Bemidji State University

PHYS 1101: General Physics I

A. COURSE DESCRIPTION

Credits: 4
Lecture Hours/Week: 0
Lab Hours/Week: 0
OJT Hours/Week: *.*
Prerequisites: None
Corequisites: None
MnTC Goals: Goal 03 - Natural Science

First course of a survey of introductory physics, suitable for students who are not familiar with calculus. Topics include Newton’s laws of motion, energy conservation, momentum, fluids, vibrations, and waves. Elementary algebra and trigonometry are used frequently. Includes lecture and laboratory. Prerequisites: none; MATH 1170 recommended. [Core Curriculum Goal Area 3 (LC)]

B. COURSE EFFECTIVE DATES: 08/25/1997 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Motion
2. Kinematics
3. Dynamics
4. Energy
5. Momentum
6. Rotation
7. Fluids
8. Vibration
9. Waves

D. LEARNING OUTCOMES (General)

1. describe, in words and mathematically, physics concepts related to force, energy, and momentum.
2. use equations to make predictions and calculate measurable quantities for relevant physical situations.
3. carry out experimental investigations and interpret data in a laboratory setting.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal 03 - Natural Science

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus
G. SPECIAL INFORMATION

None noted