BIOLOGY, BACHELOR OF ARTS (BA) - LIBERAL STUDIES

Program Learning Outcomes

- **Critical Thinking/Problem Solving:** Respective program graduates should demonstrate synthetic, analytical, and interpretive skills.
- **Knowledge/Content:** Graduates should demonstrate that they are founded in the discipline at the molecular, cellular, organismal, population, community, and ecosystem levels and that they have a fundamental understanding of chemistry, physics, and mathematics.
- **Practical Skills:** Graduates will demonstrate proficiency in laboratory related skills.
- **Communication Skills:** Respective program graduates should demonstrate strong oral, digital, and written communication skills.
- **Professional Attitude:** Graduates demonstrate professional attitude, behavior, and ability to interact with people from diverse backgrounds and cultures.
- **Degree Program Writing Competency:** Graduates will demonstrate proficiency in writing based on longitudinal data as opposed to point in time data.

Related Links

Biology, BA Program Page (https://www.sru.edu/academics/majors-and-minors/biology/)

Biology Department Page (https://www.sru.edu/academics/colleges-and-departments/ches/departments/biology/)

Professional Licensure/Certification Page (http://www.sru.edu/Documents/offices/PRMA/PLC.pdf)

Curriculum Guide

GPA Requirement

Major GPA: 2.0 or higher
Overall GPA: 2.0 or higher
Core GPA: 2.0 or higher

Summary*

Code	Title	Hours
Liberal Studies Requirements		45-46
Modern Language Requirement		0-9
Other Basic Requirements		0-3
Computer Competency		0-3
Major/Concentration Requirements		39-40
Electives		35

* All undergraduate degree programs require a minimum of 120 credits. Some courses meet multiple requirements, but are only counted once toward the 120 credit total required to graduate.

Liberal Studies Requirements

See Liberal Studies Guide for Goal and Enrichment choices

Code	Title	Hours
Goal Course Requirements		
Complete Goal requirements as indicated below		
Basic Requirements		
ENGL 102	Critical Writing	3
ENGL 104	Critical Reading	3
COMM 200	Civil Discourse: Theory & Practice	3
The Arts		
Goal (http://catalog.sru.edu/undergraduate/liberal-studies/liberal-studies-guide/)		3
Global Community		
Goal—Non-US (http://catalog.sru.edu/undergraduate/liberal-studies/liberal-studies-guide/)		3
Goal—Non-US (http://catalog.sru.edu/undergraduate/liberal-studies/liberal-studies-guide/)		3
Goal—US (http://catalog.sru.edu/undergraduate/liberal-studies/liberal-studies-guide/)		3
Human Institutions/Interpersonal Relationships		
Goal (http://catalog.sru.edu/undergraduate/liberal-studies/liberal-studies-guide/)		3
Science, Technology & Math		
CHEM 107	General Chemistry I	3
CHEM 111	General Chemistry I Lab	1
PHYS 201	Elements of Physics I with Lab	4
or PHYS 211	General Physics I with Lab	
MATH 125	Precalculus	4
or MATH 225	Calculus I	
Challenges of the Modern Age		
Goal (http://catalog.sru.edu/undergraduate/liberal-studies/liberal-studies-guide/)		3
Subtotal		39
Enrichment Course Requirements		
Select one course from three of the following Enrichment Areas:		9
The Arts (http://catalog.sru.edu/undergraduate/liberal-studies/liberal-studies-guide/)		
Global Community (http://catalog.sru.edu/undergraduate/liberal-studies/liberal-studies-guide/)		
Human Institutions/Interpersonal Relationships (http://catalog.sru.edu/undergraduate/liberal-studies/liberal-studies-guide/)		
Science, Technology & Math (p. 1) [1]		
Subtotal		9
Total Hours		48

Note

[1] CHEM 108

BA Modern Language Requirement

BA degree requires language proficiency at the 103 class level. Exemption by placement or examination is possible.

Code	Title	Hours
Complete 0-9 credits		0-9
Total Hours		0-9

Basic Math Requirement

Check with your adviser or a current degree audit report to see if you have been exempted from this course. The credit earned in this course will not be counted toward the 120 credit hour minimum needed to earn a degree.

