Science Education, B.A.

Requirements

The Bachelor of Arts with major in science education requires a minimum of 120 s.h., including a minimum of 44 s.h. in science education professional education courses, completion of an approved College of Liberal Arts and Sciences science degree, and science education content courses. Students must maintain a g.p.a. of at least 2.70 in professional education course requirements. They also must complete the GE CLAS Core. The major requires admission to the Teacher Education Program (TEP). Application information can be obtained through the Office of Student Services.

Students must earn one of these majors at the University of Iowa, with a minimum of 36 s.h., in order to earn the B.A. in science education: a B.A. in biology, a B.S. in biology, a B.A. in chemistry, a B.S. in chemistry, a B.A. in environmental sciences, a B.S. in environmental sciences, a B.A. in geoscience, a B.S. in geoscience, a B.A. in physics, a B.S. in physics, or a B.S. in science studies; both degrees may be earned at the same time. Separate application to each degree program is required. Graduates who have earned one of these degrees at another institution and wish to earn the B.A. in science education should consult the Department of Teaching and Learning; additional coursework may be required.

An Iowa secondary teaching license qualifies holders to teach in grades 5-12. Additional subject area endorsements can be completed in any 5-12 licensure program. For more information and an advisor, contact the Department of Teaching and Learning.

For initial licensure, student teaching must be an all-day, full-semester experience. Most students are placed in a district within a 60-mile radius of Iowa City. Placements outside this area require special approval and are considered on an individual basis. Special site programs provide experience in districts with diverse populations and students also may apply to student teach at international sites for the second half of the semester.

Additional information about options for student teaching and application procedures is available from the Office of Student Services. Applications for student teaching must be submitted during the calendar year before the student teaching semester. The deadline for student planning to student teach the following fall semester is November 15 and April 15 for the following spring semester.

The B.A. with a major in science education requires the following work.

Professional Education Course Requirements

Students complete 44 s.h. from the following.

Foundation Courses

Foundation courses may be completed before or after admission to the major.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTL:4900</td>
<td>Foundations of Special Education</td>
<td>3</td>
</tr>
<tr>
<td>EPLS:3000</td>
<td>Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>PSQF:1075</td>
<td>Educational Psychology and Measurement</td>
<td>3</td>
</tr>
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Additional Licensure Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTL:3002</td>
<td>Technology in the Classroom</td>
<td>2</td>
</tr>
<tr>
<td>EDTL:3091</td>
<td>Secondary Education Program Orientation and Classroom Management</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:3095</td>
<td>Teaching Reading in Secondary Content Areas</td>
<td>1</td>
</tr>
<tr>
<td>EPLS:4180</td>
<td>Human Relations for the Classroom Teacher</td>
<td>3</td>
</tr>
</tbody>
</table>

And, all of these taken in this order:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTL:4751</td>
<td>Science Methods I: Early Learners with Field Experience</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:4752</td>
<td>Science Methods II: Junior High with Field Experience</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:4753</td>
<td>Science Methods III: High School with Field Experience</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:4779</td>
<td>Secondary School Science Practicum</td>
<td>2</td>
</tr>
</tbody>
</table>

Mathematics Course

Students must complete a college-level math course. Most students complete this course as a part of their GE CLAS Core requirement in Quantitative or Formal Reasoning. For questions about how the math course can be applied to the licensure requirement, see Academic Advising on the College of Education website.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS:1110</td>
<td>Introduction to Computer Science</td>
<td>3</td>
</tr>
<tr>
<td>CS:1210</td>
<td>Computer Science I: Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>STAT:1010</td>
<td>Statistics and Society</td>
<td>3</td>
</tr>
<tr>
<td>STAT:1020/PSQF:1020</td>
<td>Elementary Statistics and Inference</td>
<td>3</td>
</tr>
</tbody>
</table>

Student Teaching

Transfer students should consult their advisor since they must complete certain courses before they student teach.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTL:4087</td>
<td>Seminar: Curriculum and Student Teaching</td>
<td>3</td>
</tr>
<tr>
<td>EDTL:4091</td>
<td>Observation and Laboratory Practice in the Secondary School</td>
<td>6</td>
</tr>
<tr>
<td>EDTL:4092</td>
<td>Observation and Laboratory Practice in the Secondary School</td>
<td>6</td>
</tr>
</tbody>
</table>
Science Education, B.A.

