Biology Curriculum Guides

The following are curriculum guides for a four-year Biology degree program and is subject to change without notice. Students should consult a Biology program advisor to ensure that they have the most accurate and up-to-date information available about a particular four-year degree option.

- Biology Major with Emphasis in Animal Biology Curriculum Guide Example
- · Biology Major with Emphasis in Aquaculture Curriculum Guide Example
- Biology Major with Emphasis in Aquatic Ecology and Fisheries Curriculum Guide Example
- Biology Major with Emphasis in Ecology & Conservation Biology Curriculum Guide Example
- · Biology Major with Emphasis in Cell/Molecular Biology Curriculum Guide Example
- · Biology Major with Emphasis in Biology for Educators Curriculum Guide Example

Biology Major with Emphasis in Animal Biology

An example: Four year plan for **Biology Major with Emphasis in Animal Biology** 120 credits necessary to graduate. Assumes an 18-credit interdisciplinary minor. Plan is a representation and categories of classes can be switched. Check with your advisor.

Course	Title	Credits
Freshman		
Fall		
BIOLOGY 201 & BIOLOGY 202	Principles of Biology: Cellular and Molecular Processes and Principles of Biology Lab: Cellular and Molecular Processes	4
CHEM 211 & CHEM 213	Principles of Chemistry I and Principles of Chemistry I Laboratory	5
First Year Seminar		3
General Ed		3
	Credits	15
Spring		
BIOLOGY 203 & BIOLOGY 204	Principles of Biology: Organisms, Ecology, and Evolution and Principles of Biology Lab: Organisms, Ecology, and Evolution	4
CHEM 212 & CHEM 214	Principles of Chemistry II and Principles of Chemistry II Laboratory	5
MATH 260	Introductory Statistics	4
General Ed / Core Minor		3
	Credits	16
Sophomore		
Fall		
BIOLOGY 307 & BIOLOGY 308	Cell Biology and Cell Biology Laboratory (or Biology 302)	4
MATH 202	Calculus and Analytic Geometry I	4
WF 105	Research and Rhetoric	3
General Ed / Core Minor		3
General Ed		3
	Credits	17
Spring		
BIOLOGY 303	Genetics	3
BIOLOGY 309	Evolutionary Biology	3
General Ed		3
General Ed		3

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Core Minor		3
	Credits	15
Junior		
all		
BIOLOGY 306	Principles of Ecology	4
General Ed		3
Biology Elective		3-4
Biology Elective		3-4
Elective / Minor	Credits	3 16-18
Spring	Credits	10-10
BIOLOGY 346	Comparative Physiology	3
General Ed		3
Biology Elective		3-4
Biology/Minor Elective		3-4
Elective		3
	Credits	15-17
Senior		
Fall		
BIOLOGY 490	Biology Seminar (fall or spring)	1
BIOLOGY 498 or BIOLOGY 497	Independent Study or Internship	2-3
General Ed		3
Biology Elective		3
Elective for Minor		3
Elective		3
	Credits	15-16
Spring		
BIOLOGY 490	Biology Seminar (fall or spring)	1
Biology Elective		3-4
Elective for Minor		3-4
Elective		3-4
Elective	Oradita	3-4
	Credits	13-17
	Total Credits	122-131
Biology Major with Emphasis in Aquaculture		
Course	Title	Credits
Freshman		
Fall		
	Principles of Biology: Cellular and Molecular Processes	3
BIOLOGY 201	Cellular and Molecular Processes	
Fall BIOLOGY 201 BIOLOGY 202	Cellular and Molecular	
BIOLOGY 201 BIOLOGY 202	Cellular and Molecular Processes Principles of Biology Lab: Cellular and Molecular Processes	1
BIOLOGY 201	Cellular and Molecular Processes Principles of Biology Lab: Cellular and Molecular	1
BIOLOGY 201 BIOLOGY 202 CHEM 211 CHEM 213	Cellular and Molecular Processes Principles of Biology Lab: Cellular and Molecular Processes Principles of Chemistry I Principles of Chemistry I	1 4 1
BIOLOGY 201 BIOLOGY 202 CHEM 211 CHEM 213 First Year Seminar	Cellular and Molecular Processes Principles of Biology Lab: Cellular and Molecular Processes Principles of Chemistry I Principles of Chemistry I	1 4 1 3
BIOLOGY 201 BIOLOGY 202 CHEM 211 CHEM 213 First Year Seminar General Ed	Cellular and Molecular Processes Principles of Biology Lab: Cellular and Molecular Processes Principles of Chemistry I Principles of Chemistry I	1 4 1 3 3 3
BIOLOGY 201 BIOLOGY 202 CHEM 211 CHEM 213 First Year Seminar General Ed Spring	Cellular and Molecular Processes Principles of Biology Lab: Cellular and Molecular Processes Principles of Chemistry I Principles of Chemistry I Laboratory Credits	1 4 1 3 3 15
BIOLOGY 201 BIOLOGY 202 CHEM 211 CHEM 213 First Year Seminar	Cellular and Molecular Processes Principles of Biology Lab: Cellular and Molecular Processes Principles of Chemistry I Principles of Chemistry I Laboratory	1 4 1 3 3 15
BIOLOGY 201 BIOLOGY 202 CHEM 211 CHEM 213 First Year Seminar General Ed Spring BIOLOGY 203	Cellular and Molecular Processes Principles of Biology Lab: Cellular and Molecular Processes Principles of Chemistry I Principles of Chemistry I Laboratory Credits Principles of Biology: Organisms, Ecology, and	1 4 1 3 3 3 15 3
BIOLOGY 201 BIOLOGY 202 CHEM 211 CHEM 213 First Year Seminar General Ed Spring	Cellular and Molecular Processes Principles of Biology Lab: Cellular and Molecular Processes Principles of Chemistry I Principles of Chemistry I Laboratory Credits Principles of Biology: Organisms, Ecology, and Evolution Principles of Biology Lab:	3 1 4 1 3 3 3 15 3 1 4

