

# SECONDARY EDUCATION: SCIENCE, BS

## Example Plan of Study

### Finish in Four Plan of Study

The plan below is an **example** of how students can successfully complete degree requirements in four years. This suggested class schedule plan may be used as a guide and can be adjusted based on individual needs. Students are required to meet with an academic advisor prior to enrollment each semester to plan their class schedule, and students are ultimately responsible for completing all degree requirements.

## Biology

Course	Title	Hours
<b>Freshman</b>		
<b>Fall</b>		
UNIV 1111	First Year Seminar	1
ENGL 1113 or ENGL 1313	Composition I or Critical Analysis and Writing I	3
SMED 1012	Inquiry Approaches to Teaching	2
BIOL 1113 & BIOL 1111 or BIOL 1114	Introductory Biology (N) or Introductory Biology (LN)	4
MATH 1813	Preparation for Calculus (A)	3
HIST 1103 or HIST 1483 or HIST 1493	Survey of American History or American History to 1865 (H) or American History Since 1865 (DH)	3
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
EDHS 1111 or ENGL 1413 or ENGL 3323	First Year Seminar Supplement or Critical Analysis and Writing II or Technical Writing	1
ENGL 1213 or ENGL 1413 or ENGL 3323	Composition II or Critical Analysis and Writing II or Technical Writing	3
CHEM 1314	Chemistry I (LN)	4
BIOL 1604	Animal Biology	4
POLS 1113	American Government	3
<b>Hours</b>		<b>15</b>
<b>Sophomore</b>		
<b>Fall</b>		
CHEM 1515	Chemistry II (LN)	5
PBIO 1404	Plant Biology (LN)	4
SPED 3202	Educating Exceptional Learners	2
PHIL 3933	Creation and Evolution	3
3 Hour General Education Humanities (H)		3
<b>Hours</b>		<b>17</b>
<b>Spring</b>		
PHYS 1114 or PHYS 2014	College Physics I (LN) or University Physics I (LN)	4
MICR 2123	Introduction to Microbiology	3
MICR 2132	Introduction to Microbiology Laboratory	2
SMED 3013	Knowing and Learning in Mathematics and Science	3
3 Hours General Education (S)		3
<b>Hours</b>		<b>15</b>
<b>Junior</b>		
<b>Fall</b>		
BIOL 3204	Physiology	4
MICR 3033	Cell and Molecular Biology	3

CIED 3313	Field Experience in the Secondary Schools	3
3 Hours Upper-Division PBIO		3
3 Hours General Education		3
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
BIOL 3023	General Genetics	3
BIOL 4133	Evolution	3
CHEM 3013	Survey of Organic Chemistry	3
SMED 4611	Authentic Research in the Science Classroom	1
SMED 4613	Teaching the Nature of Science Through an Inquiry Approach	3
CIED 4133	Introduction to K-12 English Language Learners	3
<b>Hours</b>		<b>16</b>
<b>Senior</b>		
<b>Fall</b>		
BIOL 3034	General Ecology	4
STAT 4013 or STAT 2013	Statistical Methods I (A) or Elementary Statistics (A)	3
SMED 4023	Problem-Based Learning in Mathematics and Science	3
SMED 4713	Teaching and Learning Science in the Secondary School	3
3 Hours General Education		3
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
CIED 4720	Internship in the Secondary Classroom	6
SMED 4723	Senior Seminar in Secondary Mathematics and Science Education	3
<b>Hours</b>		<b>9</b>
<b>Total Hours</b>		<b>120</b>

