

PHYSICS (PHY)

PHY1001 APPLIED PHYSICS (3.00 Credits)

PHY1001 is an introductory course in general physics outlining topics in mechanics, matter, magnetism, electricity, heat and wave phenomena. The course is intended for students in technical or vocational fields. The student will learn to analyze and solve problems using analysis in algebra and written composition projects.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

Complete all the courses in one of the following options:

- Option 1 - Prerequisite: MAT1033 (minimum grade: C)
- Option 2 - Prerequisite: MGF1131 (minimum grade: C)
- Option 3 - Prerequisite: MAC1105 (minimum grade: C)
- Option 4 - Prerequisite: STA2023 (minimum grade: C)
- Option 5 - Prerequisite: MAC1114 (minimum grade: C)
- Option 6 - Prerequisite: MAC1140 (minimum grade: C)
- Option 7 - Prerequisite: MAC2233 (minimum grade: C)
- Option 8 - Prerequisite: MAC2311 (minimum grade: C)
- Option 9 - Prerequisite: MAC2312 (minimum grade: C)
- Option 10 - Prerequisite: MAC2313 (minimum grade: C)
- Option 11 - Prerequisite: MAP2302 (minimum grade: C)
- Option 12 - Prerequisite: MAS2103 (minimum grade: C)
- Option 13 - Prerequisite: MAC1147 (minimum grade: C)
- Option 14 - Prerequisite: MAC1105C (minimum grade: C)

PHY1001L APPLIED PHYSICS LAB (1.00 Credits)

PHY1001L is a laboratory which allows students to able to collect and analyze data in a variety of experiments covering topics covered in its companion course PHY1001L. Students will create experiment reports using analysis in algebra.

Total Contact Hrs: 32.00

Lab Hrs: 32.00

Complete all the courses in the following option:

- Pre or Corequisite: PHY1001 (minimum grade: C)

PHY1020 FUNDAMENTALS OF PHYSICS (3.00 Credits)

This course offers a comprehensive survey of physics, covering a wide range of topics including motion, Newton's laws, energy, sound, heat, electricity, magnetism, and optics. Emphasizing a conceptual understanding of physics, the course integrates critical thinking skills and real-world applications.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

PHY2048 GENERAL PHYSICS WITH CALCULUS I (4.00 Credits)

This calculus-based course serves as the first in a two-part series, covering topics like kinematics, dynamics, energy, momentum, rotational motion, fluid dynamics, oscillatory motion, and waves. Designed for science and engineering majors, the course integrates critical thinking, analytical skills, and real-world applications.

Total Contact Hrs: 64.00

Lecture Hrs: 64.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: MAC2311 (minimum grade: C), Corequisite: PHY2048L (minimum grade: C)

PHY2048L GENERAL PHYSICS WITH CALCULUS I LAB (1.00 Credits)

This calculus-based course serves as the first in a two-part series, covering topics like kinematics dynamics, energy, momentum, rotational motion, fluid dynamics, oscillatory motion, and waves. Designed for science and engineering majors, the course integrates critical thinking, analytical skills, and real-world applications. PHY2048L is a laboratory which allows students to able to collect and analyze data in a variety of experiments covering topics in its companion course PHY2048 including kinematics, vectors, statics, energy, momentum, rotational motion, oscillations and waves.

Students will create experiment reports using analysis in algebra, geometry and calculus.

Total Contact Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$10.00

Complete all the courses in the following option:

- Pre or Corequisite: PHY2048 (minimum grade: C)

PHY2049 GENERAL PHYSICS WITH CALCULUS II (4.00 Credits)

PHY2049 is part two of a comprehensive physics course outlining electricity, magnetism and optics using analysis in calculus.

Total Contact Hrs: 64.00

Lecture Hrs: 64.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: PHY2048 (minimum grade: C), Pre or Corequisite: MAC2312 (minimum grade: C) and PHY2049L (minimum grade: C)

PHY2049L GENERAL PHYSICS WITH CALCULUS II LAB (1.00 Credits)

A series of physics laboratory experiments chosen to coincide with the lecture course PHY2049. The course will include topics in electricity, magnetism, and optics. One 2-hour class meeting per week. A laboratory fee is charged.

Total Contact Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$10.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: PHY2048 (minimum grade: C) and PHY2048L (minimum grade: C), Pre or Corequisite: PHY2049 (minimum grade: C)

PHY2053 GENERAL PHYSICS I (3.00 Credits)

This course is the first in a two-part series intended for non-physics majors, offering an algebra and trigonometry approach to topics such as kinematics, dynamics, energy, momentum, rotational motion, fluid dynamics, oscillatory motion, and waves. The course fosters analytical and critical thinking skills to promote a scientific understanding of the real world.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

Complete all the courses in one of the following options:

- Option 1 - Prerequisite: MAC1114 (minimum grade: C), Pre or Corequisite: PHY2053L (minimum grade: C)
- Option 2 - Prerequisite: MTB1326 (minimum grade: C), Pre or Corequisite: PHY2053L (minimum grade: C)
- Option 3 - Prerequisite: MAC1133 (minimum grade: C), Pre or Corequisite: PHY2053L (minimum grade: C)
- Option 4 - Prerequisite: MAC1147 (minimum grade: C), Pre or Corequisite: PHY2053L (minimum grade: C)

PHY2053L GENERAL PHYSICS I LAB (1.00 Credits)

This course is the first in a two-part series intended for non-physics majors, offering an algebra and trigonometry approach to topics such as kinematics, dynamics, energy, momentum, rotational motion, fluid dynamics, oscillatory motion, and waves. The course fosters analytical and critical thinking skills to promote a scientific understanding of the real world. PHY2053L is a laboratory which allows students to be able to collect and analyze data in a variety of experiments covering topics covered in its companion course PHY2053. Students will create experiment reports using analysis in algebra.

Total Contact Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$10.00

Complete all the courses in the following option:

- Pre or Corequisite: PHY2053 (minimum grade: C)

PHY2054 GENERAL PHYSICS II (3.00 Credits)

PHY2054 is the second course in a two semester sequence, PHY2053 and PHY2054. This sequence includes two laboratory classes: PHY2053L to be taken concurrently with PHY2053, and PHY2054L to be taken concurrently with PHY2054. The topics covered in PHY2054 include: electricity, magnetism and optics. Algebra, trigonometry, geometry and vector methods will be used in the quantitative description of these topics.

Total Contact Hrs: 48.00

Lecture Hrs: 48.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: PHY2053 (minimum grade: C) and PHY2053L (minimum grade: C), Pre or Corequisite: PHY2054L (minimum grade: C)

PHY2054L GENERAL PHYSICS II LAB (1.00 Credits)

Laboratory experiences designed to accompany the topics under study in PHY2054. One two hour period per week. Special fee charged. Placement by Testing Department.

Total Contact Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$6.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: PHY2053 (minimum grade: C) and PHY2053L (minimum grade: C), Pre or Corequisite: PHY2054 (minimum grade: C)