PHYSICS (PHY)

PHY 151 (3 credit hours)
Introductory Physics I
Focuses on the conceptual principles of mechanics of solids, liquids, gases, heat, and sound using some algebra. Credit is not given to students who already have credit for PHY 201 or PHY 231. Companion lecture to PHY 161 laboratory. Lecture: 3 credits (45 contact hours).
Pre-requisite: KCTCS placement in College Algebra or completion of Intermediate Algebra.
Attributes: SN - Science
Components: LEC: Lecture

PHY 152 (3 credit hours)
Introductory Physics II
Focuses on the conceptual principles of electricity, magnetism, optics, atomic, and nuclear physics using some algebra. Credit is not given to students who already have credit for PHY 203 or PHY 232. Companion lecture to PHY 162 laboratory. Lecture: 3 credits (45 contact hours).
Pre-requisite: KCTCS placement in College Algebra or completion of Intermediate Algebra.
Attributes: SN - Science
Components: LEC: Lecture

PHY 160 (3 credit hours)
Physics and Astronomy for Elementary Teachers
Addresses basic concepts of astronomy and physics appropriate for elementary teachers and is taught with an emphasis on inquiry-based, laboratory activities. Topics include the basics of the motion of objects, astronomy by sight, electrical circuits, magnetism and the behavior of light. Companion course to GLY 160. Lecture: 1 credit hour (15 contact hours). Lab: 2 credit hours (75 contact hours).
Pre-requisite: GLY 160.
Attributes: SL - Science Laboratory, SN - Science
Components: LAB: Laboratory, LEC: Lecture

PHY 161 (1 credit hours)
Introductory Physics I Laboratory
Investigates concepts introduced in PHY 151 through experiments in classical mechanics and thermal physics. Laboratory: 1 credit hour (30 contact hours).
Pre- or co-requisite: PHY 151.
Attributes: SL - Science Laboratory
Components: LAB: Laboratory

PHY 162 (1 credit hours)
Introductory Physics II Laboratory
Investigates concepts introduced in PHY 152 through experiments in electricity, magnetism, light, atoms, and nuclei. Lab: 1 credit hour (30 contact hours).
Pre- or co-requisite: PHY 152.
Attributes: SL - Science Laboratory
Components: LAB: Laboratory

PHY 171 (4 credit hours)
Applied Physics
Surveys mechanics, heat, sound, electricity, magnetism, light, and modern physics as applied to practical systems. Lecture: 3 credits (45 contact hours). Lab: 1 credits (30 contact hours).
Pre-requisite: (MAT 85 or (MAT 116 or greater) or Equivalent math placement score) or consent of instructor.
Attributes: SL - Science Laboratory, SN - Science, Course Also Offered in Modules
Components: LAB: Laboratory, LEC: Lecture

PHY 172 (2 credit hours)
Physics for Health Sciences
Introduces the basic concepts of motion, forces, work, energy, power and waves through experimentation, as applied in electricity and magnetism, optics, atomic, and nuclear physics. Lab: 2 credit hours (60 contact hours).
Pre-requisite: KCTCS placement in College Algebra or completion of Intermediate Algebra.
Attributes: SL - Science Laboratory
Components: LAB: Laboratory

PHY 201 (4 credit hours)
College Physics I
Focuses on the mechanics of matter as governed by Newton's Laws; by the conservation laws of energy, momentum, and angular momentum; and thermal processes using algebra and basic trigonometry. Companion lecture to PHY 202 laboratory. Credit is not given to students who have already completed PHY 231. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours).
Pre-requisite: (MAT 150 or higher) or MA109 or an ACT math score of 25 or higher.
Attributes: SN - Science
Components: DIS: Discussion, LEC: Lecture

PHY 202 (1 credit hours)
College Physics I Laboratory
Enhances concepts introduced in PHY 201 through experiments in classical mechanics and thermal physics. Laboratory: 1 credit (30 contact hours).
Pre- or co-requisite: PHY 201 or equivalent.
Attributes: SL - Science Laboratory
Components: LAB: Laboratory

PHY 203 (4 credit hours)
College Physics II
Focuses on electromagnetic phenomena, circuits, optics and an introduction to modern physics using algebra and basic trigonometry. Companion lecture to PHY 204 laboratory. Credit is not given to students who have already completed PHY 232. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours).
Pre-requisite: PHY 201 or equivalent.
Attributes: SN - Science
Components: DIS: Discussion, LEC: Lecture

PHY 204 (1 credit hours)
College Physics II Laboratory
Enhances concepts introduced in PHY 203 through experiments in electricity, magnetism, and optics. Laboratory: 1 credit hour (30 contact hours).
Pre- or co-requisite: PHY 203 or equivalent.
Attributes: SL - Science Laboratory
Components: LAB: Laboratory

PHY 231 (4 credit hours)
General University Physics I
Focuses on the mechanics of matter as governed by Newton's Laws and by the conservation laws of energy, linear momentum, and angular momentum using calculus and trigonometry. Companion lecture to PHY 241 laboratory. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours).
Pre- or co-requisite: MAT 185 or MA 114 or equivalent.
Attributes: SN - Science
Components: DIS: Discussion, LEC: Lecture

PHY 232 (4 credit hours)
General University Physics II
Focuses on electromagnetic phenomena, circuits, and optics using vector calculus. Companion lecture to PHY 242 laboratory. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours).
Pre-requisite: PHY 231.
Pre- or co-requisite: MAT 275 or MA 213 or equivalent.
Attributes: SN - Science
Components: DIS: Discussion, LEC: Lecture

PHY 241 (1 credit hours)
General University Physics I Laboratory
Enhances concepts introduced in PHY 231 through a complement of experiments relating to motion, Newton's laws, rotation, and energy conservation principles. Laboratory: 1 credit hour (30 contact hours).
Pre- or co-requisite: PHY 231.
Attributes: SL - Science Laboratory
Components: LAB: Laboratory

PHY 242 (1 credit hours)
General University Physics II Laboratory
Enhances concepts introduced in PHY 232 through a complement of experiments probing electromagnetic phenomena, circuits, and optics. Laboratory: 1 credit hour (30 contact hours).
Pre- or co-requisite: PHY 232.
Attributes: SL - Science Laboratory
Components: LAB: Laboratory