UNIVERSITY PHYSICS I (PHYS 2074)

PHILOSOPHY: This is the first course of University Physics. The students will study the basic principles of mechanics, thermodynamics, and wave motion. This course is designed to prepare students with abilities of understanding the scientific concepts, logical thinking, skills of solving problems, and techniques of experiments.

PREREQUISITE: MATH 2205 (Calculus I)

MINIMUM COURSE REQUIREMENTS: This course will include the following topics:

I. Mechanics
   1. Measurement
   2. Motion in One Dimension
   3. Vectors, Motion in Two Dimensions
   4. The Laws of Motion, Applications of Newton's Laws
   5. Circular Motion
   6. Work and Energy
   7. Conservation of Energy
   8. Linear Momentum and Collisions
   9. Rotational Motion and the Law of Gravitation
  10. Angular Momentum and Torque
  11. Static Equilibrium
  12. Fluid Mechanics

II. Vibrations and Wave Motion
   1. Wave Motion
   2. Sound Waves

III. Thermodynamics
   1. Temperature, Thermal Expansion, and Ideal Gases
   2. Heat and the First Law of Thermodynamics
   3. The Kinetic Theory of Gases

ASSIGNMENTS: Instructors will assign homework, quizzes, class exams, and final exam to evaluate students’ level of understanding of scientific concepts and ability of solving problems.

ASSESSMENT RESPONSIBILITIES: Instructors who teach this course will be expected to participate in the Course Assessment. You will be given further information/instructions by the lead instructor.

Mathematics and Science Department Contact Information:
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