CHEM 214	Principles of Chemistry II	1
	Laboratory	
MATH 260	Introductory Statistics	4
General Ed		3
	Credits	16
Sophomore		
Fall	0	
BIOLOGY 303	Genetics	3
MATH 104 or MATH 202	Precalculus or Calculus and	4
	Analytic Geometry I	
WF 105	Research and Rhetoric	3
or INFO SCI 390	or Technical Writing	
General Ed		3
General Ed		3
	Credits	16
Spring		
BIOLOGY 306	Principles of Ecology	4
BIOLOGY 307	Cell Biology	4
& BIOLOGY 308	and Cell Biology	
BIOLOGY 323	Laboratory	4
& BIOLOGY 323	Principles of Microbiology and Principles of	4
	Microbiology Laboratory	
BIOLOGY 309	Evolutionary Biology	3
General Ed		3
	Credits	18
Junior		
Fall		
BIOLOGY 469	Conservation Biology	4
ENV SCI 403	Limnology	4
or ENV SCI 401	or Stream Ecology	
BIOLOGY 360	Early Life History of Fish	3
General Ed		3
	Credits	14
Spring		
BIOLOGY 341	Ichthyology	4
BIOLOGY 322	Environmental	4
BIOLOGY 346	Microbiology Comparative Physiology	3
BIOLOGY 370	Fisheries Research and	3
	Management	5
General Ed	-	3
	Credits	17
Senior		
Fall		
BIOLOGY 490	Biology Seminar	1
ENV SCI 467	Capstone in	4
	Environmental Science	
Major Elective		3-4
Major Elective		3-4
General Ed		3
	Credits	14-16
Spring		
BIOLOGY 401	Fish and Wildlife	4
	Population Dynamics	
BIOLOGY 449 Major Elective	Wetland Ecology	3
Major Elective		-4
Major Elective	Cradita	3-4
	Credits	10-15
	Total Credits	120-127

Biology Major with Emphasis in Aquatic Ecology & Fisheries

Course	Title	Credit
Freshman	The	orean
Fall		
BIOLOGY 201	Principles of Biology:	
	Cellular and Molecular Processes	
BIOLOGY 202	Principles of Biology Lab:	
	Cellular and Molecular Processes	
CHEM 211	Principles of Chemistry I	
CHEM 213	Principles of Chemistry I Laboratory	
CHEM 207	Laboratory Safety	
First Year Seminar		:
General Ed		
	Credits	1
pring		
SIOLOGY 203	Principles of Biology: Organisms, Ecology, and	
BIOLOGY 204	Evolution Principles of Biology Lab:	
	Organisms, Ecology, and Evolution	
CHEM 212	Principles of Chemistry II	
CHEM 213	Principles of Chemistry I Laboratory	
MATH 260	Introductory Statistics	
General Ed		
	Credits	1
Sophomore		
Fall		
BIOLOGY 303	Genetics	;
VATH 104	Precalculus	
or MATH 202	or Calculus and Analytic Geometry I	
WF 105 or INFO SCI 390	Research and Rhetoric or Technical Writing	:
General Ed		
General Ed		:
	Credits	1
Junior		
all		
BIOLOGY 360	Early Life History of Fish	:
BIOLOGY 469	Conservation Biology	
or ENV SCI 401	Limnology or Stream Ecology	
General Ed		
	Credits	1
Spring		
BIOLOGY 341	Ichthyology	
3IOLOGY 322	Environmental Microbiology	
BIOLOGY 346	Comparative Physiology	
BIOLOGY 370	Fisheries Research and Management	:
General Ed		
	Credits	1
Senior Fall		
raii BIOLOGY 490	Biology Seminar	
SIDLOG Y 490	Capstone in	
	Environmental Science	

