

## Integrative Studies in Biological Science—ISB

- 204 Applications of Biomedical Sciences**  
Fall, Spring, Summer. 3(3-0) P:M: (MTH 103 or concurrently or MTH 110 or concurrently or MTH 116 or concurrently or LBS 117 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently) or designated score on Mathematics placement test.

Historical and recent development of knowledge about cellular developmental or genetic processes. Critical evaluation of the use and misuse of scientific discoveries in these areas.

- 206H Human Biology and Society**  
Fall, Spring. 3(3-0) P:M: (MTH 103 or concurrently or MTH 110 or concurrently or MTH 116 or concurrently or LBS 117 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently) or designated score on Mathematics placement test.

Conceptual and technological advances in biology. Ethical, legal, social and economic issues which accompany these advances.

- 208L Applications in Biological Science Laboratory**  
Fall, Spring, Summer. 2(1-2) P:M: (ISB 202 or concurrently or ISB 204 or concurrently) SA: ISB 202L, ISB 204L

Problem solving activities based on observation and interpretation of selected biological systems.

- 203 Geology of the Human Environment**  
Fall, Spring, Summer. 3(3-0) P:M: (MTH 103 or MTH 110 or MTH 116 or LBS 117 or MTH 106 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently) or designated score on Mathematics placement test.

The scientific method in geological studies: its impact on the human environment and history, and on cultural, social, philosophical, and political decisions.

- 203L Geology of the Human Environment Laboratory**  
Fall, Spring, Summer. 2(1-2) P:M: (ISP 203 or concurrently)

Exercises in the scientific method applied to earth materials and their impact on society.

- 205 Visions of the Universe**  
Fall, Spring, Summer. 3(3-0) P:M: (MTH 103 or MTH 110 or MTH 116 or LBS 117 or MTH 106 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently) or designated score on Mathematics placement test.

Role of observation, theory, philosophy, and technology in the development of the modern conception of the universe. The Copernican Revolution. Birth and death of stars. Spaceship Earth. Cosmology and time.

- 205L Visions of the Universe Laboratory**  
Fall, Spring, Summer. 2(1-2) P:M: (ISP 205 or concurrently)

Observations of the sky, laboratory experiments, and computer simulations exploring the development of the modern conception of the universe.

- 207 World of Chemistry**  
Fall, Spring, Summer. 3(3-0) P:M: (MTH 103 or MTH 110 or MTH 116 or LBS 117 or MTH 106 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently) or designated score on Mathematics placement test.

The language, concepts, models and techniques of chemical science, including atomic theory; nuclear energy; acids; chemicals in air, water, food and biological systems.

- 207L World of Chemistry Laboratory**  
Fall, Spring, Summer. 2(1-2) P:M: (ISP 207 or concurrently)

Chemical combinations and reactivity with respect to such materials as acids, bases, dyes, foods, and detergents.

- 209 The Mystery of the Physical World**  
Fall, Spring, Summer. 3(3-0) P:M: (MTH 103 or MTH 110 or MTH 116 or LBS 117 or MTH 106 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently) or designated score on Mathematics placement test.

Laws of physics through demonstrations and analyses of every day phenomena. Optics, mechanical systems and electromagnetic phenomena.

- 209L The Mystery of the Physical World Laboratory**  
Fall, Spring, Summer. 2(1-2) P:M: (ISP 209 or concurrently)

Physical phenomena: optics, mechanical systems and electromagnetics.

- 213H Navigating the Universe**  
Fall. 3(3-0) Interdepartmental with Physics. P:M: (MTH 103 or MTH 110 or MTH 116 or MTH 106 or MTH 124 or MTH 132 or MTH 201 or LBS 117 or STT 200 or STT 201) or designated score on Mathematics placement test. RB: High school physics, high school algebra, and high school trigonometry

Aspects of classical physics, relativity, quantum mechanics, and standard models of elementary particle physics and cosmology. How notions of reality and standards for forming acceptable knowledge claims have changed.

- 215 The Science of Sound**  
Fall, Spring. 3(3-0) P:M: (MTH 103 or MTH 110 or MTH 116 or LBS 117 or MTH 106 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201) or designated score on Mathematics placement test.

The science of speech, communication, musical instruments, room acoustics, and analogue and digital audio. Integrating the physical, physiological, and psychological principles involved.

- 217 Earth Systems: Water and the Biosphere**  
Fall, Spring. 3(3-0) P:M: (MTH 103 or MTH 110 or MTH 116 or LBS 117 or MTH 106 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently)

Application of the scientific method to the identification and solution of environmental problems related to water and aquatic ecosystems.

- 221 Energy and the Biosphere**  
Fall, Spring, Summer. 3(3-0) P:M: (MTH 103 or MTH 110 or MTH 116 or LBS 117 or MTH 106 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently)

Flow of energy into, through, and out of the earth's biosphere. Energy, entropy, and life processes. Ecology and the structure of life. Global warming, Greenhouse Effect, and contemporary issues.

## INTEGRATIVE STUDIES IN PHYSICAL SCIENCE

### Center for Integrative Studies in General Science College of Natural Science

- 201 Concepts of Reality through Physical Science**  
Fall, Spring, Summer. 3(3-0) P:M: (MTH 103 or MTH 110 or MTH 116 or LBS 117 or MTH 106 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently) or designated score on Mathematics placement test.

Historical and recent development of our understanding of the physical world. Selected topics from the physical sciences, their relationship to one another and to other areas of culture.

- 201L Concepts of Reality through Physical Science Laboratory**  
Fall, Spring, Summer. 2(1-2) P:M: (ISP 201 or concurrently)

Problem-solving activities based on observation and interpretation of selected physical systems.

## INTEGRATIVE STUDIES IN SOCIAL, BEHAVIORAL AND ECONOMIC SCIENCES

### Center for Integrative Studies in Social, Behavioral and Economic Science College of Social Science

- 210 Society and the Individual (D)**  
Fall, Spring, Summer. 4(4-0)  
Evolution of human behavior with an emphasis on the individual and society. Family and kinship, social organizations. Societal types, personality, and the life cycle.