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 203
COURSE TITLE: ENGINEERING PHYSICS I
SEMESTER CREDIT HOUR: 5
DEPARTMENT: Physics or Engineering
DIVISION: General Education
PREREQUISITE: Concurrent enrollment or completion of MATH 130 Calculus I

COURSE DESCRIPTION:
The topics covered are the same as PHYS 201 College Physics I. However, all topics are covered using concepts and mathematical tools of calculus.

COURSE OUTCOMES AND COMPETENCIES:
Students who successfully complete this course will be able to:

1. The student will be able to show concept knowledge by application in problem solving.
   - Solve problems on counting, and measuring.
   - Solve problems on the mechanics of motion.
   - Solve problems on the mechanical and thermal properties of matter.
   - Analyze a physical system and formulate a hypothesis as to the behavior of the system.

2. The student will be able to formulate problems using the tools of mathematics.
   - Apply algebra and trigonometry in applications and problems in physics.
   - Apply integration and differentiation methods to 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. The student will be able to 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. The student will be able to analyze experimental error in lab work, and relate 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.