

Elementary Education

Science Added Endorsement Program K-8

Student Name:

UID:

This program of the University of Iowa College of Education is approved by the state of Iowa as preparation for endorsement number 150, Science-basic K-8 when completed with or following an Elementary Education Teacher Education Program K-6 (endorsement 102).

Requirements

- Completion of minimum of two courses in methods of teaching science, as below.
- Completion of minimum of two courses in Societal and Educational Applications of Science.
- Completion of minimum 24 semester hours in science, to include courses in biology, earth and space science, and physical science (chemistry and physics) listed below.
- [Admission to the Teacher Education Program](#).
- Completion of the TEP Professional Education Course Requirements and field experiences.

Professional Education Course Requirements

Complete both of the following.

Course	Course Title	Credit	Session/Substitute
EDTL:3165	Elementary Science Methods I	3 s.h.	
EDTL:3166	Elementary Science Methods II	3 s.h.	

Societal and Educational Applications of Science

Complete at least two of the following (can also fulfill the science content requirements).

Course	Course Title	Credit	Session/Substitute
SIED:4102	Soc & Ed Applicatn of Earth Science & Envir Science	4 s.h.	
SIED:4103	Soc & Ed Applicatns of Biological Sciences	4 s.h.	
SIED:4105	Soc & Ed Applicatns Physical Sciences	4 s.h.	
SIED:4106	Soc & Ed Applicatns Chemical Concepts	4 s.h.	
SIED:4110	Environmental Issues of the Colorado Rockies	4 s.h.	

Science Content Course Requirements

Complete a minimum of 24 s.h. in the following areas.

Biological Science

Complete a minimum of 6 s.h. of the following or approved substitutes.

Course	Course Title	Credit	Session/Substitute
BIOL:1140	Human Biology	4 s.h.	
BIOL:1141	Introductory Animal Biology	4 s.h.	
BIOL:1260	Plants and Human Affairs	3 s.h.	
BIOL:1261	Introduction to Botany	4 s.h.	
BIOL:1370	Understanding Evolution	3 s.h.	
BIOL:1411	Foundations of Biology	4 s.h.	
BIOL:1412	Diversity of Form and Function	4 s.h.	
SIED:4103	Soc & Ed Applicatns of Biological Sciences	4 s.h.	

Chemistry

Complete a minimum of 6 s.h. of the following or approved substitutes.

Course	Course Title	Credit	Session/Substitute
CHEM:1050	Chemistry of Our World	3 s.h.	
CHEM:1070	General Chemistry I	3 s.h.	
CHEM:1080	General Chemistry II	3 s.h.	
CHEM:1110	Principles of Chemistry I	4 s.h.	
CHEM:1120	Principles of Chemistry II	4 s.h.	
SIED:4106	Soc & Ed Applicatns of Chemical Concepts	4 s.h.	

Earth/Space Science

Complete a minimum of 6 s.h. of the following or approved substitutes.

Course	Course Title	Credit	Session/Substitute
ASTR:1070	Stars, Galaxies, and the Universe	3-4 s.h.	
GEOG:1020	The Global Environment	3 s.h.	
GEOG:1070	Contemporary Environmental Issues	3 s.h.	
EES:1030	Introduction to Earth Science	4 s.h.	
EES:1040	Evolution and History of Life	4 s.h.	
EES:1050	Introduction to Geology	4 s.h.	
EES:1070	Age of Dinosaurs	4 s.h.	
EES:1080	Introduction to Environmental Science	4 s.h.	
EES:3080	Introduction to Oceanography	2 s.h.	
SIED:4102	Soc & Ed Applicatn of Earth Science & Envir Science	4 s.h.	
SIED:4110	Environmental Issues of the Colorado Rookies	4 s.h.	

Physics

Complete a minimum of 6 s.h. of the following or approved substitutes.

Course	Course Title	Credit	Session/Substitute
ASTR:1070	Stars, Galaxies, and the Universe	3-4 s.h.	
ASTR:1085	Citizen Astronomy	4 s.h.	
ASTR:1771	Introductory Astronomy I	4 s.h.	
PHYS:1200	The Physics of Everyday Experience	3 s.h.	
PHYS:1300	Nanoscience	3 s.h.	
PHYS:1511	College Physics I (Algebra-based)	4 s.h.	
PHYS:1512	College Physics II (Algebra-based)	4 s.h.	
SIED:4105	Soc Ed Applicatns of Physical Sciences	4 s.h.	

ASTR:1070 Stars, Galaxies, and the Universe may be used to meet requirements for either Earth/Space or Physics, but not both.

Course Overlap with All Science 5-12 endorsement

The following courses from above are also required courses as part of the University of Iowa approved program for endorsements [185 All Science 5-12](#).

Biology

- BIOL:1411 Foundations of Biology
- BOIL:1412 Diversity of Form and Function

Chemistry

- CHEM:1110 Principles of Chemistry I
- CHEM:1120 Principles of Chemistry II

Earth Science

- EES:1030 Introduction to Earth Science or EES:1050 Introduction to Geology

Physics

- PHYS:1511 College Physics I (Algebra-based)
- PHYS:1512 College Physics II (Algebra-based)

Additional Information

This Program Guide is for planning and documentation of program completion. State requirements for licensure and endorsements are subject to change without notice; check with your advisor or the Office of Education Services for updated requirements. Course transfer and substitution may require syllabi or other documentation in addition to transcript. Revised 9/15/2022 BJ version 4.3.

For additional information, admissions procedures, or advising referral, please contact Office of Student Services, College of Education, N201 Lindquist Center, Iowa City, IA 52242, 319-335-5359, FAX: 319-335-5364, ask-education@uiowa.edu, <https://education.uiowa.edu/>