing A6 for student two is worth  $\frac{1}{2}$  credit and the missing A5 for student three is worth  $\frac{1}{4}$  credit. The A4 and A3 columns are effectively closed (barring other circumstances) and work is too late to turn in. So, students are expected (and rewarded for) turning in late work expeditiously.

**Help.** Help exists in several forms. Assignments are posted in advance in Rm H243. 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

**Homework quizzes.** Some of the assignments will be graded by quiz: after going over the assignment in class, students will be given a quiz containing problems much like the homework problems. These quizzes are not always announced in advance. The intent is to say to the student that in completing a homework assignment, you need to understand the material, not just have managed to obtain “the answer”. Quizzes can occur at any time.

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

**Cell Phones:** Students should be aware the school cell phone policy allows me to take your cell phone if I see it out during class, to assign an after school detention for the second offense, and to refer the student to the office for discipline on the third offense.

**Tardy Policy.** The official school tardy policy will be followed. A record of the number of times a student is tardy to class will be kept. Missing over half a class period is the same as being absent. Note carefully the tardy procedure discussed in class.

**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 should put their name on their calculator. The TI 83 or TI 84 series of calculators is strongly recommended.

**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 occasionally. 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. The lab stools are to be placed on the lab tables at the end of the block. 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 I expect 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.

**Notebook.** With the comprehensive final exam in mind, students are required to keep a notebook for Physics. This will be spot checked occasionally and should contain all notes, labs, handouts, quizzes, tests, and homework assignments. I will retain some of your tests, but you are to keep any that have been returned. First quarter material should be kept until the first semester final in January. Similarly, third quarter material should be kept until the final exam in May. Papers are never to be carried around stuffed into your textbook!

**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.

**Grading.** Grades will be determined by a student’s percentage of total possible points. Each assignment, lab write-up, quiz, test, or notebook check is worth points. In a typical quarter, 60% of the points might be from tests, 10% from quizzes, 10% from labs, 15% from homework scores, and 5% from the

notebook. Grades are on a percent scale as follows: 90 – 100% = A, 80 – 89% = B, 70 – 79% = C, 60 – 69% = D, 0 – 59% = F.

**Pass Fail.** Students who select the pass/fail grading option in Physics are expected to work diligently to learn the material covered in this course. A percentage greater than or equal to 59.5% is needed in order to pass. Students who select the pass/fail grading option should fill out the proper form during the first week of class.

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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.