General Ed		3
	Credits	14-16
Spring		
BIOLOGY 401	Fish and Wildlife Population Dynamics	4
BIOLOGY 449	Wetland Ecology	3
Major Elective	Wolland Ebology	3-4
Major Elective		3-4
	Credits	13-15
	Total Credits	106-110
Biology Major with Emphasis in Cell/Molecular		
An example: Four year plan for Biology Major with Emphasis in Cell/Molecular		
120 credits necessary to graduate. Assumes an 18-credit minor.		
Plan is a representation and categories of classes can be switched. Check with your advisor.		
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Course	Title	Credits
Freshman		
Fall		
BIOLOGY 201 & BIOLOGY 202	Principles of Biology: Cellular and Molecular	4
	Processes	
	and Principles of Biology	
	Lab: Cellular and Molecular Processes	
CHEM 211	Principles of Chemistry I	5
& CHEM 213	and Principles of	
	Chemistry I Laboratory	
First Year Seminar		3
General Ed		3
Pasian	Credits	15
Spring BIOLOGY 203	Principles of Biology:	4
& BIOLOGY 204	Organisms, Ecology, and	
	Evolution	
	and Principles of Biology Lab: Organisms,	
	Ecology, and Evolution	
CHEM 212	Principles of Chemistry II	5
& CHEM 214	and Principles of	
MATU 000	Chemistry II Laboratory	
MATH 260 General Ed / Core Minor	Introductory Statistics	4
	Credits	16
Sophomore	olouito	10
Fall		
BIOLOGY 323	Principles of Microbiology	4
& BIOLOGY 324	and Principles of	
MATURAD	Microbiology Laboratory	
MATH 202	Calculus and Analytic Geometry I	4
WF 105	Research and Rhetoric	3
General Ed		3
Elective		3
	Credits	17
Spring		
	Genetics	3
BIOLOGY 303	Evolutionary Biology	3
	Evolutionary biology	
General Ed	Evolutionally biology	3
BIOLOGY 309	Liolainaly Doogy	3 3 3

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Junior		
Fall		
BIOLOGY 306	Principles of Ecology	4
BIOLOGY 307	Cell Biology	4
& BIOLOGY 308	and Cell Biology Laboratory	
CHEM 302	Organic Chemistry I	4
& CHEM 304	and Organic Chemistry	
	Laboratory I (or Bio- Organic in Spring)	
General Ed	- 3	3
	Credits	15
Spring		
BIOLOGY 346	Comparative Physiology	3
CHEM 330	Biochemistry	4
& CHEM 301	and Bio-Organic Chemistry Laboratory (or	
	Organic I in Fall)	
BIOLOGY 407		
General Ed		3
Elective		3
Elective		3
	Credits	16
Senior		
Fall		
BIOLOGY 490	Biology Seminar (fall or spring)	1
Elective		3
General Ed		3
Biology Elective		3
Elective for Minor		3
Elective		3
Omine	Credits	16
Spring	Dislamy Comings (fall or	4
BIOLOGY 490	Biology Seminar (fall or spring)	1
Biology Elective		3-4
Elective for Minor		3-4
Elective		3-4
Elective		3-4
	Credits	13-17
	Total Credits	123-127

Biology Major with Emphasis in Ecology & Conservation

An example: Four year plan for Biology Major with Emphasis in Ecology and Conservation Biology

120 credits necessary to graduate. Assumes an 18-credit minor.

Plan is a representation and categories of classes can be switched. Check with your advisor.

