

# BIOLOGY (B.A. OR B.S.)

To graduate in this program, students must earn a minimum grade of C in BIOL 114, BIOL 115, and BIOL 115L. Required course work includes the university requirements (see regulation J-3 (<https://catalog.uidaho.edu/general-requirements-academic-procedures/j-general-requirements-baccalaureate-degrees/#j3>)) and:

Code	Title	Hours
BIOL 101	Opportunities in Biological Sciences	1
BIOL 114	Organisms and Environments	4
BIOL 115 & 115L	Cells and the Evolution of Life and Cells and the Evolution of Life Laboratory	4
BIOL 213	Structure and Function Across the Tree of Life	4
BIOL 300 or BIOL 380	Survey of Biochemistry Biochemistry I	3-4
BIOL 310	Genetics	3
BIOL 312	Molecular and Cellular Biology	3
BIOL 313	Molecular and Cellular Laboratory	1
BIOL 314	Ecology and Population Biology	4
BIOL 315	Genetics Lab	1
BIOL 400	Seminar	1-16
BIOL 421	Advanced Evolution	3
CHEM 111 & 111L	General Chemistry I and General Chemistry I Laboratory	4
CHEM 112 & 112L	General Chemistry II and General Chemistry II Laboratory	5
CHEM 277 & CHEM 278	Organic Chemistry I and Organic Chemistry I: Lab	4
MATH 170	Calculus I	4
STAT 251 or STAT 301	Statistical Methods Probability and Statistics	3
Select one of the following Senior Experience courses:		2-3
BIOL 401	Undergraduate Research (Max 8 credits)	
BIOL 407	Practicum in Biology Laboratory Teaching (Max 12 credits)	
BIOL 408	Human Anatomy and Physiology Laboratory Pedagogy (Max 8 credits)	
BIOL 411	Senior Capstone	
BIOL 425	Experimental Field Ecology	
Select one of the following:		3
ENGL 202	Technical Writing I	
ENGL 207	Persuasive Writing	
ENGL 208	Personal & Exploratory Writing	
ENGL 317	Technical Writing II	
ENGL 318	Science Writing	
ENGL 320	Grant and Proposal Writing	
Select one of the following:		4
PHYS 111 & 111L	General Physics I and General Physics I Lab	
PHYS 211 & 211L	Engineering Physics I and Laboratory Physics I	
Select one of the following:		4

PHYS 112 & 112L	General Physics II and General Physics II Lab	
PHYS 212 & 212L	Engineering Physics II and Laboratory Physics II	
Select 14 credits of approved electives from the following:		14
BIOL 340	Pathophysiology	
BIOL 425	Experimental Field Ecology	
BIOL 428	Microscopic Anatomy	
BIOL 432	Immunology	
BIOL 433	Pathogenic Microbiology	
BIOL 444	Genomics	
BIOL 447	Virology	
BIOL 456	Computer Skills for Biologists	
BIOL 460	Advanced Field Botany	
BIOL 461	Neurobiology	
BIOL 474	Developmental Biology	
BIOL 478	Animal Behavior	
BIOL 482	Protein Structure and Function	
BIOL 483	Mammalogy	
BIOL 485	Prokaryotic Molecular Biology	
BIOL 487	Cellular and Molecular Basis of Disease	
BIOL 489	Herpetology	
CHEM 473	Intermediate Organic Chemistry	
ENT 411	Veterinary & Medical Entomology	
ENT 438	Pesticides in the Environment	
ENT 441	Insect Ecology	
ENT 469	Introduction to Forest Insects	
ENT 476	Medical Parasitology	
MATH 437	Mathematical Biology	
PLSC 440	Advanced Laboratory Techniques	
PLSC 476	Cell Biology	
PLSC 488	Genetic Engineering	
WLF 440	Conservation Biology	
WLF 448	Fish and Wildlife Population Ecology	
WLF 482	Ornithology	

**Total Hours** 79-96

## Biology B.A. Students must also complete:

Code	Title	Hours
Two humanities courses in addition to the minimum university-wide general education requirements <sup>1</sup>		6
One Social Science course in addition to the minimum university-wide general education requirements <sup>1</sup>		3
0-16 credits in a foreign language <sup>2</sup>		0-16
<b>Total Hours</b>		<b>9-25</b>

<sup>1</sup>

Courses satisfying the humanities requirement are those dealing with the arts, literature, and philosophy. Courses satisfying the social science requirement are those courses dealing with a person's social condition including social relations, institutions, history, and participation in an organized community. Refer to the online degree audit system through Web registration system or your academic advisor for a listing of appropriate courses.

