

Bloomington Jefferson Senior High School
EDUCATION PROGRAM AND CLASS STANDARDS

AP PHYSICS-IV	KERSTEN, JEREMY	T4	2008-09
Course	Teacher	Term	Year

The Bloomington Schools staff supports and models the five core ethical values (respect, honesty, citizenship, integrity, and responsibility). Students at Jefferson High School are expected to maintain the highest standards of ethical academic conduct. Academic honesty and integrity are expected in class participation, assignments, tests, and homework.

ESSENTIAL STANDARDS

1. Demonstrate an understanding of Newton's laws of motion, including static equilibrium, dynamics of a single particle, and systems of two or more bodies; and
2. Explain Newtonian mechanics, which includes Kinematics, work, power, energy, momentum, motion, oscillations and gravitation.

COURSE CONTENT

Description

AP Physics Course, the equivalent to an introductory college level course that forms the foundation in physics for students considering majoring in the physical sciences or engineering. Methods of calculus are used whenever appropriate in formulating physical principles and in applying them to physical problems. Strong emphasis is placed on solving a variety of challenging problems, some requiring calculus. The subject matter of this course is primarily an intensive and analytic study of mechanics, electricity and magnetism. Other topics covered include kinematics, Newton's laws, work, energy and power, systems of particles, circular motion and rotation, oscillations and gravitation, electrostatics, conductors, capacitors and dielectrics, circuits, magnetostatics, and electromagnetism. The students will gain a foundation for analyzing real world situations, asking probing questions, and understanding the nature of interactions between objects. Additionally, students will read and interpret complex information and evaluate its validity.

Information about course, including textbooks and materials:

Walker, James S. Physics. Upper Saddle River, NJ: Prentice Hall. 2002.

EVALUATION

Essential Standards Assessment: Name and Description

Assessments for the AP Physics Essential Standards

1. The student will maintain a journal of solved physics problems. The problems will be submitted for review every three weeks throughout the first term. The problems will be evaluated for clarity, correct use of physics principles, and appropriate use of diagrams to help explain ideas.
2. The student will take an AP Exam. There are three possible exams to choose from at the time of this writing: the 1988 version, the 1993 version, and the 1998 version. The student should complete both the multiple choice and free response sections of the exam.

Course Grading:

All students are required to take the final assessment or examination each term in every course unless the student has an official exemption.

JEFFERSON HIGH SCHOOL EDUCATIONAL PROGRAM AND CLASS STANDARDS

Course Name: AP Physics **Voicemail:** 952-806-7728
Instructor: Jeremy Kersten **E-mail:** jykerste@bloomington.k12.mn.us

Welcome to AP Physics!

Course Content: AP Physics is designed to be an introductory college course in physics. The five main topics explored in AP Physics are Newtonian Mechanics (35%), Fluid Mechanics and Thermal Physics (15%), Electricity and Magnetism (25%), Waves and Optics (15%), and Atomic and Nuclear Physics (10%).

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Class Objectives: The course objective will be to prepare the student to take the AP Physics Test. For a detailed description of the class content and objectives please see: www.apcentral.collegeboard.com.

Books and Materials: Each student will be assigned a Physics textbook.. Replacement costs for the book is \$80. Students are expected to come prepared to class everyday with the proper materials. The following items should be brought to class each and every day:

- | | |
|-------------------------------|-----------------------|
| Covered Physics Textbook | Assignment Notebook |
| Pencil or Pen (Blue or Black) | Notes Notebook |
| Lab Notebook | Scientific Calculator |

Evaluation and Grading: Grades will be assigned based upon the following percentage. Remember that AP Physics is a weighted grade, but only if you complete all four terms of the course.

96-99 A	87-89 B+	77-79 C+	67-69 D+	0-59 F
90-95 A-	83-86 B	73-76 C	63-66 D	
	80-82 B-	70-72 C-	60-62 D-	

Grade Breakdown: The approximate number of points for the class will be as follows:

Homework	30 Assignments x 5 pts each	=	100 pts
Labs	10 Labs x 10 pts each	=	100 pts
Tests*	2 tests x 75 pts each	=	200 pts
Quizzes	5 x 10 pts each	=	50 pts
Projects	Paper and Lab write-up	=	50 pts
Participation	<u>Daily Participation/Notebook</u>	=	<u>50 pts</u>
Total		=	600 pts

All points are weighted equally and final percentages are rounded by TiesGradebook®. (Ex: 89.4%=89%= B+)

Note: Physics Tests will be scored using the same method as the AP College Board. The approximate grade to AP Score will be correlated as follows: 5 = A, 4 = A or A-. 3 = B+ to B-, 2 = C+ to C-, 1 = D+ to F.

Participation: Participation grade will include; coming to class prepared and with proper materials, participating in class discussions, performing laboratory experiments, learning and helping others learn in a group setting, taking notes, keeping a chemistry notebook, and paying attention in class.

Absences: A log will be kept of the daily activities for each class. If absent from class, it is the student's responsibility to read the log to determine which assignments, labs, or lectures they have missed and schedule a time with their teacher to make them up. For each day of absence, the student will have 1 day upon their return to make up any assignments or labs. Students may only make-up work from verified absences, no make-up work will be accepted from skipped classes including tests and the final exam.

Test / Quiz Absences

Course Credit and Essential Standards Policy:

- *Students who pass the class and pass the standard will receive both the credit and the standard.
- *Students who have earned a passing score for a class, but have not passed (received a zero for) the standard, will receive an NC (no credit) for the course.
- *Students who have failed the class and receive a zero on the standard will receive an F for the course.
- *Students who fail the class and pass the standard would receive the standard and have the opportunity to retake the class for the credit.

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