Hartford Magnet Trinity College Academy

Physics Course Outline

Welcome to Physics. I am so excited to work with you this school year! My name is Dr. Martina McCrory (you can call me Doc) and I will be your teacher for this course. I am fully committed to working with you this semester to help you excel in Physics. We will be using two platforms: Google Classroom and Google Sites. It will be your responsibility to check in on both sites daily.

Teacher Information: Name: Dr. Martina R. McCrory (Doc)

Email: mccrm0012@hartfordschools.org

drmccroryscience@gmail.com

Assignment Expectations:

- **Study Guide**:
    - Read the assigned material and complete all lesson objectives notes and provide examples.
    - Complete the multiple choice, true/false, open-ended, and problem-solving questions on the topic given.
        - All multiple choice answers must be placed on the line provided.
        - All true false answers must be placed on the line provided. All statements that are false must be corrected to be true. Any part of the statement can be changed to make it true.
        - All open-ended questions must be answered in complete sentences
        - All problem solving (math) questions must show work, include appropriate units, include the correct number of significant figures in order to receive credit.

- **Real-World Example**: Watch the video, complete the readings, use the additional links provided and answer the questions in complete sentences.

- **Quizzes**: Complete the assessment on ck12 and submit through google classroom.

- **Chapter Exams**: Completed in class (on paper). These may or may not be open-note exams (this is subject to teachers discretion). To use materials for an open-note exam all papers must be in a 3-ring binder for easy access. Failure to have your materials in the binder will result in you not being able to use it on the exam. There is no sharing of materials for an open-note exam!

- **Assessments**: You will have a mid-term assessment and final assessment as a part of your grade. Each assessment will involve a lab component and a test component.

- **Laboratory Assignments**: All labs must be completed electronically and posted to your own google site. All completed labs will be printed, graded, and returned to you.

- **Topics to be covered**
    - **Safety in the laboratory**
        - Safety Rules
        - Laboratory equipment

    - **Ch. 1 A Physics Toolkit**
        - 1.1 Mathematics and Physics
        - 1.2 Measurement
        - 1.3 Graphing Data

    - **Ch. 2 Representing Motion**
        - 2.1 Picturing Motion
        - 2.2 Where and When
        - 2.3 Position Time Graphs
        - 2.4 How Fast

- **Ch. 3 Accelerated Motion**
  - 3.1 Acceleration
  - 3.2 Motion with Constant Acceleration
  - 3.3 Free Fall

- **Ch. 4 Forces in One Dimension**
  - 4.1 Force and Motion
  - 4.2 Using Newton's Laws
  - 4.3 Interaction Forces

- **Ch. 5 Forces in Two Dimension**
  - 5.1 Vectors
  - 5.2 Friction
  - 5.3 Force and Motion in Two Dimensions

- **Ch. 6 Motion in Two Dimensions**
  - 6.1 Projectile Motion
  - 6.2 Circular Motion
  - 6.3 Relative Velocity

- **Ch. 9 Momentum and Its Conservation**
  - 9.1 Impulse and Momentum
  - 9.2 Conservation of Momentum

- **Ch. 10 Energy, Work, and Simple Machines**
  - 10.1 Energy and Work
  - 10.2 Machines

- **Ch. 11 Energy and Its Conservation**
  - 11.1 Many forms of Energy
  - 11.2 Conservation of Energy

- **Ch. 12 Thermal Energy**
  - 12.1 Temperature and Thermal Energy

- **Ch. 14 Vibrations and Waves**
  - 14.1 Periodic Motion
  - 14.2 Wave Properties

- **Ch. 15 Sound**
  - 15.1 Properties and Detection of Sound
  - 15.2 The Physics of Music

- **Ch. 22 Current Electricity**
  - 22.1 Current and Circuits
  - 22.2 Using Electric Energy