SUBJECTS AND COURSES

COURSE DESCRIPTIONS - PHYSICS (PHY)

PHY 112 Principles of Physics
MTH-100(Intermediate Algebra) with a grade of C or higher or MTH-110(Finite Mathematics) with a grade of C or higher or MTH-110(Finite Mathematics) with a transfer-in grade of C or higher or MTH-112(Precalculus Algebra) with a grade of C or higher or MTH-112(Precalculus Algebra) with a transfer-in grade of C or higher or MTH-113(Precalculus Trigonometry) with a grade of C or higher or MTH-113(Precalculus Trigonometry) with a transfer-in grade of C or higher
CODE - A PREREQUISITE: MTH 100 This course introduces the student to the basic principles of physics with an emphasis on electricity and magnetism. The course is designed to provide the student with not only a basic knowledge of electricity and magnetism but also an understanding of real-world applications. To prepare the student to understand electricity and magnetism, additional topics includes forces, work, energy, power, sound, and the atomic nature of matter. Topics in electricity and magnetism include electrical forces and fields, currents, electrical circuits, magnetic forces and fields, capacitance, electromagnetic induction and transformers. **2 Credit Hours**

PHY 201 General Physics I
MTH-113(Precalculus Trigonometry) with a grade of C or higher or MTH-115(Precaluculus Algebra Trig) with a grade of C or higher or MTH-125(Calculus I) with a grade of C or higher or MTH-126(Calculus II) with a grade of C or higher
This course is designed to cover general physics at a level that assures previous exposure to college algebra, basic trigonometry. Specific topics include mechanics, properties of matter and energy, thermodynamics, and periodic motion. A laboratory is required. PREREQUISITE: MTH 113 or equivalent. **5 Credit Hours**

PHY 202 General Physics II
PHY-201(General Physics I) with a grade of C or higher
This course is designed to cover general physics using college algebra and basic trigonometry. Specific topics include wave motion, sound, light optics, electrostatics, circuits, magnetism, and modern physics. Laboratory is required. PREREQUISITE: PHY 201. **5 Credit Hours**

PHY 213 Gen Physics with Cal I
MTH-125(Calculus I) with a grade of C or higher
This course provides a calculus-based treatment of the principal subdivisions of classical physics: mechanics and energy. Laboratory is required. **5 Credit Hours**

PHY 214 Gen Physics with Cal II
PHY-213(Gen Physics with Cal I) with a grade of C or higher
This course provides a calculus-based study in classical physics. Topics included are simple harmonic motion, waves, sound, light, optics, electricity and magnetism. Laboratory is required. **5 Credit Hours**

PHY 218 Modern Physics
PHY-214(Gen Physics with Cal II) with a grade of C or higher and MTH-227(Calculus III) with a grade of C or higher
The focus of this course is the development of the theory of relativity, the old quantum theory of Planck, Einstein, Bohr and Sommerfeld, and the new quantum physics of Schroedinger, Heisenberg, Dirac and Pauli. Laboratory experiments illustrate the principles discussed and include but not limited to determination of the speed of light, charge and charge to mass ratio of the electron, the Planck constant and the Rydberg constant. Laboratory is required. **5 Credit Hours**