

**AP Physics C: Mechanics**  
**Course Syllabus**  
**-Mr. Kim-**

**Course Description:** AP Physics C: Mechanics is designed as a lab based college introductory physics course. This course builds on the conceptual understandings of Physics I and is intended to serve as the foundation of physics for students majoring in the physical sciences or engineering. A strong emphasis is placed on solving a variety of challenging problems, some requiring calculus, as well as continuing to develop a deep understanding of physics concepts.

**Course Content:** AP Physics C: Mechanics covers the first semester of the college Physics C sequence. The content is based on the requirements of the AP Physics Exam, which breaks down as follows: 18% Kinematics 20% Newton's Laws of Motion 14% Work, Energy, & Power 12% Systems of particles, linear momentum 18% Circular Motion and Rotation 18% Oscillations and Gravitation. We will cover chapters 1-14 of the textbook, Serway, R. & Beichner, R. (2000).

**Student Assessment:**

- Students are required to take the AP Physics C: Mechanics exam on **May**. Scores of 5, 4, or 3 are considered passing scores and will be accepted for four college credits at many, but not all colleges and universities.
- Each Physics Each Physics C Exam is 1 hour and 30 minutes long. The time for each exam is divided equally between a 35-question multiple-choice section and a free-response section; the two sections are weighted equally in the determination of each grade. The usual format for each free-response section has been 3 questions.
- Grading will be given using the weighting system.

Assignments – 10%    Quizzes – 20%            Labs –30%    Tests – 40%

- Grading Scale-

A+ = 98 – 100	B = 83 - 86	C - = 70 - 72	
A = 93 - 97	B- = 80 - 82	D += 67 - 69	
A - = 90 - 92	C+= 77 – 79	D = 63 - 66	
B+ = 87 - 89	C = 73 – 76	D - = 60 - 62	F=59 &below

- Students will be evaluated on how well they process their answers, not just the answer itself. Little or no credit will be given for writing down the just the answer. Partial credit will be given even if the answer is incorrect but well processed.
- Labs will be evaluated based on their data. While students need to work together in the lab, individual work is also evaluated by follow-up questions added in the lab worksheet

### **Materials Needed:**

All students are required to bring to class each day:

- 3-ring notebook (1.5 or 2 inch) used solely for AP Physics
- Graphing or Scientific Calculator (with exponential and trig functions)
- AP Physics exam formula sheet
- Textbook

### **Textbook:**

Serway, R. & Beichner, R. (2000). Physics for Scientists and Engineers, 9<sup>th</sup> Edition. Brooks/Cole - Thomson Learning, Belmont, CA. ISBN: 0-03-022654-6

### **Late and Make Up Work:**

- Completed homework is due at the beginning of each class.
- Turn in what you have completed on the due date.
- Excused absence: homework is due at the start of the next class; students are responsible to schedule make up quizzes within one week from the given date
- Unexcused absence: homework will not be accepted. Quizzes and tests will not be made up and a grade of zero will be recorded.

**You are responsible for getting all of your assignments turned in on time. All assignments and class works done are posted on the CMS website.**

**If you are absent, you must check the website and follow the instructions posted.**

To find assignments on the school's homepage;

- i) Open Loudoun County High School homepage
- ii) Click 'staff' located on the top yellow menu and you will find a list of teachers' name
- iii) Scroll down to the letter 'K', then click on 'Kim, Moses-Science'
- iv) Click 'Physics I' on the left column

Tests will be the major factor in your grades. The test date will be informed at least a week before the testing day. Hence, if you are planning to be absent (field trip, doctor's appointment, etc..) then you must take the test before the actual test date.

### **Labs:**

Labs are an essential component of the AP Physics course and a requirement of the College Board. Some labs will be exploratory in nature and completed at the beginning of a unit, requiring only an informal lab report. Others will be more structured and advanced, and will be a final application of knowledge gained during a unit, requiring a formal lab report.

### **Contact me**

If you need to contact me, send me an e-mail ; [moses.kim@lcps.org](mailto:moses.kim@lcps.org)