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Foreign Languages 0-16 credits (zero-four courses) competence in one foreign language equivalent to that gained by the completion of four semesters of college courses through the intermediate level. This requirement may be satisfied by the completion of either of the following options

- 1. 16 credits or four high-school units in one foreign language, or
- 2. 12 credits in one foreign language, and one three-credit course in literature translated from the same language. The 12 credits may be satisfied by three high-school units in one foreign language.

Courses to total 120 credits for this degree

Biology (B.A.) Four-Year Plan

Fall Term 1		Hours
BIOL 101	Opportunities in Biological Sciences	1
BIOL 114	Organisms and Environments	4
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
MATH 170	Calculus I	4
ENGL 101	Writing and Rhetoric I	3
Hours		16
Spring Term 1		
BIOL 115	Cells and the Evolution of Life	3
BIOL 115L	Cells and the Evolution of Life Laboratory	1
CHEM 112	General Chemistry II	4
CHEM 112L	General Chemistry II Laboratory	1
ENGL 102	Writing and Rhetoric II	3
STAT 251 OR STAT 301		3
Hours		15
Fall Term 2		
BIOL 310	Genetics	3
BIOL 315	Genetics Lab	1
CHEM 277	Organic Chemistry I	3
CHEM 278	Organic Chemistry I: Lab	1
(PHYS 111 AND PHYS 111L) OR (PHYS 211 AND PHYS 211L)		4
B.A Course Requirement		3
Hours		15
Spring Term 2		
BIOL 213	Structure and Function Across the Tree of Life	4
BIOL 314	Ecology and Population Biology	4
(PHYS 112 AND PHYS 112L) OR (PHYS 212 AND PHYS 212L)		4
BA Course Requirement		3
Hours		15
Fall Term 3		
BIOL 300 OR BIOL 380		3
ENGL 202 OR ENGL 207 OR ENGL 208 OR ENGL 317 OR ENGL 318 OR ENGL 320		3
Major Elective Course		3
Humanistic and Artistic Ways of Knowing Course		3
Oral Communications Course		3
Hours		15
Spring Term 3		
BIOL 312	Molecular and Cellular Biology	3
BIOL 313	Molecular and Cellular Laboratory	1
Major Elective Course		4
Social and Behavioral Ways of Knowing Course		3
Humanistic and Artistic Ways of Knowing Course		3
Hours		14
Fall Term 4		
Major Elective Course		3

Major Elective Course		3
B.A. Course Requirement		3
American Diversity Course		3
Social and Behavioral Ways of Knowing Course		3
Hours		15
Spring Term 4		
BIOL 400	Seminar	1
BIOL 421	Advanced Evolution	3
International Course		3
B.A. Course Requirement		3
BIOL 401 OR BIOL 407 OR BIOL 408 OR BIOL 411		2
Major Elective Course		3
Hours		15
Total Hours		120

