

## LABETTE COMMUNITY COLLEGE BRIEF SYLLABUS

### **SPECIAL NOTE:**

This brief syllabus is not intended to be a legal contract. A full syllabus will be distributed to students at the first class session.

### **TEXT AND SUPPLEMENTARY MATERIALS USED IN THE COURSE (if any):**

Please check with the LCC bookstore <http://www.labette.edu/bookstore> for the required texts for this class.

**COURSE NUMBER:** PHYS 208

**COURSE TITLE:** ENGINEERING PHYSICS II

**SEMESTER CREDIT HOUR:** 5

**DEPARTMENT:** Physics or Engineering

**DIVISION:** General Education

**PREREQUISITE:** Minimum concurrent enrollment in MATH 131  
Calculus II and completion of PHYS 201 Physics I

### **COURSE DESCRIPTION:**

Engineering Physics II will pick up from the end of Engineering Physics I. Intended topics of study will be waves, electricity and magnetism, optics. Lab experiments give training in lab techniques.

### **COURSE OUTCOMES AND COMPETENCIES:**

**Students who successfully complete this class will be able to:**

1. Show concept knowledge by application in problem solving.

- Solve problems on waves, and simple harmonic motion.
- Solve problems on Electricity, and magnetism.
- Solve problems on optics
- Demonstrate examples of the interrelationship between waves, electricity, and magnetism concepts and society

2. Formulate problems using the tools of mathematics.

- Apply algebra, trigonometry, and calculus in applications and problems in physics.
- Demonstrate the ability to communicate ideas and facts using equations, graphs and other symbolic tools used in science.
- Give the correct derived unit that result from a mathematical calculation involving measured numbers having units.

3. Apply the scientific method in lab work settings.

- Conduct experiments, and collect data (observation).
- Analyze data collected.
- Draw a conclusion out of the lab performed.

4. Analyze experimental error in lab work, and relates it to lab measurement.

- Calculate mean value, standard deviation, and percentage error for data collected.
- Measure the accuracy and precision of data collected.
- State the source of error in his/her measurements.