PHYSICS

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Cascade Campus
Jackson Hall (JH), Room 210
971-722-5209

Rock Creek Campus
Building 7, Room 202
971-722-7255

Southeast Campus
Student Commons (SCOM), Room 214
971-722-6146

Sylvania Campus
Science Technology Building (ST), Room 312
971-722-4174

pcc.edu/programs/physics/

DESCRIPTION

Physics is the root discipline of science that describes the natural universe at its most fundamental level. Physics is relevant to a broad range of academic pursuits including chemistry, biology, engineering, medicine and liberal arts. Physics allows students to view the world with a new understanding and appreciation of its order and beauty.

Physics is offered at three different levels: conceptual physics (PHY 101, PHY 102, PHY 103), algebra based (PHY 201, PHY 202, PHY 203) and calculus based (PHY 211, PHY 212,PHY 213). An introductory astronomy series is also offered (PHY 121, PHY 122, PHY 123).

PHY 101. Force, Motion, and Energy. 4 Credits.
Introduces mechanics, vectors, energy, simple machines, and satellite motion. Designed as a laboratory science course for non-science majors. Prerequisite: (WR 115 and RD 115) or IRW 115 and (MTH 65 or MTH 98) or equivalent placement. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/ASOT-B, Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAOT.

PHY 102. Atoms, Matter, and Heat. 4 Credits.
Introduces properties of matter, heat and thermodynamics, and atomic and nuclear physics. Designed as a laboratory science course for non-science majors. Prerequisite: (WR 115 and RD 115) or IRW 115 and (MTH 65 or MTH 98) or equivalent placement. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAOT, Science, Math, Computer Science/ASOT-B.

PHY 103. Sound, Light, and Electricity. 4 Credits.
Introduces waves and sound, electricity and magnetism, and light and optics. Designed as a laboratory science course for non-science majors. Prerequisite: (WR 115 and RD 115) or IRW 115 and (MTH 65 or MTH 98) or equivalent placement. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/AAOT, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS, Science, Math, Computer Science/ASOT-B.

PHY 121. The Solar System. 4 Credits.
Introduces the contents of our solar system, including the earth, its moon, the other planets and moons, asteroids, comets, and meteors. Prerequisite: (WR 115 and RD 115) or IRW 115 and (MTH 65 or MTH 98) or equivalent placement. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/AAOT, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS, Science, Math, Computer Science/ASOT-B.

PHY 122. Stars and Stellar Evolution. 4 Credits.
Introduces stellar astronomy, including our sun, properties of stars, and stellar evolution. Prerequisite: (WR 115 and RD 115) or IRW 115 and (MTH 65 or MTH 98) or equivalent placement. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/ASOT-B, Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAOT.

PHY 123. Galaxies and Cosmology. 4 Credits.
Introduces star clusters, the contents of our galaxy and other galaxies, including active galaxies, and cosmology. Prerequisite: (WR 115 and RD 115) or IRW 115 and (MTH 65 or MTH 98) or equivalent placement. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAOT, Science, Math, Computer Science/ASOT-B.

PHY 201. General Physics. 4 Credits.
Introductory physics (algebra based) for science majors, pre-medical, pre-dental, pre-chiropractic and pre-physical therapy students. Topics include mechanics including statics, forces and motion energy, collisions, circular motion and rotational dynamics. Prerequisite or concurrent: MTH 111 and its prerequisite requirements. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/ASOT-B, Science, Math, Computer Science/AAOT, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS.

PHY 202. General Physics. 4 Credits.
Topics include mechanical properties of matter, heat, waves, sound and light. Algebra-based physics. Prerequisite: PHY 201 and its required prerequisites. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAOT, Science, Math, Computer Science/ASOT-B.

PHY 203. General Physics. 4 Credits.
Topics include electricity, magnetism and radioactivity. Algebra-based physics. Prerequisite: PHY 201 and its prerequisite requirements. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAOT, Science, Math, Computer Science/ASOT-B.

PHY 211. General Physics (Calculus). 5 Credits.
Topics include concepts in mechanics and their relationship to practical applications for science and engineering majors. Prerequisites: MTH 251 and MTH 252 and their prerequisite requirements. Prerequisite/Concurrent: MTH 252. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/AAOT, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS, Science, Math, Computer Science/ASOT-B.

PHY 212. General Physics (Calculus). 5 Credits.
Topics include concepts in fluid mechanics, waves, thermodynamics and optics. Prerequisites: PHY 211 and its prerequisite requirements. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/ASOT-B, Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAOT.

PHY 213. General Physics (Calculus). 5 Credits.
Topics include concepts in electromagnetism together with their relationship to practical applications. Prerequisites: PHY 211 and its prerequisite requirements. Audit available. This course fulfills the following GE requirements: Science, Math, Computer Science/AAS, Science, Math, Computer Science/AGS, Science, Math, Computer Science/AS, Science, Math, Computer Science/AAOT, Science, Math, Computer Science/ASOT-B.