Biology (B.A.) Five-Year Plan

Fall Term 1		Hours
BIOL 101	Opportunities in Biological Sciences	1
MATH 143	College Algebra	3
ENGL 101	Writing and Rhetoric I	3
MATH 144	Precalculus II: Trigonometry	1
Oral Communication Course		3
B.A. Course Requirement		3
Hours		14
Spring Term 1		
ENGL 102	Writing and Rhetoric II	3
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
MATH 170	Calculus I	4
B.A. Course Requirement		3
Hours		14
Fall Term 2		
BIOL 114	Organisms and Environments	4
CHEM 112	General Chemistry II	4
CHEM 112L	General Chemistry II Laboratory	1
B.A. Course Requirement		3
Hours		12
Spring Term 2		
BIOL 115L	Cells and the Evolution of Life Laboratory	1
BIOL 115	Cells and the Evolution of Life	3
B.A. Course Requirement		3
STAT 251 OR STAT 301		3
Hours		10
Fall Term 3		
CHEM 277	Organic Chemistry I	3
CHEM 278	Organic Chemistry I: Lab	1
BIOL 310	Genetics	3
BIOL 315	Genetics Lab	1
(PHYS 111 AND PHYS 111L) OR (PHYS 211 AND PHYS 211L)		4
Hours		12
Spring Term 3		
BIOL 314	Ecology and Population Biology	4
BIOL 213	Structure and Function Across the Tree of Life	4
(PHYS 112 AND PHYS 112L) OR (PHYS 212 AND PHYS 212L)		4
Hours		12
Fall Term 4		
Humanistic and Artistic Ways of Knowing Course		3
B.A. Course Requirement		3
BIOL 300 OR BIOL 380		3
ENGL 202 OR ENGL 207 OR ENGL 208 OR ENGL 317 OR ENGL 318 OR ENGL 320		3
Hours		12

Spring Term 4		
BIOL 312	Molecular and Cellular Biology	3
BIOL 313	Molecular and Cellular Laboratory	1
American Diversity Course		3
Social and Behavioral Ways of Knowing Course		3
B.A. Course Requirement		3
Hours		13
Fall Term 5		
Major Elective Course		3
Major Elective Course		3
Social and Behavioral Ways of Knowing Course		3
B.A. Course Requirement		3
Hours		12
Spring Term 5		
BIOL 400	Seminar	1
BIOL 421	Advanced Evolution	3
Major Elective Course		3
International Course		3
BIOL 401 OR BIOL 407 OR BIOL 408 OR BIOL 411 OR BIOL 425		2
Hours		12
Total Hours		123

## Biology (B.S.) Four-Year Plan

Fall Term 1		Hours
BIOL 101	Opportunities in Biological Sciences	1
BIOL 114	Organisms and Environments	4
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
ENGL 101	Writing and Rhetoric I	3
MATH 170	Calculus I	4
Hours		16
Spring Term 1		
BIOL 115	Cells and the Evolution of Life	3
BIOL 115L	Cells and the Evolution of Life Laboratory	1
CHEM 112	General Chemistry II	4
CHEM 112L	General Chemistry II Laboratory	1
ENGL 102	Writing and Rhetoric II	3
STAT 251 OR STAT 301		3
Hours		15
Fall Term 2		
BIOL 310	Genetics	3
BIOL 315	Genetics Lab	1
CHEM 277	Organic Chemistry I	3
CHEM 278	Organic Chemistry I: Lab	1
Humanistic and Artistic Ways of Knowing Course		3
(PHYS 111 AND PHYS 111L) OR (PHYS 211 AND PHYS 211L)		4
Hours		15
Spring Term 2		
BIOL 213	Structure and Function Across the Tree of Life	4
BIOL 314	Ecology and Population Biology	4
Social and Behavioral Ways of Knowing Course		3
(PHYS 112 AND PHYS 112L) OR (PHYS 212 AND PHYS 212L)		4
Hours		15
Fall Term 3		
American Diversity Course		3
Humanistic and Artistic Ways of Knowing Course		3
Major Elective Course		3
BIOL 300 OR BIOL 380		3
ENGL 202 OR ENGL 207 OR ENGL 208 OR ENGL 317 OR ENGL 318 OR ENGL 320		3
Hours		15

Spring Term 3		
BIOL 312	Molecular and Cellular Biology	3
BIOL 313	Molecular and Cellular Laboratory	1
Social and Behavioral Ways of Knowing Course		3
Major Elective Course		3
Oral Communication Course		3
Hours		13
Fall Term 4		
Major Elective Course		3
Major Elective Course		3
International Course		3
Elective Course		3
Elective Course		3
Hours		15
Spring Term 4		
BIOL 400	Seminar	1
BIOL 421	Advanced Evolution	3
Major Elective Course		4
Elective Course		3
Elective Course		3
BIOL 401 OR BIOL 407 OR BIOL 408 OR BIOL 411 OR BIOL 425		2
Hours		16
Total Hours		120

