Biology

BI103 Human Life Science 1 **Cr-4**
This course explores the form and function of human body systems for non-science students. It stresses normal and abnormal life processes as well as the philosophy and history of science including the scientific method. Laboratory exercises complement lecture topics, which include the study of cells and tissues, and the nervous, cardiovascular, respiratory, and reproductive systems. Dissections are required in the laboratory.

BI105 Environmental Science **Cr-4**
This course increases appreciation and interest in human interaction with other organisms and with the physical environment. Topics include basic ecological concepts as well as human impact on the earth with an emphasis on selected environmental problems (i.e. natural resource use, pollution, wildlife conservation, agriculture, hazardous waste etc.). The laboratory component supplements lecture topics by providing practical experiences. Field experiences are required.

BI110 Survey of Human Anatomy & Physiology **Cr-3**
This course is a systems overview of human anatomy and physiology. Topics include structure and function of integumentary, skeletal, muscular, nervous/endocrine, immune, digestive, cardiovascular, urogenital, and respiratory systems. This course presents development and integration of these systems as a basis for understanding the anatomical and physiological aspects of humans. This course will not count for credit in the science or clinical health profession programs (Nursing, Radiologic Technologies, Respiratory Care, Surgical Technician).

BI141 General Biology 1 **Cr-4**
This is the first of a two-semester course covering the central concepts of biology. Topics include the chemical and cellular basis of life, energy transformations, and classical and molecular genetics. Laboratory exercises mirror lecture topics and include opportunities for the student to practice the scientific method, data collection, and lab report writing.

BI142 General Biology 2 **Cr-4**
This course is a continuation of BI141 covering the central concepts of biology. Topics include evolutionary processes, speciation, organismal biology, and ecology. Laboratory exercises mirror lecture topics and include opportunities for the student to practice the scientific method, data collection, and lab report writing. Prerequisite: BI141 General Biology 1 or permission of the Dean.

BI151 Nutrition & Dietetics 1 **Cr-3**
This course provides a general understanding of the science of nutrition. Topics include nutrients, nutrient requirements, food sourses, food safety dietary assessments, the role that nutrients play in maintaining health and physical well-being, and physiological functions such as digestion, absorption, and metabolism of nutrients. This course is for Nutrition and Dietetics majors. Prerequisite: High school chemistry or equivalent.

BI201 Microbiology **Cr-4**
This course introduces the morphology, physiology, and genetics of microorganisms and their impact on health and environment. Organisms studied include bacteria, fungi, virus, and protozoa. Laboratories emphasize safe handling and culturing of live bacteria, as well as identification procedures. Prerequisites: BI141 General Biology 1, or BI217 Human Anatomy & Physiology 2.

BI202 Ecology **Cr-4**
This course covers classical ecology, with a study of the interrelationships of organisms and their environment. Topics include basic ecological principles, natural selection and speciation, population dynamics, community structure, ecosystem diversity, energy flow, biogeochemical cycling of nutrients, and relevant environmental issues. Fieldtrips may be taken during laboratory exercises. Prerequisite: BI141 General Biology 1. - Spring Semester Only

BI209 Basic Pathophysiology **Cr-3**
This course examines the physiological consequences of various disease states. Diseases are treated as threats to homeostasis. The effects of pathology on normal bodily processes are discussed at various organizational levels, including biochemical, cellular, histological, and organ systems. This course is designed for allied health students. Prerequisites: BI216 Human Anatomy & Physiology 1.

BI216 Human Anatomy & Physiology 1 **Cr-4**
This course covers the structure and function of the human organism and the regulatory processes that operate within a living system. It introduces general anatomical, physiological, and chemical organization, and includes the integumentary (skin), skeletal, muscular, and nervous systems. Laboratories involve vertebrate dissection, the use of prosected human cadavers and human skeletal materials, microscope work, non-invasive human experimentation, and possibly animal experimentation. Prerequisite: High School Biology or its equivalent is recommended.

BI217 Human Anatomy & Physiology 2 **Cr-4**
This course, which is a continuation of BI216 Human Anatomy & Physiology 1, involves the study of structure, function, and regulation in the human organism. Topics include blood, peripheral nerves, the cardiovascular system, lymphatics, the respiratory system, the excretory system, the endocrine system, the reproductive systems, the digestive system, and metabolism. Laboratories involve vertebrate dissection, the use of prosected human cadavers and human skeletal materials, microscope work, non-invasive human experimentation, and possibly animal experimentation. Prerequisite: BI216 Human Anatomy & Physiology 1.

BI251 Nutrition Across the Lifespan **Cr-3**
This course explores the changing nutritional needs as an individual progresses through the normal life cycle. Topics include physiology and nutritional demands of growth periods, the physiology and nutritional demands of the aging process, and optimal dietary behaviors during pregnancy, lactation, infancy, childhood, adolescence, and late adulthood. Prerequisites: BI151 Nutrition & Dietetics and BI216 Human Anatomy & Physiology 1.

BI270 Practicum in Human Dissection **Cr-1**
This course provides selected students with hands on experience in directed, supervised human cadaver dissection. Working in small groups, students collaborate to explore, locate, expose, identify, and demonstrate selected organs, structures, anomalies, and pathologies on embalmed specimens. Since different groups may have different dissection tasks, students in each group share their work with those in other groups. Specific dissections and exposures are selected by the instructor to coincide with the prosection requirements of Human Anatomy & Physiology 1 and 2 (BI106 and BI107) and, whenever, feasible, with the interests and backgrounds of the enrolled students. Because every cadaver provides a unique dissection and educational experience, students may enroll in this course more than once for credit. Prerequisites: BI216 Human Anatomy & Physiology 1 or BI217 Human

Anatomy & Physiology 2, and written permission of the instructor. All prospective students will be required to submit an essay, not to exceed 500 words, explaining their interest in taking this course and indicating the use to which they intend to put this information and the benefit they expect to derive from it. This essay will be considered carefully by the instructor before any course enrollment decision is made.