## Chemistry

Course	Title	Hours
<b>Freshman</b>		
<b>Fall</b>		
UNIV 1111	First Year Seminar	1
ENGL 1113 or ENGL 1313	Composition I or Critical Analysis and Writing I	3
SMED 1012	Inquiry Approaches to Teaching	2
CHEM 1314	Chemistry I (LN)	4
MATH 2144	Calculus I (A)	4
HIST 1103 or HIST 1483 or HIST 1493	Survey of American History or American History to 1865 (H) or American History Since 1865 (DH)	3
<b>Hours</b>		<b>17</b>
<b>Spring</b>		
EDHS 1111	First Year Seminar Supplement	1
ENGL 1213 or ENGL 1413 or ENGL 3323	Composition II or Critical Analysis and Writing II or Technical Writing	3
CHEM 1515	Chemistry II (LN)	5
BIOL 1113 & BIOL 1111 or BIOL 1114	Introductory Biology (N) or Introductory Biology (LN)	4
MATH 2153	Calculus II (A)	3
<b>Hours</b>		<b>16</b>
<b>Sophomore</b>		
<b>Fall</b>		
CHEM 3053	Organic Chemistry I	3
PHYS 1114 or PHYS 2014	College Physics I (LN) or University Physics I (LN)	4
SPED 3202	Educating Exceptional Learners	2
POLS 1113	American Government	3

3 Hours Course Designated (H, DH, or HI)		3
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
PHYS 1214 or PHYS 2114	College Physics II (LN) or University Physics II (LN)	4
CHEM 3153	Organic Chemistry II	3
SMED 3013	Knowing and Learning in Mathematics and Science	3
CHEM 3112	Organic Chemistry Laboratory	2
3 Hours General Education (S)		3
<b>Hours</b>		<b>15</b>
<b>Junior</b>		
<b>Fall</b>		
CHEM 2113	Principles of Analytical Chemistry	3
CHEM 2122	Quantitative Analysis Laboratory	2
CHEM 4990	Special Problems in Chemistry	1
PHIL 3933	Creation and Evolution	3
CIED 3313	Field Experience in the Secondary Schools	3
3 Hours General Education		3
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
CHEM 3353 or CHEM 3363	Descriptive Inorganic Chemistry or Bioinorganic Chemistry	3
CHEM 3413	Physical Chemistry Applications	3
CHEM 4990	Special Problems in Chemistry	1
SMED 4611	Authentic Research in the Science Classroom	1
SMED 4613	Teaching the Nature of Science Through an Inquiry Approach	3
CIED 4133	Introduction to K-12 English Language Learners	3
3 Hours Elective		3
<b>Hours</b>		<b>17</b>
<b>Senior</b>		
<b>Fall</b>		
BIOC 3653	Survey of Biochemistry	3
STAT 4013 or STAT 2013	Statistical Methods I (A) or Elementary Statistics (A)	3
SMED 4023	Problem-Based Learning in Mathematics and Science	3
SMED 4713	Teaching and Learning Science in the Secondary School	3
3 Hours General Education		3
1 Hour Elective		1
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
CIED 4720	Internship in the Secondary Classroom	6
SMED 4723	Senior Seminar in Secondary Mathematics and Science Education	3
<b>Hours</b>		<b>9</b>
<b>Total Hours</b>		<b>120</b>

## Physics

Course	Title	Hours
<b>Freshman</b>		
<b>Fall</b>		
UNIV 1111	First Year Seminar	1
ENGL 1113 or ENGL 1313	Composition I or Critical Analysis and Writing I	3
SMED 1012	Inquiry Approaches to Teaching	2
CHEM 1314	Chemistry I (LN)	4
MATH 2144	Calculus I (A)	4
HIST 1103 or HIST 1483 or HIST 1493	Survey of American History or American History to 1865 (H) or American History Since 1865 (DH)	3
<b>Hours</b>		<b>17</b>

