

# Dakota County Technical College

## PHYS 1050: Introduction to Physics

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 2

Lab Hours/Week: 1

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 03 - Natural Science

This is an introductory course in Physics and its applications. The course is designed for individuals with no previous experience in physics. In this course students will learn basic theory and application of classical physics in everyday life, and how to apply that knowledge through problem solving, simulation, and laboratory experiments. Topics to be covered include: linear and rotational motion, vectors, forces and equilibrium, work and energy, momentum, properties of solids, liquids and gases, heat and thermodynamics, and waves and sound.

Meets MnTC Goal 3

**B. COURSE EFFECTIVE DATES:** 11/05/2010 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

### D. LEARNING OUTCOMES (General)

1. acquire basic theory and application of classical physics and be able to apply these skills through problem solving, simulation, and laboratory experiments
2. develop an understanding of Systems International and English units
3. learn the definitions of and how to solve practical problems
4. demonstrate and apply critical thinking skills to solve a variety of problems
5. utilize scientific method to verify or discover physical phenomena
6. demonstrate effective use of resources including faculty, other students, reference materials, industry sources, and the Internet

### 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.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted