

PHYSICS

PHY 121 GENERAL PHYSICS I

3 Lecture 3 Lab 4 Credit Hours(s)

A general college physics course covering principles of mechanics, including kinematics, Newton's laws, conservation of energy and momentum, rotational motion, simple harmonic motion. Three lecture hours plus weekly three-hour laboratory.

Prerequisite: Math Placement Level 4 (See Math Placement Table) or MAT 184 or MAT 132 with a grade of C or better.

PHY 122 GENERAL PHYSICS II

3 Lecture 3 Lab 4 Credit Hours(s)

A continuation of PHY 121, beginning with the study of fluids then moving on to heat, electricity and magnetism, waves and optics, and modern physics. Three lecture hours plus weekly three-hour laboratory.

Prerequisite: PHY 121 with a grade of C or better.

PHY 125 CONVERSATIONS-MODERN PHYSICS

1 Lecture 0 Lab 1 Credit Hours(s)

An introductory course of modern physics topics including relativity, wave particle duality, quantization of light and energy, etc. This course is for students who are interested in discussing and learning about these topics and their applications.

Prerequisites: MAT 184 with a grade of C or better and one year of high school physics or PHY 121 with a grade of C or better.

PHY 151 CALCULUS-BASED PHYSICS I

3 Lecture 3 Lab 4 Credit Hours(s)

This is the first semester of a three-semester sequence of calculus based physics. This course gives students who plan to major in either physics or engineering an understanding of physical concepts and their applications through the use of calculus. The laboratory is designed to teach basic experimental techniques and to verify physical concepts. PHY151 is primarily concerned with mechanics, including basic vector operations, kinematics, Newton's Law, work, energy, and conservation laws.

Prerequisites: MAT 221 with a C or better and either PHY121 with a C or better or one year of high school physics with a grade of 75 or better. Concurrent enrollment in MAT 222 strongly recommended.

PHY 152 CALCULUS-BASED PHYSICS II

3 Lecture 3 Lab 4 Credit Hours(s)

PHY152 is the second semester of physics in the calculus-based physics sequence. This course gives students who plan to major in either physics or engineering a fundamental understanding of electric and magnetic principles.

Prerequisite: PHY 151 with a grade of C or better and MAT 222 with a C or better.

PHY 251 ENGINEERING PHYSICS III

3 Lecture 3 Lab 4 Credit Hours(s)

This is the third semester of calculus based physics and is required for anyone pursuing a degree in physics or engineering. The major topics studied in this course are fluids, harmonic motion, wave motion, sound, thermodynamics, kinetic theory of gases and optics.

Prerequisites: PHY 152 with a grade of C or better or permission of the department AND MAT 223 with a C or better or concurrent enrollment in MAT 223

PHY 271 SPECIAL STUDY PROJECT I

1 Lecture 0 Lab 1 Credit Hours(s)

A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of physics or related areas. The student's time commitment to the project will be approximately 35-50 hours.

PHY 272 SPECIAL STUDY PROJECT II

2 Lecture 0 Lab 2 Credit Hours(s)

Similar to PHY 271, except that the student's time commitment to the project will be approximately 70-90 hours.

PHY 273 SPECIAL STUDY PROJECT III

3 Lecture 0 Lab 3 Credit Hours(s)

Similar to PHY 271, except that the student's time commitment to the project will be approximately 105-135 hours.