

Applied Physics/Robotics Course Syllabus 2011-2012

Instructor:

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Office Hours: By appointment.

About the Course: Physics is a yearlong course recommended for students planning to pursue a science-oriented college curriculum. It is an introductory course studying the basic principles of our physical universe including: motion, mechanics, energy, sound, light, optics, electricity, and magnetism. Concepts and practical applications are emphasized through demonstrations, labs, problem solving, videos, and computer applications.

Materials:

Text: Physics: Principles and Problems by GlencoeScience. Additional material may be included to supplement the robotics portion of the curriculum around the end of the first semester.

Calculator: A calculator is required for this course, but is not to be relied upon for simple calculations. I recommend a graphing calculator, but scientific is sufficient. I do not require a specific type of calculator.

Grading

Homework: 25%

Lab/ Lab-Activity: 25%

Test/Quizzes: 30%

Final (cumulative, each semester): 20%

Letter grades will be assigned according to the following scale:

90-100% A

80-89% B

70-79% C

60-69% D

0-59% F

To keep informed on student progress, parents and students are encouraged to visit the district website at www.scusd.edu and log into Zangle to view assignments, grades, class and school news, which are updated regularly. If a parent doesn't yet have a Zangle Parent Connection account they must come into the school office to sign-up. Students may log in by using their student ID number and their birthday in the form mm/dd/yy for their password. I plan on updating my Zangle grade book weekly on Friday afternoons.

Late Work: Late work should be turned in next class period for 50% credit but will not be accepted if more than one day late.

Laboratories: The lab component is a major part of this physics course. Both open-ended (inquiry) and traditional (data collection & analysis) labs will be conducted with an emphasis on the development of scientific investigation and critical thinking. In addition to major labs, each unit also includes many additional informal hands-on activities/investigations and demonstrations. For all laboratories, whether formal or informal, students are required to state a predicted outcome, to record raw data, and to present evidence-based conclusions. The way in which students meet these requirements will depend on the lab and will range from a formal, typed lab report to a short group presentation in class. **MISCONDUCT DURING A LAB WILL NOT BE TOLERATED.** Consequences may include a 0 and exclusion from future laboratory activities. *****There will be no make up labs/ activities.**

Homework: In order to be successful, students are expected to do homework *every* night. Nightly homework assignments will be due at the beginning of class the next day. This is a fast paced course, and staying up-to-date with readings and exercises will be crucial to success in the course. Students should plan ahead to be sure all assigned work is completed on time.

Exams: Tests and quizzes will be composed of multiple choice and free response questions. Students will be informed of the dates of quizzes ahead of time and these will be about one third the length of a test. There will also be pop quizzes. These will be short (about five minutes) and are meant to check if students are staying up-to-date with the material. A word of caution: I always require that students show work on tests. Simply writing an answer without work will result in a 0. Students must

demonstrate that the memory on their calculators is cleared before beginning a test or a quiz. Students are allowed one note sheet of their creation for each exam. I DO NOT CURVE tests or the course grades.

Class Rules

Treat your peers, the instructor, and the subject matter with respect at all times. No food will be allowed in the classroom. No food *or drinks* will be allowed in the lab room. Remain seated and attentive until dismissed by the instructor at the end of class. The bell does not signal the end of class, I do.

Absence Policy: Students who miss an exam/ homework should be prepared to take the exam and/or turn in the assignment on the day of their return. Students are responsible for all homework that is missed during an absence. Students will be responsible for turning the work in; I will not ask for it. Students should consult classmates or the instructor regarding absent work.

Academic Integrity: Cheating of any kind will not be tolerated. Cheating can range from, but is not limited to: copying of another's work from homework, quizzes, or exams; plagiarizing; or violating test-taking procedures (talking, looking at unauthorized notes, sharing calculators, etc.) Students suspected of cheating or knowingly enabling another student to cheat will receive a zero on the assignment, quiz, or exam and possible further disciplinary action.

Contacting the Instructor: If at any time there are any issues pertaining to my class, please contact me. I am here to help students overcome their difficulties with the subject matter, and to impart new knowledge, so please never hesitate to ask for assistance. *The best way to reach me from off campus is through e-mail (ryan-mangan@scusd.edu).*

Please keep this syllabus in your personal records. This page is a contract, which you and your parents must sign indicating you have read this syllabus thoroughly. Please detach, sign and return it by the end of the first week.

I have read the attached syllabus. I understand and agree to abide by all the policies listed. By signing you are also acknowledging that physics is a class that is designed to prepare students for the rigor of university level science.

student signature

student name (print)

Date: _____

parent's signature

Date: _____

parent's e-mail

student's email

parent's phone number