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COURSE SYLLABUS

COURSE: PHY 131 PHYSICS-MECHANICS

HOURS: Lecture: **3** Lab/Shop: **2** Work Exp/Clinical: **0** Credits: **4**

COURSE DESCRIPTION:

This algebra/trigonometry-based course introduces fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, vectors, motion, forces, Newton's laws of motions, work, energy, power, momentum, and properties of matter. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.

PREREQUISITE(S): MAT 121 or MAT 171

COREQUISITE(S): NONE

TEXTBOOK(S) & OTHER SPECIAL REQUIREMENTS:

Open Educational Resources (OER) are listed in the course Moodle.

STUDENT LEARNING OUTCOMES:

Upon successful completion of this course, the student will be able to:

1. Convert quantities with one unit to another unit using a conversion factor.
2. Distinguish and manipulate vector and scalar quantities.
3. Solve problems involving Newton's Laws.
4. Understand and solve projectile problems.
5. Solve problems using the concepts of work, energy, momentum, and power.
6. Solve problems involving statics and elasticity.
7. Calculate the density of objects of known volume and mass.
8. Understand basic properties of Fluids (Liquids and Gasses).

*****Please refer to the online version of the Richmond Community College Program & Course Catalog and the Student Handbook for current academic and general information.**