# PHY: PHYSICS

## Courses

| | Credit(s) | Contact | Lab |
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| PHY 1007C. PHYSICS WITH MEDICAL APPLICATIONS. | 4 | 3 | 3 |

PHYSICS WITH MEDICAL APPLICATIONS Prerequisite: Minimum grade of C in MAC 1105 or higher One-semester course for health-related majors, primarily those entering Valencia's Cardiovascular Technology and Respiratory Care programs. Survey of topics in physics related to health field. Applications of physics to principles of mechanics, heat, light, sound, electricity and magnetism, and radioactivity as they apply to health field. May not be taken for credit subsequent to receiving grade of C or better in any higher physics course. (Special Fee: $92.00).

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| PHY 1020. FUNDAMENTALS OF PHYSICS. | 3 | 3 | 0 |

FUNDAMENTALS OF PHYSICS Prerequisites: Two years of high school algebra or appropriate score on approved assessment. 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. This course fulfills the general education science core course requirements.

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| PHY 2048C. GENERAL PHYSICS WITH CALCULUS I. | 4 | 3 | 3 |

GENERAL PHYSICS WITH CALCULUS I Prerequisite: Minimum grade of C in MAC 2311 or higher 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. For physics, mathematics, chemistry, and pre-engineering majors. (Special Fee: $73.00).

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| PHY 2048H. GENERAL PHYSICS WITH CALCULUS I - HONORS. | 4 | 3 | 3 |

GENERAL PHYSICS WITH CALCULUS I - HONORS Prerequisite: Minimum grade of C in MAC 2311 or higher Same as PHY 2048C. In addition, course content will satisfy one Honors Program learning outcome. Honors Program permission required. (Special Fee: $73.00).

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| PHY 2049C. GENERAL PHYSICS WITH CALCULUS II. | 4 | 3 | 3 |

GENERAL PHYSICS WITH CALCULUS II Pre-requisites: Minimum grade of C in both PHY 2048C and in MAC 2312 Fundamental principles of electricity, magnetism, optics and waves. For physics, mathematics, chemistry and pre-engineering majors. (Special Fee: $70.00).

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| PHY 2049H. GENERAL PHYSICS WITH CALCULUS II HONORS. | 4 | 3 | 3 |

GENERAL PHYSICS WITH CALCULUS II HONORS Prerequisite: Minimum grade of C in both PHY 2048C/PHY 2048H and MAC 2312/MAC 2312H Same as PHY 2049C. In addition, course will satisfy one Honors Program learning outcome. Honors Program permission required. (Special Fee: $70.00).

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| PHY 2053C. GENERAL PHYSICS I. | 4 | 3 | 3 |

GENERAL PHYSICS I Prerequisite: High school trigonometry or MAC 1114 or MAC 1147 with a minimum grade of C. 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. (Special Fee: $73.00).

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| PHY 2054C. COLLEGE PHYSICS II WITH ALGEBRA AND TRIGONOMETRY. | 4 | 3 | 3 |

COLLEGE PHYSICS II WITH ALGEBRA AND TRIGONOMETRY Prerequisite: Minimum grade of C in PHY 2053C or PHY 2048C Fundamental principles of electricity, magnetism, optics, waves and nuclear physics. For pre-health profession, biological sciences and Information Technology majors. This course fulfills the general education science core requirements. (Special Fee: $70.00).

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| PHY 2936. SELECTED TOPICS IN PHYSICS. | 1-3 | variable |

SELECTED TOPICS IN PHYSICS Prerequisites: PHY 1053C or PHY 2048C and departmental approval. For student in science who desires in-depth study of special topics in classical and modern physics. Includes experimental topics upon demand. Multiple credit course. May be repeated for credit and grade forgiveness cannot be applied.

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| PHY 2941. INTERNSHIP EXPLORATION IN PHYSICS. | 1-4 | variable |

INTERNSHIP EXPLORATION IN PHYSICS Prerequisites: Satisfactory completion of all mandated courses in Reading, Mathematics, English and English for Academic Purposes; a minimum 2.0 institutional or overall GPA; and 12 credits, including PHY 2048C and MAC 2311 The Program Director/Program Chair/Program Coordinator or Internship Placement Office has the discretion to provide override approval as it relates to the waiver of required program/discipline-related courses. This course is a planned work-based experience that provides students with supervised career exploration activities and/ or practical experiences. Each earned credit of internship requires a minimum of 80 clock hours of work. Multiple credit course. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: $10.00).