Instructor: Mr. Phillip Bitzer

Office Hours: Monday and Wednesday, 7:30 AM; other times by appointment only

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"Physics can not be taught, only learned."

Welcome to Physics 101. In this course, you will learn how the world works around you. It has been said that physics is the Rosetta stone between nature and mathematics. Therefore, you need math in order to do physics. The math we do, however, is restricted, to algebra skills and some geometry. If you feel you do not have the skills to start this class, you must see me immediately. I will happy to help in any way I can. I know you are probably nervous about the math involved, but I assure you that you will not be responsible for any math that you have not seen before. However, you will still have to do math in this class. This may mean lots of practice; be prepared.

In this course, **you will be expected to do homework every night**. Homework should be done completely, i.e. there is no credit for doing half the assigned problems or all but 2 of the assigned problems, etc. Homework is assigned so you can get better at the problems we are working on. Giving a partial effort will not help you.

Your grade in this class will be based on the amount points you have earned divided by the number points possible. Typically, there will be two to four traditional tests each quarter, each worth 100 points. We will have short 10 minute quizzes, both announced and unannounced, worth 10 points. Each quarter you will at least one major lab report, worth 100 points. In addition, there will be mini labs, worth varying amount of points, up to 100. Each quarter you are responsible for an article summary for 5 percent of your quarter grade. To get your grade, simply add up the number of points you have and divide by the number of points you could have. **You are expected to complete all assignments on time!** There is no excuse for turning late work; your grade will be severely affected.

If you have to miss class, we will miss you. However, class will still continue. Ask your classmates for the material you missed; ask the instructor if you have questions concerning the material missed. You will have the same number of days to make up work that you missed school. For instance, if you miss on two days, you will have two days to make up any work. **It is the student's responsibility to schedule make up tests.** See the related rule in your handbook.

This classroom will be using technology often. We will be using the web site extensively. You can find the presentations from class there, as well as various handouts. You can also check your grade, under your alias. You are also required to have an email account for this class. If you do not have one, I suggest getting a free Hotmail account. You are also strongly encouraged to sign up for a free AOL Instant Messenger Account. We will be holding various tutoring sessions online, and this is media I would like to use. If you do not have an account, see the web site on how to acquire either one. Also, there are a number of free downloads that you MIGHT need. Microsoft Powerpoint viewer and Adobe Acrobat Reader are two free programs you may need. If you need them, follow the instructions on the web site. Also, make sure your browser is Javascript enabled.

Calculators are a must for this class. However, calculators that can be programmed are NOT allowed on tests. If you insist on using them on tests, I will erase EVERYTHING in your memory! This includes all games and any pre-installed programs. **I STRONGLY encourage having a calculator such as the TI-30X IIS for class.**

I recommend having a binder to use for notes. I give out a lot of handouts, and the notes we take in class can be printed. In addition to whatever you use to take notes, you need to purchase a 3 hole, 1 inch binder for this class. In this you will be keeping the labs we do in class. Have this by Monday, August 23.

A final note: this is a physics course. We will be exploring many things of which you have prior knowledge.

A lot of notions will right; some will not. However, you do not learn unless you ask questions. As long as you are prepared, I am happy to answer any questions. There are many deep and interesting questions that arise; feel free to ask.

A general course outline is as follows, keeping in mind it is subject to change at any time,

1. Math Skills
2. Newtonian Mechanics
   (a) One dimensional Kinematics
      - Vectors
      - Distance/Displacement
      - Velocity
      - Acceleration, g

   (b) Graphing Skills
   (c) Two Dimensional Kinematics
      - Projectile Motion
      - Circular Motion

   (d) Dynamics (2nd quarter)
      - Newton's Three Laws of Motion
      - Kepler's Planetary Laws
      - Newton's Law of Gravitation

   (e) Two dimensional Dynamics
      - Inclined Planes

   (f) Momentum and Energy
      - Momentum, conservation
      - Work
      - Kinetic and Potential, conservation

3. Waves (3rd quarter)
4. Optics
5. Electricity and Magnetism (4th quarter)
6. Modern Physics
7. Thermodynamics
8. Fluid Mechanics

I have received the physics syllabus and understand all policies outlined. I have asked any questions I may have and received satisfactory answers. This is due back to the instructor on Monday, August 16.

Student (print name):

Student (sign name):

Parent (sign name):