Is the Natural Science Major for You?

- Are you interested in all areas of science?
- Do you want to be a generalist, not a specialist?
- Do you want to be a middle-school science teacher?

If you answered yes to any of these questions, then the Natural Science major may be for you. Science now transcends the boundaries of single subject. The real world is complicated, and figuring out how it works requires us to understand all aspects of nature. The connections between disciplines are especially apparent to middle school teachers because at this level science is taught in a multidisciplinary framework. Such teachers are generalists—not specialists—and need to have a holistic view of science as well as a solid base in biology, chemistry, physics, and environmental/earth science.

Careers

The Natural Science major was designed specifically to prepare students for becoming intermediate-level science teachers. Graduates of the program often enroll in the UH Hilo secondary teaching certification program following graduation. Others pursue non-teaching careers in the science arena, or become science educators in non-academic settings.

What Will I Learn?

Students in the Natural Science program take courses in a wide spectrum of science subjects, plus complete a minor in one of these subjects. The minor gives students an area of specialization. Students can expect to gain a solid knowledge base in the fundamental sciences of chemistry and physics, and to receive a broad introduction to other disciplines, potentially including astronomy, computer science, geology, meteorology, oceanography, and the philosophy of science. Students choose between a curriculum that stresses biology, or a curriculum that emphasizes the physical sciences with less intense coverage of biology. Students can expect to deepen their knowledge through hands-on laboratory investigations, to develop observational and experimental skills, and become familiar with safety protocols appropriate to teaching laboratories. Students will develop critical thinking skills and a more detailed understanding of scientific concepts and methods through completion of a minor in a specific science discipline. Students will be able to apply their knowledge to current issues, and give a professional-style oral presentation on a scientific topic. See the reverse side for the listing of courses required for the major.

Why UH Hilo?

UH-Hilo is surrounded by unique tropical ecosystems, world-class astronomy observatories, active volcanoes, and tropical reefs. Can you think of a better place to study science? Many courses emphasize field trips that use this fabulous location as a “living laboratory”. We also feature small classes and personalized instruction. The plants, animals, volcanoes, ocean, and astronomical observatories of the Big Island are unique, and they bring biology, geology, oceanography, and astronomy to life.
Requirements for the Natural Sciences Major

1. Core Requirements (24 credits)

- Chem 124-125 General Chemistry I and II
- Chem 124 L One semester Chemistry Lab
- Phys 106-107 College Physics I and II
- Phys 170L One semester Physics Lab
- Math 115 Applied Calculus
- Phil 390 Philosophy of Science
- 495A-495B Senior Seminar

2. Breadth Requirements (20 credits)

Students complete either the General Science Option or the Physical Science Option.

**General Science Option**

- Biol 150-153 Botany and Zoology
- Biol 150L or 153L Botany or Zoology Lab
- Biol 125 or 270 Cellular and Molecular Biology

*One additional science laboratory course*

- Astr 180-181 Principles of Astronomy I & II
- CS 102 Microcomputer Applications for the Sciences
- Geol 111-112 Understanding the Earth and History of the Earth and Its Life
- Mare 201 Oceanography
- Phys/Geog 120 Weather and Climate of Hawai‘i

**Physical Science Option**

- Biol 101 General Biology
- Astr 180 Principles of Astronomy I
- Geol 111 Understanding the Earth
- Chem 125L Second Semester Chemistry Lab
- Phys 171L Second Semester Physics Labs

*Three courses selected from:*

- Astr 181 Principles of Astronomy II
- CS 102 Microcomputer Applications for the Sciences
- Geol 112 History of the Earth and Its Life
- Mare 201 Oceanography
- Phys/Geog 120 Weather and Climate of Hawai‘i

3. Complete 21 Credits at the Junior and Senior Level

4. Complete a minor in one of the following disciplines:

- Astronomy
- Geology
- Biology
- Marine Science
- Chemistry
- Mathematics
- Computer Science
- Physics
- Earth/Space Science

Contact Information

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