

I. Key Message/Expectations

Attendance is critical to this course. If you miss or are going to miss class, you are responsible to gather what you miss from your peers or from my website. If you miss a Lab, come, and see me and we will schedule a time when you can make it up. If you miss a test or exam, you will write it on a scheduled day.

This classroom is a safe learning environment. As such I expect everyone to treat each other with respect and kindness.

I believe that all my students are capable of success in this course. I want you all to succeed so do not be afraid to ask for help, either from myself or your peers.

If you would like extra help, I will be available during lunch and after school.

II. Course Overview

The secondary science program is guided by the vision that all students, regardless of gender or cultural background, are given the opportunity to develop scientific literacy. The goal of scientific literacy is to develop in students the science-related knowledge, skills and attitudes that they need to solve problems and make decisions and, at the same time, to help students become lifelong learners who maintain their sense of wonder about the world around them.

Physics 20 consists of four units of study:

- A. Kinematics
- B. Dynamics
- C. Circular Motion, Work and Energy
- D. Oscillatory Motion and Mechanical Waves

Success in this course will stem from active participation in demonstrations and discussions, completion of practice problems, and attendance.

III. Scope and Sequence

There will be four units in this course:

Unit 1: Kinematics

- Scalar/vector Quantities
- Uniform/uniform accelerated motion
- Two-dimensional motion

Unit 2: Dynamics

- Newton's laws of motion
- Vector addition
- Gravitational force and field
- Static and kinetic friction
- Newton's law of universal gravitation

Unit 3: Circular Motion, Work and Energy

- Uniform circular motion
- Planetary and satellite motion
- Kepler's laws
- Mechanical energy
- Conservation of mechanical energy
- Work-energy theorem
- Power
- Isolated systems

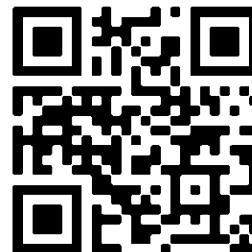
Unit 4: Oscillatory Motion and Mechanical Waves

- Simple harmonic motion
- Pendulums
- Mechanical and acoustic resonance
- Mechanical waves
- Universal wave equation
- Reflection
- Interference
- Doppler effect

IV. Teaching Methodology

I will be teaching this course using a wide variety of methods. Some of which may include, lectures, hands on learning, multimodal sources, group projects.

All notes and assignments will be posted to my website, you can scan the following QR code to be brought straight to my website.



V. Assessment

Assessment breakdown:

- Coursework – 80 %
 - Unit 1 – 15 %
 - Unit 2 – 25 %
 - Unit 3 – 30 %
 - Unit 4 – 30 %
- Final Exam – 20 %

Individual unit breakdown:

- Unit exam – 55 %
- Labs – 30 %
- Classwork – 15 %
- Other assessment ^{optional} – 15% (taken off unit exam)

Marks will be uploaded to PowerSchool within two weeks after the due date.

In this classroom we will strive to enable students to demonstrate what they understand, know, and can do. Multiple and varied approaches will be used for assessment purposes, with special attention to the role of differentiated learning. Only summative or assessment of learning activities will be used to determine coursework grades.

VI. Resources

To every class bring:

- Pencils
- Paper (binder or notebook)
- Lab Book
- Data Booklet
- Calculator (with a log function)