Interdisciplinary Studies-Natural Science and Mathematics

**ISNS 2359** Earthquakes and Volcanoes (3 semester credit hours) Earthquakes and volcanoes appear capricious and devastating in human terms, but they are also a regular part of geological history. This course will integrate current geological thinking with elements of statistics, physics, chemistry, human history, sociology, psychology, and religion to develop an understanding and to provide pragmatic strategies for living with these events. (3-0) Y

**ISNS 2366** Global Climate Change (3 semester credit hours) The course will integrate the four main Earth Sciences - Geology, Biology, Paleontology, Oceanography, Meteorology, and Astronomy - and will demonstrate the inseparable connection between these sciences and how their interplay determines world climate conditions. A biological component - including the evolution of the human species - will also be incorporated to show how life itself is likely Earth’s thermostat that regulates climate on a range of spatial and temporal scales. (3-0) S

**ISNS 2367 (GEOL 1345)** The Oceans (3 semester credit hours) Physical, chemical, biological, and geological aspects of oceanography. Description and origin of features on sea floor; evolution of ocean basins; chemistry of sea water; influence of oceans on weather and climate; formation of waves, tides, currents; factors affecting biological productivity; economic resources and environmental problems. (3-0) S

**ISNS 2368 (GEOL 1347)** Weather and Climate (3 semester credit hours) An overview of the fields of meteorology and climatology. The approach is scientific yet nonmathematical, and students will be exposed to a wide spectrum of ideas from folklore, history, law, economics, and environmental issues. (3-0) S

**ISNS 3371** The Phenomena of Nature: Forces, Gases, Motion, Heat, Light and Electricity (3 semester credit hours) The purpose of the course is to cultivate in students an intuitive perception of the nature of observable physical reality through the presentation and analysis of striking experimental demonstrations. No substantial prior training in science is assumed, but students with a background in science may profit from this course. There will be considerable reference to the historical growth of scientific knowledge and to the aesthetic quality of the explanations offered by science. (3-0) Y

**ISNS 3373** Our Nearest Neighbors in the Sky (3 semester credit hours) A description of the tools and principles the astronomer and space scientist use in exploration of the solar system; the earth, moon, the sun, planets, asteroids, meteors, and comets; the origin of the solar system; classroom demonstrations, multimedia presentations, and telescope observations. (3-0) Y