**The Natural Sciences Minor** (for non-science majors only)

The Natural Sciences minor provides non-science majors with an opportunity to acquire a broad base of knowledge in the basic scientific disciplines of biology, chemistry, and physics. The minor consists of the introductory course sequences for Biology, Inorganic and Organic Chemistry, and Physics. Through this selection of courses, students will be introduced to the fundamental processes that shape and regulate the world around us; including the physical, chemical and biological aspects of nature. This minor is ideal for preparation of a non-science major to apply to a professional school for an advanced degree in a health-professions area such as medicine, dentistry, veterinary science, etc. (Note: Cannot be awarded in conjunction with a Biology minor).

Required courses for the Natural Sciences minor (total = 24 units):

- **BIOL105** General Biology I 4 units
- **BIOL106** General Biology II 4 units
- **CHEM230** Organic Chemistry I* 3 units
- **CHEM231** Organic Chemistry II 4 units
- **CHEM232** Organic Chemistry I Lab 1 units
- **PHYS100** Introductory Physics I** 4 units
- **PHYS101** Introductory Physics II** 4 units

* Pre-requisite for Organic Chemistry is the yearlong sequence of General Chemistry (CHEM111 and CHEM113, 8 units total) with minimum grades of C.

**General Physics I and II (PHYS 110/210) can be taken in place of Introductory Physics.

**Course Descriptions**

**BIOL105. General Biology I.** Introduction to the principles and concepts of biology with emphasis on molecular biology and cell physiology. Offered every semester.

**BIOL106. General Biology II.** Introduction to the principles and concepts of biology with emphasis on biological diversity, organismal biology and ecology. Offered every semester.

**CHEM230. Organic Chemistry I.** Prerequisite: CHEM113 with grade of C or higher. This course introduces students to the fundamental concepts necessary for understanding organic molecules. These include nomenclature, conformational analysis, stereochemistry, radical and nucleophilic reactions, and spectroscopy. Offered every fall.

**CHEM231. Organic Chemistry II.** Prerequisite: CHEM230 with grade of C or higher. Surveys the chemistry of functionalized organic compounds emphasizing mechanisms and multi-step syntheses. Offered every spring.

**CHEM232. Organic Chemistry Laboratory I.** Pre- or co-requisite: CHEM230 or CHEM236. Experimental course that highlights the concepts learned in lecture. Students will learn and employ techniques for the preparation, isolation, purification and characterization of organic molecules. Offered every fall.

**PHYS100. Introductory Physics I.** Mechanics, properties of matter, fluids, heat, waves, and sound. Offered every fall.

**PHYS101. Introductory Physics II.** Prerequisite: PHYS100. Electricity and magnetism, light, and modern physics. Offered every spring.