# PH 201 : GENERAL PHYSICS I

## Transcript title

General Physics I

## Credits

5

## Grade mode

Standard letter grades

## Contact hours total

70

## Lecture hours

40

## Lab hours

30

## Recommended preparation

MTH 111.

## Description

Studies Newtonian Mechanics beginning with basic math concepts and continuing into kinematics, dynamics, uniform circular motion, energy, momentum, and rotational equivalents of some of these topics. Lab addresses experiments and applied settings of Newtonian Mechanics along with explorations of diverse methods for analyzing and interpreting scientific data. Meets the basic requirements for many pre-health and life science programs. Should be taken in sequence.

## Learning outcomes

For each of these concepts and laws you will be able to:
1. Identify the symbols and constants which are used to express them.
2. Describe their qualitative meaning verbally, mathematically, and in writing.
3.Recognize their application to settings in our daily lives.
4.Apply them appropriately to settings drawn from daily life.
5.Use them successfully to predict or extrapolate the behavior of an object or system of objects.
6.Use graphical techniques to construct an equivalent alternative representation of the behavior of an object or system of objects.
7.Reinforce your understanding through written descriptions and explanations of your solution process.
8.Use them to estimate a reasonable expectation for some physical value based on your defensible evaluation of the physical parameters in the setting.
9.Integrate all of the above to construct a personal understanding of the relationship of this physics to the world around you.
Through activities that you complete for this class you will develop an awareness that learning and doing science is enhanced by:
1. Developing strong conceptual understanding first.
exploring multiple modalities for expressing your understanding including mathematical, graphical, oral, and written.
2. Constructing a personal understanding of the ideas and tools through practice and self reflection
seeking out, listening to, and reflecting on the the viewpoints of others
the use of simplified models that have value even when details are not accounted for.
understanding science as a process and not an answer.

## General education/Related instruction lists

- Science Lab