

PH 100 : INTRODUCTORY PHYSICS

Transcript title

Introductory Physics

Credits

4

Grading mode

Standard letter grades

Total contact hours

60

Lecture hours

30

Lab hours

30

Recommended preparation

one year of high school algebra or equivalent or concurrent enrollment in MTH 060.

Course Description

Provides an introduction to the field of physics for students without any background in physics. Physics provides a fundamental description for everything we see in the world around us, from describing the formation of snow crystals to predicting the speed of a falling rock climber, and as such this course may discuss a variety of exciting topics. Intended to provide the non-science major an introduction to the fundamental ideas, importance and impacts of physics.

Course learning outcomes

1. Identify and apply the process of scientific inquiry.
2. Summarize and report on scientific concepts and data.
3. Analyze various realistic and hypothetical situations with the tools of fundamental physics.
4. Use mathematics to understand and solve physics problems.
5. Interpret data sets and graphs and draw appropriate conclusions.
6. Describe fundamental models and theories of physics.
7. Interpret the fundamental symbolic language of physics.
8. Describe in scientific terms the interplay between physics and societal issues, such as sustainability.

Content outline

1. Scientific method/nature of science
2. Data, quantitative and qualitative, scientific reasoning from data
3. Measurement and data analysis
4. Motion
5. Forces and free-body diagrams
6. Newton's Laws of motion
7. Energy and conservation of energy
8. Momentum and conservation of momentum

Required materials

May be required, see syllabus for details.

General education/Related instruction lists

- Science Lab