<b>Spring</b>		
EDHS 1111	First Year Seminar Supplement	1
ENGL 1213 or ENGL 1413 or ENGL 3323	Composition II or Critical Analysis and Writing II or Technical Writing	3
PHYS 2014	University Physics I (LN)	4
CHEM 1515	Chemistry II (LN)	5
MATH 2153	Calculus II (A)	3
<b>Hours</b>		<b>16</b>
<b>Sophomore</b>		
<b>Fall</b>		
PHYS 2114	University Physics II (LN)	4
BIOL 1113 & BIOL 1111 or BIOL 1114	Introductory Biology (N) or Introductory Biology (LN)	4
MATH 2163	Calculus III	3
SPED 3202	Educating Exceptional Learners	2
POLS 1113	American Government	3
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
PHYS 2203	University Physics III	3
PHYS 3513	Mathematical Physics	3
MATH 2233	Differential Equations	3
SMED 3013	Knowing and Learning in Mathematics and Science	3
3 Hours Course Designated (H, DH, or HI)		3
<b>Hours</b>		<b>15</b>
<b>Junior</b>		
<b>Fall</b>		
PHYS 3013	Mechanics I	3
PHYS 3323	Modern Laboratory Methods I	3
PHYS 3713	Modern Physics	3
PHIL 3933	Creation and Evolution	3
CIED 3313	Field Experience in the Secondary Schools	3
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
PHYS 3623	Modern Laboratory Methods II	3
STAT 4013	Statistical Methods I (A)	3
SMED 4611	Authentic Research in the Science Classroom	1
SMED 4613	Teaching the Nature of Science Through an Inquiry Approach	3
CIED 4133	Introduction to K-12 English Language Learners	3
3 Hours General Education (S)		3
<b>Hours</b>		<b>16</b>
<b>Senior</b>		
<b>Fall</b>		
PHYS 4113	Electricity and Magnetism	3
SMED 4023	Problem-Based Learning in Mathematics and Science	3
SMED 4713	Teaching and Learning Science in the Secondary School	3
3 Hours Upper-Division PHYS		3
4 Hours Electives		4
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
CIED 4720	Internship in the Secondary Classroom	6
SMED 4723	Senior Seminar in Secondary Mathematics and Science Education	3
<b>Hours</b>		<b>9</b>
<b>Total Hours</b>		<b>120</b>

## Earth Science

Course	Title	Hours
<b>Freshman</b>		
<b>Fall</b>		
UNIV 1111	First Year Seminar	1
SMED 1012	Inquiry Approaches to Teaching	2
BIOL 1113 & BIOL 1111 or BIOL 1114	Introductory Biology (N) or Introductory Biology (LN)	4
GEOL 1214 or GEOL 1114	Introductory Geological Processes (LN) or Physical Geology (LN)	4
MATH 2144	Calculus I (A)	4
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
EDHS 1111	First Year Seminar Supplement	1
ENGL 1113 or ENGL 1313	Composition I or Critical Analysis and Writing I	3
CHEM 1314	Chemistry I (LN)	4
GEOL 1224	Evolution of the Earth (LN)	4
ASTR 1023	Stars, Galaxies, Universe (N)	3
SPED 3202	Educating Exceptional Learners	2
<b>Hours</b>		<b>17</b>
<b>Sophomore</b>		
<b>Fall</b>		
ENGL 1213 or ENGL 1413 or ENGL 3323	Composition II or Critical Analysis and Writing II or Technical Writing	3
CHEM 1515	Chemistry II (LN)	5
GEOL 2464	Rocks and Minerals	4
HIST 1103 or HIST 1483 or HIST 1493	Survey of American History or American History to 1865 (H) or American History Since 1865 (DH)	3
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
PHYS 1114 or PHYS 2014	College Physics I (LN) or University Physics I (LN)	4
GEOG 3023 or GEOG 3033	Climatology (N) or Meteorology (N)	3
GEOL 3503	Environmental Geology (N)	3
SMED 3013	Knowing and Learning in Mathematics and Science	3
POLS 1113	American Government	3
<b>Hours</b>		<b>16</b>
<b>Junior</b>		
<b>Fall</b>		
GEOL 3014	Structural Geology	4
GEOL 2773	Introduction to Planetary Geology (N)	3
PHIL 3933	Creation and Evolution	3
CIED 3313	Field Experience in the Secondary Schools	3
3 Hours Course Designated (H, DH, or HI)		3
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
GEOL 3034	Principles of Stratigraphy and Sedimentology	4
STAT 4013 or STAT 2013	Statistical Methods I (A) or Elementary Statistics (A)	3
SMED 4611	Authentic Research in the Science Classroom	1
SMED 4613	Teaching the Nature of Science Through an Inquiry Approach	3
CIED 4133	Introduction to K-12 English Language Learners	3
3 Hours General Education (S)		3
<b>Hours</b>		<b>17</b>
<b>Senior</b>		
<b>Fall</b>		
GEOL 4503	Introduction to Oceanography (N)	3

