

# Fond du Lac Tribal and Community College

## COURSE OUTLINE

Date submitted: 11/20/07

Date approved:

Department and Course Number: PHYS 1010-1011

Title of Course: General Physics I & II

Number of credits: Lecture 4 Lab 1

### Catalog/Course Description:

Calculus-level general physics course designed for science and engineering majors. Concepts in mechanics, electricity, magnetism, heat, light, sound, and modern physics will be examined.

### **Placement for Success prerequisites:** (See instruction sheet)

Prerequisite: Concurrent enrollment in Calculus sequence

Reading: English/Writing: Math: Level 4

Recommended course materials and resources, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest lecturers. If applicable.

Text determined on a yearly basis depending on availability and content.

Three-Ring Binder, Metric Ruler, Colored Pencils, and Calculator with trig functions.

Handouts, Overheads, Slides, and Videos.

### Relationship of proposed course to the department mission and goals

Provides general education credits suitable for transfer to four-year degree programs. Serves as a basis for knowledge for more advanced studies in the physical sciences.

### Course goals:

Goal: To promote an understanding of calculus-based physics concepts and their relevancy to the student's everyday world.

Learning outcomes: (A minimum of one learning outcome shall be provided for each course goal)

State a minimum of two assessment instruments for each learning outcome.

Outcome: Students will demonstrate and communicate physics concepts through scientific inquiry and laboratory activities.

Assessment:

- in class question and answers
- lab journals
- problem solving exercises
- student presentations
- exams
- attendance

Course content:

(Provide an outline of major topics covered in course)

Physics I:

- Fundamentals of Matter, Energy, Space, and Time
- Describing and Analyzing Motion
- Force, Work, and Motion
- Equilibrium
- Circular Motion
- Momentum
- Rotational Motion
- Mechanical Properties of Matter
- Harmonic Motion
- Fluids
- Waves

Physics II:

- Thermal Properties of Matter
- Thermodynamics
- Electricity
- Electric Fields
- Electric Current
- Magnetic Fields
- Electromagnetism
- Capacitance and Inductance

- Light
- Lenses and Optics
- Particles and Waves
- Relativity
- The Atom

Placement for Success prerequisite

Check one of each area--English, reading, and math

Prerequisite	X
English level 1	
English level 2	
no English prerequisite	X
Reading level 1	
Reading level 2	
Reading level 3	
no Reading prerequisite	X
Math level 1	
Math level 2	
Math level 3	
Math level 4	X
no Math prerequisite	