COURSE DESCRIPTIONS BY COURSE DISCIPLINE PREFIX

PHY PHYSICS

PHY-110	Conceptual Physics	3 (3-0)	Fall Spring

Prerequisites: MAT-003^L or BSP-4003^L
Corequisites: PHY-110A^L

This course provides a conceptually-based exposure to the fundamental principles and processes of the physical world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Upon completion, students should be able to describe examples and applications of the principles studied.(1997 SU) This course has been approved to satisfy the following requirement(s):
   • UGETC course for A.A., A.A. Teacher Preparation, and A.F.A.
   • Natural Science Gen. Ed. course for A.S. and A.S. Teacher Preparation
   • Natural Science Gen. Ed. course for A.A.S. and A.G.E.

PHY-110A	Conceptual Physics Lab	1 (0-2)	Fall Spring

Prerequisites: MAT-003^L or BSP-4003^L
Corequisites: PHY-110^S

This course is a laboratory for PHY 110. Emphasis is placed on laboratory experiences that enhance materials presented in PHY 110. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in PHY 110.(1997 SU) This course has been approved to satisfy the following requirement(s):
   • UGETC course for A.A., A.A. Teacher Preparation, and A.F.A.
   • Natural Science Gen. Ed. course for A.S. and A.S. Teacher Preparation
   • Natural Science Gen. Ed. course for A.A.S. and A.G.E.

PHY-131	Physics-Mechanics	4 (3-2)	Summer

Prerequisites: MAT-121^S or MAT-171^S
Corequisites: None

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 motion, 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.(2014 FA) This course has been approved to satisfy the following requirement(s):
   • Natural Science Gen. Ed. course for A.G.E.

| **PHY-151** | **College Physics I** | **4 (3-2)** | **Fall Summer** |

Prerequisites: MAT-171^S or MAT-271^S

Corequisites: None

This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vectors, linear kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.(2018 SP) This course has been approved to satisfy the following requirement(s):

- UGETC course for A.S. and A.S. Teacher Preparation
- Natural Science Gen. Ed. course for A.A. and A.A. Teacher Preparation
- Natural Science Gen. Ed. course for A.G.E.

| **PHY-152** | **College Physics II** | **4 (3-2)** | **Spring** |

Prerequisites: PHY-151^S

Corequisites: None

This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.(1997 SU) This course has been approved to satisfy the following requirement(s):

- UGETC course for A.S. and A.S. Teacher Preparation
- Natural Science Gen. Ed. course for A.A. and A.A. Teacher Preparation
- Natural Science Gen. Ed. course for A.G.E.

| **PHY-251** | **General Physics I** | **4 (3-3)** | **Fall** |

Prerequisites: MAT-271^S

Corequisites: MAT-272^S

This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vector operations, linear kinematics and dynamics, energy, power, momentum, rotational mechanics, periodic motion, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.(1997 SU) This course has been approved to satisfy the following requirement(s):

- UGETC course for A.E., A.S. and A.S. Teacher Preparation
- Natural Science Gen. Ed. course for A.A. and A.A. Teacher Preparation

PHY-252   **General Physics II**   **4 (3-3)**   **Spring**
Prerequisites: MAT-272[S] and PHY-251[S]
Corequisites: None
This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered.(1997 SU) This course has been approved to satisfy the following requirement(s):
- UGETC course for A.E., A.S. and A.S. Teacher Preparation
- Natural Science Gen. Ed. course for A.A. and A.A. Teacher Preparation