SMED 4023	Problem-Based Learning in Mathematics and Science	3
SMED 4713	Teaching and Learning Science in the Secondary School	3
3 Hours Elective		3
3 Hours Elective		3
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
CIED 4720	Internship in the Secondary Classroom	6
SMED 4723	Senior Seminar in Secondary Mathematics and Science Education	3
<b>Hours</b>		<b>9</b>
<b>Total Hours</b>		<b>120</b>

## Zoology

Course	Title	Hours
<b>Freshman</b>		
<b>Fall</b>		
UNIV 1111	First Year Seminar	1
ENGL 1113 or ENGL 1313	Composition I or Critical Analysis and Writing I	3
SMED 1012	Inquiry Approaches to Teaching	2
BIOL 1113 & BIOL 1111 or BIOL 1114	Introductory Biology (N) or Introductory Biology (LN)	4
MATH 1813	Preparation for Calculus (A)	3
HIST 1103 or HIST 1483 or HIST 1493	Survey of American History or American History to 1865 (H) or American History Since 1865 (DH)	3
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
EDHS 1111	First Year Seminar Supplement	1
ENGL 1213 or ENGL 1413 or ENGL 3323	Composition II or Critical Analysis and Writing II or Technical Writing	3
CHEM 1314	Chemistry I (LN)	4
BIOL 1604	Animal Biology	4
POLS 1113	American Government	3
<b>Hours</b>		<b>15</b>
<b>Sophomore</b>		
<b>Fall</b>		
CHEM 1515	Chemistry II (LN)	5
PBIO 1404	Plant Biology (LN)	4
SPED 3202	Educating Exceptional Learners	2
PHIL 3933	Creation and Evolution	3
3 Hours Course Designated (H, DH, or HI)		3
<b>Hours</b>		<b>17</b>
<b>Spring</b>		
PHYS 1114 or PHYS 2014	College Physics I (LN) or University Physics I (LN)	4
BIOL 3104	Invertebrate Zoology	4
SMED 3013	Knowing and Learning in Mathematics and Science	3
3 Hours General Education (S)		3
<b>Hours</b>		<b>14</b>
<b>Junior</b>		
<b>Fall</b>		
BIOL 3023	General Genetics	3
MICR 3033	Cell and Molecular Biology	3
BIOL 3114	Vertebrate Zoology	4
CIED 3313	Field Experience in the Secondary Schools	3
3 Hours General Education (A, H, N, or S)		3
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
BIOL 3204	Physiology	4

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BIOL 4133	Evolution	3
CHEM 3013	Survey of Organic Chemistry	3
SMED 4611	Authentic Research in the Science Classroom	1
SMED 4613	Teaching the Nature of Science Through an Inquiry Approach	3
CIED 4133	Introduction to K-12 English Language Learners	3
<b>Hours</b>		<b>17</b>
<b>Senior</b>		
<b>Fall</b>		
BIOL 3034	General Ecology	4
STAT 4013 or STAT 2013	Statistical Methods I (A) or Elementary Statistics (A)	3
SMED 4023	Problem-Based Learning in Mathematics and Science	3
SMED 4713	Teaching and Learning Science in the Secondary School	3
3 Hours Elective		3
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
CIED 4720	Internship in the Secondary Classroom	6
SMED 4723	Senior Seminar in Secondary Mathematics and Science Education	3
<b>Hours</b>		<b>9</b>
<b>Total Hours</b>		<b>120</b>