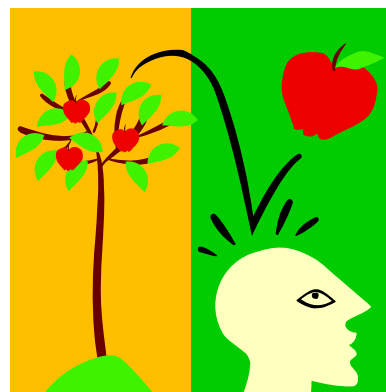


# AP Physics C: Mechanics Course Syllabus & Policies 2008-2009



## Welcome to AP Physics C!

**Teacher:** Ms. Cerami, **Office:** CC2 (Science Dept. Office)

**Email:** lcerami@newtoncountryday.org

**Website:** <http://ncdsnet.newtoncountryday.org> (follow links to AP Physics C)

### Course Description:

This course is equivalent to a first-year calculus-based college physics course in mechanics, which will prepare you to take the AP Physics C Mechanics Exam. This year, we will learn scientific principles that explain the physical world in which we live. Emphasis in the course is on gaining a solid understanding of concepts and the development of effective problem-solving skills. Lab experiments, engaging group discussions and other group activities are an important part of the course and will give you many opportunities for scientific inquiry and practice in analytical reasoning.

### Textbook:

*Fundamentals of Physics*, Halliday/Resnick/Walker; 8<sup>th</sup> edition, John Wiley & Sons, 2007.

### Course Topics & Syllabus:

Introduction to Physics, Measurement	Week 1
Kinematics in 1D & 2D, Vectors	Weeks 2-5
Forces & Newton's Laws	Weeks 6-9
Work, Energy & Power	Weeks 10-12
Linear Momentum, Impulse & Collisions	Weeks 13-15
Circular Motion and Rotation	Weeks 16-19
Gravitation	Weeks 20-21
Simple Harmonic Motion & Oscillations	Weeks 22-24
Review and Extra Topics	Weeks 25-28

## Course Evaluation:

Student grades for the course are based on performance on several forms of assessment. The grade will be *roughly* distributed as follows:

Tests & Quizzes (~ 50%)  
Homework (~ 30%)  
Labs (~ 20%)

### For Course Grade:

1 <sup>st</sup> Trimester:	25%
2 <sup>nd</sup> Trimester:	25%
3 <sup>rd</sup> Trimester:	25%
AP Exam Grade:	25%

## Homework:

Homework will consist of textbook chapter problems, worksheets, lab reports and projects. You will be assigned daily homework related to the current topic we are studying. This type of homework will be viewed at the beginning of class for an effort check. A strong effort will earn the full 2 points. Partial effort will earn 1 point and very little or no will receive no points. Periodically, daily homework will be collected for a more thorough grading. Homework is a very important part of your learning in this course. Late homework will result in 0 points for daily checks and a **10% grade reduction** per day late for all other assignments.

## Tests & Quizzes:

We will have a test on each chapter/unit and several small quizzes per unit (approximately once per week). As mechanics topics are interrelated and build upon each other, you may be asked to demonstrate knowledge of previously learned concepts on unit tests. You will be given at least 1 day notice for quizzes and 4 days notice for tests. Most of the tests, including a cumulative semester exam given approximately halfway through the year, will have a format similar to the AP exam to give you practice.

## Labs:

A variety of inquiry-based and instructor-designed lab activities will provide learning opportunities throughout the school year. You will have several opportunities to design and carry out your own lab experiments on topics we are covering. Laboratory experiments will be performed during both single and double period meetings. You will keep a lab notebook of your work throughout the year and will be asked to write several formal laboratory reports. For everyone's safety, it is imperative that you understand and follow lab guidelines. There will be a lab safety statement for you to sign.

## Attendance & Tardiness:

Attendance is **essential** for satisfactory performance in this course. If you are tardy to class for more than five minutes, you will not receive full credit on the daily homework check. Repeated tardiness will result in serious consequences.

### **Make-up Work:**

In the case of foreseen absences, please notify me as soon as possible to get homework assignments in advance. For unforeseen short-term absences, it is expected that you make up missed work as soon as possible after your return to school. You will have one additional day to make up work for every day that you are absent from school. If you miss a test, you should see me as soon as you can upon your return to schedule a period for your make-up test. Any assignment missed must be made up within one week after your return to school or you will receive no credit. Longer-term illness or special circumstances will be dealt with individually. **\*\*It is the STUDENT'S responsibility to reschedule missed work.\*\***

### **Organization & Supplies:**

I suggest that you use a 3-ring binder for organization of your course materials. Please keep your binder organized by unit. You will be given a bound journal to use as your lab notebook. You need to bring your binder and lab notebook to class each day, along with plenty of paper, writing utensils, a calculator and the **course textbook**. I will let you know when you need computers for class meetings.

### **Extra Help:**

You are always welcome to see me for extra help. If you are having difficulties with the material, please sign up (on my schedule at the Science Dept. Office) to meet with me outside of class. Often a few minutes spent talking to me about your confusion will save hours of frustration on your own. Physics concepts are best explained with diagrams and props and therefore it is best to speak with me in person when you have questions. Your classmates are another resource you should use when you are confused.

### **General Expectations:**

Physics is a complex subject and requires hard work and perseverance to understand the concepts. I expect that you will put in the effort both in and outside of class time and bring a positive attitude and approach to learning the material. You should devote thought to your homework assignments and give yourself enough time to complete larger assignments, such as lab reports and projects, and preparation for tests.

### **Course Website:**

The course website will contain course information including cycle syllabi, copies of handouts, extra practice problems and links to outside physics resources, such as simulations and videos that you can use to support what we are learning in class.