

# Computer Graphics Technology

## Approved Science Electives List

### 2006

#### Allied Health (AHLT) School of Natural Sciences

**AHLT-C 150 Body Structure and Function (3 cr.)** Introduction to the basic structures and functions of the human body; fundamental anatomic terminology; relationships of clinical laboratory to diagnosis.

#### Anatomy (ANAT) School of Natural Sciences

**ANAT-A 215 Basic Human Anatomy (5 cr.)** Structure of cells, tissues, organs, and systems and their relationship to function. (Lab fee required.)

#### Astronomy (AST) School of Natural Sciences

**AST-A 100 The Solar System (3 cr.)** Celestial sphere and constellations, measurement of time, astronomical instruments, Earth as a planet, moons, eclipses, planets and their satellites, comets, meteors, theories of origin of solar system. Spring Sem. and odd-year Summers.

**AST-A 105 Stellar Astronomy (3 cr.)** The sun as a star, physical properties of stars, principles of spectroscopy as applied to astronomy, double stars, variable stars, star clusters, gaseous nebulae, stellar motions and distribution, Milky Way system, expanding universe, cosmic time scale. Fall Sem. And even-year Summers.

#### Biology (BIOL) School of Natural Sciences

**BIOL-L 100 Humans and the Biological World (5 cr.)** Principles of biological organization, from molecules through cells and organisms to populations. Emphasis on processes common to all organisms, with special reference to human beings. This course will not count toward a biology degree. (Lab fee required.)

**BIOL-L 100 Humans and the Biological World (3 cr.)** Principles of biological organization, from molecules through cells and organisms to populations. Emphasis on processes common to all organisms, with special reference to human beings. This course will not count toward a biology degree.

**BIOL-L 101 Introduction to Biological Sciences I (5 cr.)** P: One year of high school chemistry or one semester of college chemistry. Lecture and laboratory. Fundamental principles of biology for students considering a biology major or students with high school science background. Principles of evolution, animal morphology, physiology and diversity, and ecology. (Lab fee required.)

**BIOL-L 102 Introduction to Biological Sciences II (5 cr.)** P: One year of high school chemistry or one semester of college chemistry. Lecture and laboratory. Fundamental principles of biology for students considering a biology major or students with high school science background. Principles of biochemistry, cell biology, genetics, developmental biology, systematics, nonanimal diversity, and plant biology. (Lab fee required.)

**BIOL-L 200 Environmental Biology and Conservation (3 cr.)** An interdisciplinary examination of environmental problems. Class may include lectures, films, fieldwork, and laboratory methods including computer simulations. Fieldwork, if undertaken, may include trips to local industries with pollution controls in place, trips to examine local habitats, or other appropriate activities. Not open to students who have had E 162, L 350, or L 473.

#### Chemistry (CHEM) School of Natural Sciences

**CHEM-C 101 Elementary Chemistry I (3 cr.)** P: One year of high school algebra or equivalent. Introduction to chemistry. Usually taken concurrently with C 121. Lectures and discussion. The two sequences, C 101-C 121 and C 102-C 122, usually satisfy programs that require only two semesters of chemistry. Admission to advanced courses on the basis of C 101-C 121 and C 102-C 122 is granted only in exceptional cases. May be taken by students who have deficiencies in chemistry background without credit toward graduation in preparation for C 105. Credit given for only one of the following chemistry courses: C 101, C 104, C 105. Fall Sem., Spring Sem., Summer I.

**CHEM-C 102 Elementary Chemistry II (3 cr.)** P: C 101. Continuation of C 101. Usually taken concurrently with C 122. The chemistry of organic compounds and their reactions, followed by an extensive introduction to biochemistry. Lectures and discussion. Credit not given for both C 102 and C 341. Fall Sem., Spring Sem., Summer II.

**CHEM-C 105 Principles of Chemistry I (3 cr.)** P: Two years of high school algebra or equivalent, one year of high school chemistry, or consent of instructor. C: C 125. Basic principles, including stoichiometry, equilibrium, atomic and molecular structures. Lectures and discussion. Credit given for only one of these chemistry courses: C 101, C 104, C 105. Fall Sem., Spring Sem., Summer I.

## Geography (GEOG) School of Natural Sciences

No GEOG

## Geology (GEOL) School of Natural Sciences

**GEOL-G 100 Earth Science: Geologic Aspects (5 cr.)** Broad study of the earth. The earth in the solar system, earth's atmosphere. Formation and modification of earth materials, landforms, continents, and oceans throughout geologic time. Geological records in selected areas. Lectures, laboratory, field trips. Credit given for only one of the following geology courses: G 100, G 103, or G 110. (Lab fee required.)

**GEOL-G 103 Earth Science: Materials and Processes (3 cr.)** Introduction to the origin and classification of minerals and rocks. Relationships between rock types, rock structures, surficial geological processes of running water, subsurface water, glaciation, wind, tides, and landform evolution. Credit given for only one of the following geology courses: G 100, G 103, or G 110. (Lab fee required.)

**GEOL-G 104 Earth Science: Evolution of the Earth (3 cr.)** Principles of interpretation of earth history. Geologic age dating, correlation, facies analysis, fossils, fold mountain belts, isostasy, and plate tectonics as applied to reconstructing selected geological events. Credit given for only one of the following geology courses: G 100, G 104, or G 109. (Lab fee required.)

**GEOL-G 121 Meteorites and Geological Processes in Planets (3 cr.)** Geological processes operative on earth-like planetary bodies and asteroids; evidence from current meteorite, lunar, Martian, and space research.

**GEOL-G 180 Dinosaurs (3 cr.)** A survey of the characteristics and evolution of dinosaurs. Topics include: the occurrence of dinosaur remains in the fossil record, basic anatomy, principles used in classification, types of predatory and plant-eating dinosaurs, environments occupied during life, behavior, extinction theories, dinosaurs in the media and the public eye. (Credit not given for both GEOL-G 180 and GEOL-G 301.)

**GEOL-G 210 Oceanography (3 cr.)** Study of the physical and biological features of the ocean environment.

## Physiology (PHSL)

**PHSL-P 130 Human Biology (3 cr.)** Basic concepts in human biology. Covers reproduction and development, physiological regulations, stress biology, and behavioral biology, with emphasis on socially related problems.

## Physics (PHYS) School of Natural Sciences

**PHYS-P 202 General Physics: Electricity, Magnetism, Light, and Nuclear Physics (5 cr.)** P: MATH-M 125 and M 126 or high school equivalent. R: P 201. Noncalculus presentation of electricity and magnetism; geometrical and physical optics; introduction to concepts of quantum theory, atomic, and nuclear physics, including applications to related scientific disciplines. Four hours of lecture and two hours of laboratory per week. (Lab fee required.) Spring Sem. Credit may be obtained only for either P 201 or P 221 and for P 202 or P 222

## Plant Science (PLSC) School of Natural Sciences

**PLSC-B 101 Plant Biology (5 cr.)** Fundamental principles of biology as illustrated by plants: characteristics of living matter, nutrition, growth, responses to environment, reproduction, basic principles of heredity. This course will not count toward a biology major. (Lab fee required.)