

PHYSICS (PHYS)

PHYS 100 Survey of Physics

(3 Credits, Varies)

This course provides an introduction to the concepts of physics and their application to the world around us and beyond. The course is intended for non-science majors, very-limited math skills are necessary. Topics include the laws of motion, conservation of energy and momentum, properties of matter, heat, sound, electricity and magnetism, light, atomic and nuclear physics, and relativity. COREQ: PHYS 100L. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing.)*. (3 lecture hours, 0 lab hours, 3 credits)

PHYS 100L Survey of Physics Lab

(1 Credit, Varies)

This required lab accompanies PHYS 100, which provides an introduction to the concepts of physics and their application to the world around us and beyond. The course is intended for non-science majors, very-limited math skills are necessary. Topics include the laws of motion, conservation of energy and momentum, properties of matter, heat, sound, electricity and magnetism, light, atomic and nuclear physics, and relativity. COREQ: PHYS 100. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing.)*. (0 lecture hours, 2 lab hours, 1 credits)

PHYS 101 Survey of Astronomy

(3 Credits, Varies)

This course involves the study of astronomy. The relationship of astronomy to the other sciences is stressed. Topics include the motion of celestial bodies, history of astronomy, radiation and spectroscopy, astronomical instrumentation and methods, Earth, Moon, planets, the Sun, properties and life cycles of stars, unusual stars, galaxies, cosmology, and exobiology. COREQ: PHYS 101L. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing.)*. (3 lecture hours, 0 lab hours, 3 credits)

PHYS 101L Survey of Astronomy Lab

(1 Credit, Varies)

This required lab accompanies PHYS 101, which involves the study of astronomy. The relationship of astronomy to the other sciences is stressed. Topics include the motion of celestial bodies, history of astronomy, radiation and spectroscopy, astronomical instrumentation and methods, Earth, Moon, planets, the Sun, properties and life cycles of stars, unusual stars, galaxies, cosmology, and exobiology. COREQ: PHYS 101. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing.)*. (0 lecture hours, 3 lab hours, 1 credits)

PHYS 111 General Physics I

(3 Credits, Fall/Spring)

This course includes a general study of kinematics, Newton's Laws of Motion, universal gravitation, work, mechanical energy, motion in a plane, momentum, hydrostatics, SHM, wave motion, sound, introductory thermodynamics, and heat transfer with applications to life sciences. PREREQ: MATH 143 and MATH 144, or MATH 147 (or higher). COREQ: PHYS 111L. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing.)*. (3 lecture hours, 0 lab hours, 3 credits)

PHYS 111L General Physics I Lab

(1 Credit, Fall/Spring)

This required lab accompanies PHYS 111, which includes a general study of kinematics, Newton's Laws of Motion, universal gravitation, work, mechanical energy, motion in a plane, momentum, hydrostatics, SHM, wave motion, sound, introductory thermodynamics, and heat transfer with applications to life sciences. PREREQ: MATH 143 and MATH 144, or MATH 147 (or higher). COREQ: PHYS 111. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing.)*. (0 lecture hours, 2 lab hours, 1 credits)

PHYS 112 General Physics II

(3 Credits, Spring)

This course includes a general study of electrostatics, DC circuitry, capacitance, magnetism, induced electromotive force (EMF), simple AC circuits, geometrical and physical optics, special relativity, and modern physics. PREREQ: PHYS 111 and PHYS 111L. COREQ: PHYS 112L. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing.)*. (3 lecture hours, 0 lab hours, 3 credits)

PHYS 112L General Physics II Lab

(1 Credit, Spring)

This required lab accompanies PHYS 112, which includes a general study of electrostatics, DC circuitry, capacitance, magnetism, induced EMF, simple AC circuits, geometrical and physical optics, special relativity, and modern physics. PREREQ: PHYS 111 and PHYS 111L. COREQ: PHYS 112. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing.)*. (0 lecture hours, 2 lab hours, 1 credits)

PHYS 199 Physics Special Topics

(1-5 Credits, Varies)

This course is designed to permit the offering of special topics appropriate to a student's program. Regular or frequently recurring topics are not offered under this title. The course may be repeated as new topics are presented. (1 lecture hours, 0 lab hours, 1 credits)

PHYS 211 Physics for Scientists and Engineers I

(4 Credits, Fall/Spring)

This course includes a study of kinematics, dynamics of particles, statics, momentum, work, mechanical energy, rotational motion, elasticity, vibratory motion, wave motion in selected media, heat, and introductory thermodynamics. COREQ: PHYS 211L. PRE/COREQ: MATH 170 or higher. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing.)*. (4 lecture hours, 0 lab hours, 4 credits)

PHYS 211L Physics for Scientists and Engineers I Lab

(1 Credit, Fall/Spring)

This required lab accompanies PHYS 211, which includes a study of kinematics, dynamics of particles, statics, momentum, work, mechanical energy, rotational motion, elasticity, vibratory motion, wave motion in selected media, heat, and introductory thermodynamics. COREQ: PHYS 211. PRE/COREQ: MATH 170 or higher. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing.)*. (0 lecture hours, 3 lab hours, 1 credits)

PHYS 212 Physics for Scientists and Engineers II

(4 Credits, Spring)

This course includes a study of Coulomb's Law, electric fields, electric potential, magnetic fields, magnetic induction, DC circuit analysis, inductance, AC circuits, geometrical and physical optics, interference and diffraction, and introductory modern physics. PREREQ: PHYS 211 and PHYS 211L. COREQ: PHYS 212L. PRE/COREQ: MATH 175 or higher. (4 lecture hours, 0 lab hours, 4 credits)

PHYS 212L Physics for Scientists and Engineers II Lab

(1 Credit, Spring)

This required lab accompanies PHYS 212, which includes a study of Coulomb's Law, electric fields, electric potential, magnetic fields, magnetic induction, DC circuit analysis, inductance, AC circuits, geometrical and physical optics, interference and diffraction, and introductory modern physics. PREREQ: PHYS 211 and PHYS 211L. COREQ: PHYS 212. PRE/COREQ: MATH 175 or higher. (0 lecture hours, 3 lab hours, 1 credits)

Refer to How to Read Course Descriptions for an explanation of elements found in the course descriptions above.