STAT:1030 Statistics for Business 4
Any mathematics course (prefix MATH) except for MATH:0100, MATH:0300, or MATH:1005 4

Science Education Content Courses

Students select science courses that relate to their major field of study. In addition, students complete the Broad Science Field Block below:

Broad Field Science Block

Students must complete 12 s.h. from the following.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIED:4135</td>
<td>The Nature of Science</td>
<td>4</td>
</tr>
<tr>
<td>SIED:4102</td>
<td>Societal and Educational Applications of Earth Science and Environmental Sciences</td>
<td>4</td>
</tr>
<tr>
<td>SIED:4103</td>
<td>Societal and Educational Applications of Biological Sciences</td>
<td>4</td>
</tr>
<tr>
<td>SIED:4105</td>
<td>Societal and Educational Applications of Physical Sciences</td>
<td>4</td>
</tr>
<tr>
<td>SIED:4106</td>
<td>Societal and Educational Applications of Chemical Concepts</td>
<td>4</td>
</tr>
</tbody>
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Academic Plans

Sample Plan of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

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Course Title Hours

First Year

Spring

PSQF:1075 Educational Psychology and Measurement 3

Hours 3

Second Year

Any Semester

Exam: PRAXIS core exam

10-hour pre-admission school field experience 0

Hours 0

Fall

EPLS:3000 Foundations of Education 3

Prepare materials for Teacher Education Program application (e.g. essays, letters of recommendation) 3

Hours 3

Spring

EDTL:4900 Foundations of Special Education 3

Admission Application: apply to the Teacher Education Program 3

Hours 3

Third Year

Fall

EDTL:3091 Secondary Education Program Orientation and Classroom Management 3

EDTL:3095 Teaching Reading in Secondary Content Areas 1

EDTL:3002 Technology in the Classroom 2

EDTL:4751 Science Methods I: Early Learners with Field Experience 3

Hours 9

Spring

EDTL:4752 Science Methods II: Junior High with Field Experience 3

EPLS:4180 Human Relations for the Classroom Teacher 3

Apply for student teaching (see the College of Education website for application instructions and deadlines) 6

Hours 6

Fourth Year

Fall

EDTL:4753 Science Methods III: High School with Field Experience 3

EDTL:4779 Secondary School Science Practicum 2

Hours 5

Spring

EDTL:4087 Seminar: Curriculum and Student Teaching 3

EDTL:4091 Observation and Laboratory Practice in the Secondary School 6

EDTL:4092 Observation and Laboratory Practice in the Secondary School 6

Exam: edTPA 15

Hours 15

Total Hours 44

Choose a course for the GE CLAS Core Quantitative or Formal Reasoning requirement that will satisfy the Teacher Education Program math requirement.

Academic Career

Any Semester

Admission to the Teacher Education Program, College of Education, is by competitive application.

For information about application requirements, process, and deadlines, please see the College of Education’s website.

Students must maintain a GPA of at least 2.70 in professional education course requirements.

Students must earn another major at the University of Iowa in order to earn the BA in science education. Both degrees may be earned at the same time.

Graduates who have earned one of these degrees at another institution and wish to earn the BA in science education should consult the Department of Teaching and Learning; additional course work may be required.

Choose a course for the GE CLAS Core Quantitative or Formal Reasoning requirement that will satisfy the Teacher Education Program math requirement.
a These majors include a BA in biology, a BS in biology, a BA in chemistry, a BS in chemistry, a BA in environmental sciences, a BS in environmental sciences, a BA in geoscience, a BS in geoscience, a BA in physics, a BS in physics, or a BS in science education.
b Complete the College of Education verification of 10 hour field experience form available on the Office of Educational Services web page.
c Please see the College of Education website for detailed application instructions and deadlines. Admission is selective and a priority deadline exists.
d Typically this course is offered in fall semesters only. Check MyUI for course availability since offerings are subject to change.
e Typically this course is offered in spring semesters only. Check MyUI for course availability since offerings are subject to change.
f As a requirement for completion of an approved Teacher Education Program for initial teaching licensure, the state of Iowa requires a passing score on this exam. The test is required before recommendation for licensure or certification to any state.