

INTEGRATED NATURAL SCIENCE

Courses

SCI 180. Foundations of Integrated Natural Science I- The Dynamic Universe. 4 Hours

An integrative course introducing scientific inquiry across all five science of disciplines, Biology, Chemistry, Computer Science, Geology and Physics. Students will be introduced to the diverse ways that science affects their lives and society.

SCI 190. The Physical Universe. 3 Hours

Conceptual survey of the fundamental laws of physics that govern the physical universe with the themes of evolution, energy and environment as unifying threads through the course. Topics include the laws of motion, gravitation, thermodynamics, electromagnetism, waves, sound, light and modern physics.

SCI 190L. The Physical Universe Laboratory. 1 Hour

Laboratory to accompany SCI 190. Students perform both hands-on and computer interfaced inquiry-based experiments which are designed to augment the concepts in SCI 190 and illustrate the scientific thought process. The Excel spreadsheet is used in data collection and analysis. One two-hour laboratory per week. Prerequisite(s): SCI 190 (SCI 190 may be taken as a corequisite).

SCI 200. FinsII: Dynamic Universe. 4 Hours

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SCI 200L. FinsII: Dyn Unv Lab. 1 Hour

SCI 210. The Dynamic Earth. 3 Hours

Introduction to the earth system and the processes that operate in the atmosphere, hydrosphere, biosphere, and solid Earth. Emphasis is placed on understanding how interactions among these fundamental Earth systems maintain our livable planet. Prerequisite(s): SCI 190.

SCI 210L. The Dynamic Earth Laboratory. 1 Hour

Laboratory to accompany SCI 210. Students will explore the earth system through experimentation, image interpretation, and field trips. One two-hour laboratory per week. Corequisite(s): SCI 210 or GEO 109.

SCI 220. The World of Chemistry. 3 Hours

Introduction to the experimental nature of chemistry. Attention is focused on the microscopic view of matter, addressing topics that lead into the study of biological chemistry. Prerequisite(s): SCI 190.

SCI 220L. The World of Chemistry Laboratory. 1 Hour

A laboratory course to accompany SCI 220. One two-hour laboratory per week. Corequisite(s): SCI 220.

SCI 230. Organisms, Evolution & Environment. 3 Hours

An evolutionary approach to the relationship between living organisms and their environments. This survey of basic concepts in biology continues the evolutionary theme of the two prerequisite courses. Prerequisite(s): (SCI 190, SCI 210) or permission of instructor.

SCI 230L. Organisms, Evolution & Environment Laboratory. 1 Hour

Laboratory exercises to accompany SCI 230. One two-hour laboratory per week. Prerequisite(s): SCI 230 (may be taken as a corequisite).

SCI 240. Organisms, Evolution & Health. 3 Hours

Biology with an emphasis on biomedical science and a focus on human health and disease. Prerequisite(s): (SCI 190, SCI 220) or permission of instructor.

SCI 240L. Organisms, Evolution & Health Laboratory. 1 Hour

Laboratory exercises to accompany SCI 240. One two-hour laboratory per week.

SCI 300. Computing in a Global Society. 3 Hours

An introduction to the field of Computer Science, covering computers and society, the internals and externals of computer hardware and software, as well as some exposure to advanced topics of artificial intelligence, computer forensics, and databases.

SCI 310. Earth & Sky. 3 Hours

No description available.

SCI 690. Special Topics in the Natural Sciences for Teachers. 1-4 Hours

Special topical courses covering a science topic for teachers and designed to increase a classroom teacher's content knowledge. This may be offered in the form of a workshop and/or academic year mentoring. 1-4 credit hours.