Course	Title	Credits
Freshman		
Fall		
BIOLOGY 201	Principles of Biology: Cellular and Molecular Processes	3
BIOLOGY 202	Principles of Biology Lab: Cellular and Molecular Processes	1
CHEM 211	Principles of Chemistry I	4
CHEM 213	Principles of Chemistry I Laboratory	1
First Year Seminar		3
General Ed		3
	Credits	15

Spring		
BIOLOGY 203	Principles of Biology:	3
	Organisms, Ecology, and Evolution	
BIOLOGY 204	Principles of Biology Lab:	1
	Organisms, Ecology, and Evolution	
CHEM 212	Principles of Chemistry II	4
CHEM 214	Principles of Chemistry II Laboratory	1
MATH 260	Introductory Statistics	4
General Ed		3
	Credits	16
Sophomore Fall		
BIOLOGY 307	Cell Biology	4
& BIOLOGY 308	and Cell Biology Laboratory	4
MATH 202	Calculus and Analytic	4
	Geometry I	
WF 105	Research and Rhetoric	3
General Ed/Core Minor		3
General Ed	A . W	3
Spring	Credits	17
BIOLOGY 303	Genetics	3
BIOLOGY 306	Principles of Ecology	4
General Ed		3
General Ed		3
Core Minor		3
	Credits	16
Junior		
Fall		
BIOLOGY 323	Principles of Microbiology	4
& BIOLOGY 324	and Principles of Microbiology Laboratory	
BIOLOGY 309	Evolutionary Biology	3
BIOLOGY 469	Conservation Biology	4
General Ed		3
Elective / Minor		3
	Credits	17
Spring		
General Ed		3
Biology Elective		3-4
Biology/Minor Elective		3-4
Elective		3
Elective		3
Outlas	Credits	15-17
Senior		
Fall BIOLOGY 490	Biology Seminar (fall or	1
BIOLOGY 498	spring) Independent Study	2-3
or BIOLOGY 497	or Internship	
General Ed		3
Biology Elective		3
Elective for Minor		3
Elective		3
Spring	Credits	15-16
BIOLOGY 490	Biology Seminar (fall or spring)	1
Biology Elective		3-4
Elective for Minor		3-4

Elective		3-4
	Credits	13-1
	Total Credits	124-13
Biology Major with Emphasis in Biology for Educators		
An example: Four year plan for Biology Major with Emphasis in Biology for Educators		
120 credits necessary to graduate. Assumes an 18-credit interdisciplinary minor. Plan is a representation and categories of classes can be switched. Check with your advisor.		
Course	Title	Credit
Freshman		
Fall		
BIOLOGY 201 & BIOLOGY 202	Principles of Biology: Cellular and Molecular	
	Processes	
	and Principles of Biology	
	Lab: Cellular and Molecular Processes	
CHEM 211	Principles of Chemistry I	Ę
& CHEM 213	and Principles of	
First Visco Osseries a	Chemistry I Laboratory	,
First Year Seminar General Ed		:
	Credits	1:
Spring	0.0010	
BIOLOGY 203	Principles of Biology:	4
& BIOLOGY 204	Organisms, Ecology, and	
	Evolution and Principles of	
	Biology Lab: Organisms,	
	Ecology, and Evolution	
CHEM 212	Principles of Chemistry II	Ę
& CHEM 214	and Principles of Chemistry II Laboratory	
MATH 260	Introductory Statistics	4
General Ed / Core Minor		:
	Credits	16
Sophomore		
Fall		
BIOLOGY 307 & BIOLOGY 308	Cell Biology and Cell Biology	4
	Laboratory (or Biology	
	302)	
MATH 202	Calculus and Analytic	4
WF 105	Geometry I Research and Rhetoric	:
General Ed / Core Minor		
General Ed		:
	Credits	17
Spring		
BIOLOGY 303	Genetics	:
BIOLOGY 309	Evolutionary Biology	:
General Ed		:
General Ed Core Minor		:
	Credits	1:
Junior	oround	1.
Fall		
BIOLOGY 306	Principles of Ecology	4
General Ed		:
Biology Elective		3-4
Biology Elective		3-4

Elective / Minor		3
	Credits	16-18
Spring		
BIOLOGY 346 or BIOLOGY 311	Comparative Physiology or Plant Physiology	3-4
General Ed		3
Biology Elective		3-4
Biology / Minor Elective		3-4
Elective		3
	Credits	15-18
Senior		
Fall		
BIOLOGY 490	Biology Seminar (fall or spring)	1
General Ed		3
General Ed		3
Elective		3
Elective		3
Elective		3
	Credits	16
Spring		
BIOLOGY 490	Biology Seminar (fall or spring)	1
Elective		3
	Credits	13
	Total Credits	123-128