## Biology (B.S.) Five-Year Plan

Fall Term 1		Hours
BIOL 101	Opportunities in Biological Sciences	1
BIOL 114	Organisms and Environments	4
MATH 143	College Algebra	3
ENGL 101	Writing and Rhetoric I	3
MATH 144	Precalculus II: Trigonometry	1
Hours		12
Spring Term 1		
ENGL 102	Writing and Rhetoric II	3
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
MATH 170	Calculus I	4
Oral Communications Course		3
Hours		14
Fall Term 2		
CHEM 112	General Chemistry II	4
CHEM 112L	General Chemistry II Laboratory	1
BIOL 115	Cells and the Evolution of Life	3
BIOL 115L	Cells and the Evolution of Life Laboratory	1
Humanistic and Artistic Ways of Knowing Course		3
Hours		12
Spring Term 2		
General Education Course 2 cr. Elective Course		2
American Diversity Course		3
STAT 251 OR STAT 301		3
(PHYS 111 AND PHYS 111L) OR (PHYS 211 AND PHYS 211L)		4
Hours		12
Fall Term 3		
CHEM 277	Organic Chemistry I	3
CHEM 278	Organic Chemistry I: Lab	1
BIOL 310	Genetics	3
BIOL 315	Genetics Lab	1
Social and Behavioral Ways of Knowing Course		3
Elective Course		1
Hours		12

**Spring Term 3**

BIOL 314	Ecology and Population Biology	4
BIOL 213	Structure and Function Across the Tree of Life	4
(PHYS 112 AND PHYS 112L) OR (PHYS 212 AND PHYS 212L)		4

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<b>Hours</b>	<b>12</b>
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**Fall Term 4**

Major Elective Course	3
Humanistic and Artistic Ways of Knowing Course	3
BIOL 300 OR BIOL 380	3
ENGL 202 OR ENGL 207 OR ENGL 208 OR ENGL 317 OR ENGL 318 OR ENGL 320	3

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<b>Hours</b>	<b>12</b>
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**Spring Term 4**

BIOL 312	Molecular and Cellular Biology	3
BIOL 313	Molecular and Cellular Laboratory	1
Major Elective Course		3
Major Elective Course		3
Social and Behavioral Ways of Knowing Course		3

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<b>Hours</b>	<b>13</b>
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**Fall Term 5**

International Course	3
Major Elective Course	3
Major Elective Course	3
B.S. Course Requirement	3

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<b>Hours</b>	<b>12</b>
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**Spring Term 5**

BIOL 400	Seminar	1
BIOL 421	Advanced Evolution	3
Major Elective Course		3
B.S. Course Requirement		3
BIOL 401 OR BIOL 407 OR BIOL 408 OR BIOL 411 OR BIOL 425		2

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<b>Hours</b>	<b>12</b>
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<b>Total Hours</b>	<b>123</b>
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5. Practice citizenship: Students will understand and accept their roles as educated biologists and scientists in society. Students will be able to communicate with others, including non-scientists, from the special perspective of an educated biologist.

The degree map is a guide for the timely completion of your curricular requirements. Your academic advisor or department may be contacted for assistance in interpreting this map. This map is not reflective of your academic history or transcript and it is not official notification of completion of degree or certificate requirements. Please contact the Registrar's Office regarding your official degree/certificate completion status.

1. Learn and integrate: Through independent learning and collaborative study, students will attain, use, and develop knowledge in biology, chemistry, and related disciplines with specialization in biology. Students will be able to integrate biological and chemical information to understand living systems from the molecular to ecosystem level.
2. Think and create: Students will be able to use multiple thinking strategies to examine issues in biology, including the proposal of biological hypotheses and the design and analysis of biological experiments capable of testing hypotheses. Students will be able to apply biological knowledge to real world challenges, such as those that may be encountered in applied areas.
3. Communicate: Students will be able to acquire and analyze biological information from the scientific literature. Students will be able to communicate biological information via verbal, written, and other non-verbal methods such as appropriate graphics.
4. Clarify purpose and perspective: The program will allow students to explore biology in the context of their career and life's purpose as well as to apply perspectives to novel issues or problems within biology or other disciplines.