

PHYSICS

Course Description

This course is an introduction to major topics in physics, which is the natural science that studies matter, its motion and behavior through space and time, and the related entities of energy and force, including forces and motion, energy, gravity, electricity and magnetism, thermodynamics, and optics. Beginning with kinematics—the quantitative description of motion—the course covers the Newtonian mechanics of point masses, vectors and projectiles, momentum with its collisions, the work-energy principle, power, the conservation of energy and momentum, and a brief look at circular motion and satellite relevance.

Prerequisite

None

Credit Requirement Area

Science

Learning Objectives

- Students will define and understand the basic principles and applications of 1-D Kinematics.
- Students will define and understand the basic principles and applications of Newton's Laws.
- Students will define and understand the basic principles and applications of Vectors and Projectiles.
- Students will define and understand the basic principles and applications of Momentum and Its Collisions.
- Students will define and understand the basic principles and applications of Work, Energy, and Power.
- Students will define and understand the basic principles and applications of Circular Motion and Satellite Motion.

Suggested Weekly Schedule

Week	Graded Activities	Suggested Due Date	% Points
1	Assessment: 1-D Kinematics	Friday of Week 1	100%
Week 1 Total Percentage Towards Final Grade			16.65%
2	Assessment: Newton's Laws	Friday of Week 2	100%
Week 2 Total Percentage Towards Final Grade			16.65%
3	Assessment: Vectors and Projectiles	Friday of Week 3	100%
Week 3 Total Percentage Towards Final Grade			16.65%
4	Assessment: Momentum and Its Collisions	Friday of Week 4	100%
Week 4 Total Percentage Towards Final Grade			16.65%
5	Assessment: Work, Energy, Power	Friday of Week 5	100%
Week 5 Total Percentage Towards Final Grade			16.65%
6	Assessment: Circular Motion and Satellite Motion	Friday of Week 6	100%
Week 6 Total Percentage Towards Final Grade			16.75%

Week	Graded Activities	Suggested Due Date	% Points
WEIGHTED TOTAL			100%