SYLLABUS

PHYSICS – COLLEGE PREP

2015-2016

INSTRUCTOR – Mr. Burt
Contact at: aburt@mpslakers.com

Course Description

Physics studies the interaction of matter and energy. The student will study the major sources of energy and discover their nature and their applications. Mathematics used in the course will include algebra, geometry and trigonometry. A math review and trigonometry tutorial are included at the beginning of the course so that the students have an adequate grasp of the mathematics involved.

The following topics will be investigated in the coming year:

1. Study of motion-velocity, acceleration, graphical analysis of motion
2. Forces – Newton's laws of motion and their application
3. Vector addition and the applications of vectors
4. Two dimensional motion – projectile and circular motion
5. Momentum and its conservation
6. Work, power and energy and the conservation of energy
7. Torque and simple machines
8. Fluid dynamics – pressure and buoyancy
9. Heat and thermodynamics
10. Wave energy – sound and light waves
11. Electricity – static and current electricity, circuits
12. Electromagnetism – relation of magnetism and electricity and its applications

Course Requirements

Students are expected to do the following:

1. Take tests and quizzes during each term, submit lab reports, submit occasional written assignments, and complete homework assignments. Assignments are to be neatly done and in complete well-edited sentences. They are due ON THE DUE DATE. Points will be deducted from grades when assignments are late unless unusual circumstances are involved. The amount of points deducted for each assignment will be determined by the instructor (usually 25% of the total grade for each day late). No credit will be given once an assignment has been returned and reviewed by the class. When a late assignment is turned in, it will not be accepted unless *it is handed directly to the teacher.* Any work suspect of plagiarism will result in a zero for the assignment and further academic integrity review will follow.
2. Take a comprehensive final exam or project that will be worth 1/7 of the final grade. The exam/project will include material covered throughout the course and will be given in two parts, mid-year and at the end of the year. The three term grades will constitute the other 6/7 of the grade.
3. Maintain a notebook that will contain all homework assignments. This notebook will be checked regularly for an evaluation. Another notebook will be used to record notes, labs, project calculations.
4. Follow the safety procedures outlined in the Laboratory Safety Agreement and exhibit proper behavior in classroom and during lab sessions. Unsafe practices and improper behavior will result in disciplinary action. Students will be expected to follow behavior guidelines outlined in the Student Handbook. No food, beverages, or chewing gum are allowed in the classroom. All water bottles must be stored in backpacks on the back windowsill during lab investigations. All work done in class is to be related to the course. Other work will be taken.

5. Any test or lab missed must be made up by the end of the week unless prior arrangements have been made with the instructor. Unless there are unusual circumstances that have been discussed with the teacher or counselor, absence will not delay the due date of an assignment or a test date. Students who are absent are expected to see the teacher the day they return to school to discuss missed class material, obtain new assignments and turn in assignments that are due. If the absence causes the student to miss a test, the parents are asked to inform the attendance secretary when calling the school that they are aware their child is missing a test. Students should see the teacher on the day he/she returns to set a date for the make-up test. Make-up tests must be completed "in a timely fashion" or it could result in a loss of points on the test. Make-up labs will be completed upon designated days after school.

6. If there is a question about an assignment being turned in and/or missing, the proof that the assignment was completed and submitted rests with the student. Students are reminded to save all computer-generated work in your MPS server folder and to save all graded work until the end of the course.

Technology Note

Students will utilize many facets of technology throughout the year in this course. Students are expected to honor and follow all rules established in the handbook. Any failure to comply with these rules will be subject to disciplinary action set forth in the handbook.

Basis for Grading

1. The point system will be used for grading. The standard grading scale as outlined in the Student Handbook will be used.
2. Tests, quizzes, lab reports, and other assignments will be worth a variable amount that will be determined by the amount of material covered and the importance of the assignment. Students will be told the point value when a test or quiz is given or an assignment is made.
3. Failure to keep a proper notebook and excessive misspelling or sloppiness in reports and assignments can cause loss of points.
4. The grade scale in the student handbook will be strictly adhered to.

Course Materials

1. Textbook – Holt Physics by Serway &Faughn
2. Students must provide graph paper or engineering paper, notebook (three ring binder), scientific calculator and protractor, 5x8 note card for formulas, a Mead five star one subject college-ruled notebook, and a lab folder with two pockets (no prong inserts). All notebook paper used in the course must be college ruled.
3. Students are asked to bring their own safety glasses.

Classroom Discipline:

Students will be expected to conduct themselves in accordance with the policies stated in the student handbook. (Note: Cell phones are to be tuned off during the school day.)

Help Sessions/Contacts:

Extra help is available daily after school or as prearranged with the teacher.

Contacting the teacher can be done through e-mail at: aburt@mpslakers.com or by calling the school.

Please sign as acknowledgement of the contents:

Student:_____ Parent: _____Date:_____