PHYSICS
(NATURAL SCIENCES DIVISION)

PHYS-108 GENERAL PHYSICS WITH RADIATION (4 cr.) Classical mechanics, electricity and magnetism, circuits, atomic structure, radiation health physics, and X-ray production. This course introduces topics in physics essential to the field of radiation science and technology. There are three hours of lecture and one two-hour laboratory per week. Emphasis will be placed on problem solving. Pre-requisites: MATH 137, MATH 143 and MATH 144, or MATH 147.

PHYS-111 GENERAL PHYSICS I (4 cr.) Mechanics, heat and thermodynamics. General Physics I is a study of the fundamental principles of classical physics. An emphasis is placed upon analytic problem solving using algebra and elementary trigonometry, and laboratory skills. There are three hours of lecture and one three-hour laboratory per week. Pre-requisites: a grade of "C" or better in MATH 144 or MATH 147 or satisfactory math placement. Lab fee.

PHYS-112 GENERAL PHYSICS II (4 cr.) Electricity and magnetism, optics, modern physics. General Physics II is the sequel to General Physics I. Course covers the fundamental principles of electricity, magnetism, and light. There are three hours of lecture and one 3-hour laboratory per week. Pre-requisites: a grade of C or better in PHYS 111. Lab Fee.

PHYS-190 DIRECTED STUDY IN PHYSICS (1-12 cr.)

PHYS-192 SPECIAL TOPICS IN PHYSICS (1-12 cr.)

PHYS-205 DESCRIPTIVE ASTRONOMY (4 cr.) A survey of descriptive astronomy. Topics: historical development of theories of the universe, physical organization of the solar system/universe; the formation and evolution of stars, galaxies, recently discovered astronomical objects such as quasistellar objects and black holes; evolution of the universe. Three hours of lecture and one, three-hour laboratory per week. Pre-requisite: a grade of "C" or better in MATH 108 or, MATH 137, or satisfactory math placement. Lab fee.

PHYS-211 ENGINEERING PHYSICS I (4 cr.) Mechanics, heat and thermodynamics. Engineering Physics I is the standard, calculus based university physics course. Fundamental principles of physics are examined using analytic problem solving and laboratory exploration. There are three hours of lecture and one, three-hour laboratory per week. Pre-requisites: a grade of C or better in MATH 170. Lab Fee.

PHYS-212 ENGINEERING PHYSICS II (4 cr.) Electricity and magnetism, optics, modern physics. Engineering Physics II is the sequel to Engineering Physics I. Principles of electrodynamics theory, elements of optics, and modern physics are examined using analytic problem solving and laboratory exploration. There are three hours of lecture and one, three-hour laboratory per week. Pre-requisites: a grade of “C” or better in MATH 175. Lab Fee.

PHYS-290 DIRECTED STUDY IN PHYSICS (1-4 cr.)

PHYS-291 WORKSHOP IN PHYSICS (1-4 cr.)

PHYS-292 SPECIAL TOPICS IN PHYSICS (1-12 cr.)

PHYS-295 PRACTICUM IN PHYSICS (1-12 cr.)

PHYS-296 COOPERATIVE EDUCATION IN PHYSICS (1-12 cr.)

PHYS-299 RESEARCH ASSISTANTSHIP (1-12 cr.)

PHYS-305 AN INTRODUCTION TO MODERN PHYSICS (3 cr.) An introduction to the non-classical physics of the 20th century. Selected topics include the historical development that lead to modern physics, the transitional Bohr model, descriptive elements of quantum mechanics, special relativity, nuclear physics, and elementary particles. Three hours of lecture per week. Pre-requisite: a grade of "C" or better in PHYS 111 or 211.

PHYS-390 DIRECTED STUDY IN PHYSICS (1-4 cr.)

PHYS-399 RESEARCH ASSISTANTSHIP (1-12 cr.)

PHYS-490 DIRECTED STUDY IN PHYSICS (1-4 cr.)

PHYS-491 WORKSHOP IN PHYSICS (1-4 cr.)

PHYS-492 SPECIAL TOPICS IN PHYSICS (1-12 cr.)

PHYS-495 PRACTICUM IN PHYSICS (1-12 cr.)

PHYS-496 COOPERATIVE EDUCATION IN PHYSICS (1-12 cr.)