

General Science

(For Teacher Licensure)

The General Science major provides students with a broad background of various disciplines in the biological and physical sciences. The General Science major serves as excellent preparation for a career in teaching science. Students must complete the Education Core courses as well as the General Science major courses if they intend to teach science at the secondary level.

General Science Courses

BIO 100/101: General Biology with Lab*
BIO 110: General Zoology*
BIO 120: General Botany*
BIO 496: Senior Project
CHEM 151: General Chemistry I
CHEM 152: General Chemistry II and
Qualitative Analysis
ES 100: Introduction to Geology**
ES 115: Environmental Chemistry**
ES 220: Soil and Water Conservation**
PHY 109/110: Introduction to Astronomy with
Lab***
PHY 111112: Introduction to Physics I with Lab***
PHY 113114: Introduction to Physics II with Lab***

General Science majors are also required to take two Math courses numbered 100 or above.

*Choose two of the listed courses.

**Choose two of the listed courses.

***Choose two of the listed courses.

Electives

In addition to the required courses, General Science majors must also take four hours of Biology electives (at or above the 200 level), four hours of Chemistry electives (at or above the 200 level), six hours of Earth Science electives, and four hours of electives in Biology or Chemistry (at or above the 300 level).

Student Teaching

General Science majors will complete the Education Core program for teacher licensure. Students complete a supervised Student Teaching experience at a secondary school for one semester during their senior year at Upper Iowa University.

Senior Project

All General Science majors are required to complete a senior project. In conjunction with a faculty advisor, students choose a subject of interest. Working with their advisor, students will create a science laboratory lesson that they will be able to use as a secondary science teacher. This culminates in a written report and oral presentation to the science faculty. Some examples of senior projects completed by students include:

- Peggy Candler — *Pictorial Presentation of Planets, Comets, and Galaxies*
- Dave Majkrzak — *Introductory Microscope Laboratory for Middle School*

Classrooms & Equipment

32-station computer lab
1,500 sq. foot greenhouse
16-foot Jon Boat
Hydrolab water-quality multiprobe
(temperature, pH, dissolved oxygen, and conductivity) and field computer
Pleggenkuhle Prairie — three acres of virgin prairie, managed by Upper Iowa University
Turbidity meter
Water-quality lab equipped to monitor nitrogen, phosphorus, and suspended solids

Activities

Upper Iowa University General Science majors are strongly encouraged to join and actively participate in the Science and Environmental Club.

Faculty

Dr. Jeffery Butikofer,
Assistant Professor of Environmental Science
B.S. Upper Iowa University
Ph.D. University of Wyoming

Dr. Lew Churbuck,
Associate Professor of Biology
B.A. Upper Iowa University
M.A. University of Northern Iowa
Honorary Doctorate, Upper Iowa University

Dr. Scott Figdore,
Professor of Science
B.S. Penn State University
M.S., Ph.D. University of Wisconsin

Dr. Rich Klann,
Delano Professor of Science
B.A. Westminster College
M.A., Ph.D. University of Missouri

Dr. Katherine McCarville,
Assistant Professor of Geosciences
B.S. University of California
M.Sc. Colorado School of Mines
Ph.D. South Dakota School of Mines and Technology

Dr. Erik Olson,
Professor of Chemistry
B.A. Juanita College
Ph.D. Dartmouth College

Career Opportunities

General Science majors typically complete the Education Core requirements that allow them to teach science at the secondary school level. Depending on the electives a student completes, they may be able to obtain teaching endorsements in Biology, Chemistry, Earth Science, or All Science.



Office of Admissions

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