COURSE DESCRIPTION
AP Physics 1 is a year long course and is intended to be representative of courses commonly offered in colleges and universities, but it does not necessarily correspond precisely to courses at any particular colleges and universities. Advanced Placement (AP) Physics 1 provides a systematic development of the main principles of physics, emphasizing problem solving and helping students develop a deep understanding of physics concepts. It is assumed that students are familiar with algebra and trigonometry, although some theoretical developments may use basic concepts of calculus. AP Physics 1 provides a foundation in physics for students in life sciences, pre-medicine, and some applied sciences, as well as other fields not directly related to science.

GENERAL INFORMATION
Term and year: 2015-2016
Name of instructor: Wendy Chen
Room number: B-24
Website: www.jfkphysics.com
E-mail address: wendy-chen@scusd.edu
Phone number: 916-433-5200 x1124

TEXTBOOKS
Physics, 6th Edition
John D. Cutnell and Kenneth W. Johnson
John Wiley and Son, Inc. c. 2004

MATERIALS NEEDED
physics binder, 6-inch ruler, scientific calculator, pencils, erasers, and paper.

COURSE OBJECTIVES
The aim of the course should be to develop the students’ abilities to do the following:
1. Read, understand, and interpret physical information—verbal, mathematical, and graphical
   a. describe the idealized model to be used in the analysis, including simplifying assumptions where necessary;
   b. state the concepts or definitions that are applicable;
   c. specify relevant limitations on applications of these principles;
   d. carry out and describe the steps of the analysis, verbally or mathematically; and
   e. interpret the results or conclusions, including discussion of particular cases of special interest
2. Describe and explain the sequence of steps in the analysis of a particular physical phenomenon or problem; that is,
3. Use basic mathematical reasoning—arithmetic, algebraic, geometric, trigonometric, or calculus, where appropriate—in a physical situation problem
4. Perform experiments and interpret the results of observations, including making an assessment of experimental uncertainties
5. Provide students with a college level physics experience.
6. Develop and reinforce strong problem solving and critical thinking skills.
7. Develop and reinforce a collaborative problem solving approach.
8. Develop and reinforce laboratory skills including: questioning, developing an experimental procedure, observing, data collection, and data analysis, including graphical analysis.
9. Develop and reinforce appropriate laboratory safety skills.
10. Develop an understanding of how we experience physics in our everyday lives and of how physics is applied in the “real world”.

EXTRA HELP
Office hours are Monday, Wednesday, Friday after school and by appointment.

Note: Items on this syllabus may change throughout the year. Students will be informed if changes occur.
ABSENCES
It is your responsibility to check www.jfkphysics.com or with Ms. Chen before or after school for work missed. You have the number of days you are absent plus one day to make up the missing assignment. For example, if you are sick for two days, you have two days plus one day (three total) from the day you return to complete the missing work. If you have missed a lab, you must arrange a time to make up the lab as soon as you return, if you do not do this in a timely manner you will not be allowed to complete the lab and will be given a zero. Unfortunately, demos cannot be made up. Consult a peer if you missed out on an in-class demonstration.

LATE WORK
Unless you have an excused absence, late work will not be accepted. Assignments are due at the time of collection. No exceptions. All assignments are posted on the class website.

RESTROOM POLICY
Class time is precious, so please try to use the restroom during passing time. No restroom passes will be given the first 10 minutes, last five minutes of class, or during lecture. All students must use the bathroom pass when exiting the room.

TARDIES
You are considered tardy if you are not sitting in your seat when the bell rings.

HOMEWORK POLICY
Homework will be assigned in this course. Check the class website for upcoming due dates.

ACADEMIC DISHONESTY
Allowing someone to copy your answers or copying someone else’s answers is a serious offense that will result in a zero for the assignment. Talking during a test or quiz is prohibited and may also result in a zero.

GRADING POLICY

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<thead>
<tr>
<th>Categories</th>
<th>Weight</th>
<th>Grading Scale</th>
<th>Letter Grade</th>
</tr>
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<tbody>
<tr>
<td>Assignments</td>
<td>10%</td>
<td>≥90%</td>
<td>A</td>
</tr>
<tr>
<td>Labs</td>
<td>35%</td>
<td>&lt;90%-80%</td>
<td>B</td>
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<tr>
<td>Quizzes/Exams</td>
<td>35%</td>
<td>&lt;80%-70%</td>
<td>C</td>
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<tr>
<td>Final Exam</td>
<td>15%</td>
<td>&lt;70%-60%</td>
<td>D</td>
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<tr>
<td>Warm-ups</td>
<td>5%</td>
<td>&lt;60%</td>
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Keep in mind that grades in the class are earned by YOU. I do not give grades, I simply tally up the points.

COURSE ACTIVITIES AND ASSESSMENTS
The physics course covers physics concepts, applications of mathematics to scientific principles and laboratory work. Assessment needs to evaluate student progress in all these areas. Methods of assessment should include:
1. Pre-laboratory and laboratory write-ups.
2. Performance assessment in the laboratory
   - (informally) observing student activities during laboratory investigations.
   - (formally) assessing with practical exams on specific laboratory procedures.
3. Unit tests and quizzes that include essay and short answer questions on concepts as well as mathematical applications.
4. Class participation.
5. Projects that demonstrate the use of physics principles in practical applications.
6. Portfolios that contain a diverse sampling of the student's best work for the year.

Note: Items on this syllabus may change throughout the year. Students will be informed if changes occur.
UNITS COVERED
For a detailed list of topics covered in this course, click here or copy and paste the following address into a web browser:

LABORATORY RULES
For safety purposes, all lab equipment should be used according to directions. Inappropriate use of lab equipment is a serious offense and may result with a zero on the assignment, parental contact, and/or disciplinary action. Further misuse of equipment will result in a written referral.

CLASSROOM RULES
• Comply with all school rules.
• Come to class prepared and ready to learn!
• Respect others and their ideas.
• Be seated quietly when the bell rings.
• Respect classroom equipment.
• Put away and silent personal electronic devices.
• No personal grooming.
• In addition to classroom policies, students are expected to abide by school and district policies.

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