Code	Title	Hours
Complete one of the following:		0-3
Meet required minimum SAT or ACT math score OR		
ACSD 110	Beginning Algebra	
Total Hours		0-3

Computer Competency

Code	Title	Hours
Demonstrate "computer competency" by one of the following:		0-3
Pass Computer Competency Exam OR		
Select one of the following at SRU or another post-secondary institution:		
CPSC 100	Introduction to Computing for Liberal Arts	
CPSC 110	Computer Concepts	
CPSC 130	Introduction to Computing and Programming	
PE 202	Technology for Wellness	
Total Hours		0-3

Major/Concentration Requirements

- 20 major credits must be taken at SRU or PASSHE
- 20 major credits must be taken at the 300 level or above
- Students desiring a Biology Major must maintain at least a 2.000 average in Biology.
- Before progressing to a 200-level course, students must achieve a 2.000 average in Principles of Biology - BIOL 104.
- Students may register in 200-level courses in any order, but must maintain a Biology average of 2.000 or better and must complete the 200 core sequence before progressing to 300 and 400-level courses in the major.
- A student must repeat any 200-level course that brings the Biology average below a 2.000.
- Students should complete all 200-level Biology requirements by the end of their sophomore year.
- If you have questions about Financial Aid, visit their website (https://www.sru.edu/admissions/financial-aid/).
- To view the SRU policy on senior undergraduate students earning graduate credit, click here (http://catalog.sru.edu/undergraduate/academic-policies/senior-undergraduate-students-earning-graduate-credit/).

Code	Title	Hours
Biology Core Requirements		
BIOL 104	Principles of Biology with Lab [1]	4
BIOL 201	General Botany with Lab [1]	4
BIOL 212	General Zoology with Lab [1]	4
BIOL 250	Genetics with Lab [1]	4
Subtotal		16
Required Upper-Level Biology		
BIOL 492	Biology Seminar [1]	1
Subtotal		1
Upper Level Biology Electives		
Select nine credits of the following:		9
BIOL 330	Microbiology/Lab [1]	
BIOL 340	Vertebrate Anatomy with Lab [1]	
or BIOL 465	Plant Anatomy with Lab	
BIOL 370	Molecular Biology with Lab [1]	
BIOL 401	Ecology with Lab [1]	
BIOL 410	Animal Physiology with Lab [1]	
or BIOL 451	Plant Physiology/Lab	
Subtotal		9
Additional Upper-Level Biology Electives		
Select six credits from courses not chosen above, or any 300/400 level course listed below. [2]		6
Upper-Level Biology Electives (p. 2)		
Subtotal		6
Related Sciences – Chemistry		
CHEM 108	General Chemistry II [3]	3
CHEM 112	General Chemistry II Lab [3]	1
CHEM 201	Organic Chemistry I [3]	3
CHEM 211	Organic Chemistry Laboratory I [3]	1
Subtotal		8
Required Major Field Test before Graduation		
Field Test		
Total Hours		40

1 Course counts for 50% of Major and Major GPA

2 Additional electives may be selected from the Marine Science offerings listed below. PLE courses are only offered during the summer months through our affiliation with Pymatuning Laboratory of Ecology.

3 Course counts for 50% of Major requirements but not for Major GPA

* Some courses may require pre-requisites. Please see course descriptions to determine if there are any pre-requisites for that specific course.

Natural Science and Math College-Wide Requirements

Code	Title	Hours
CHEM 107	General Chemistry I	3
CHEM 111	General Chemistry I Lab	1
MATH 125	Precalculus	4
or MATH 225	Calculus I	
PHYS 201	Elements of Physics I with Lab	4
or PHYS 211	General Physics I with Lab	

Electives

Code	Title	Hours
Recommended by the Biology Department		
CHEM 202	Organic Chemistry II	3
CHEM 212	Organic Chemistry Laboratory II	1

Upper-Level Biology Electives

Code	Title	Hours
BIOL 301	Forest Ecology [1]	3
BIOL 302	Ecology of Amphibians & Reptiles/Lab [1]	3

BIOL 303	Behavioral Ecology/Lab [1]	3
BIOL 305	Wetlands and Aquatic Plants/Lab [1]	3
BIOL 306	Freshwater Biomonitoring/Lab [1]	3
BIOL 307	Vertebrate Ecology/Lab [1]	3
BIOL 308	Aquatic Ecosystem Management / Lab [1]	3
BIOL 310	Plant Systematics with Lab [1]	3
BIOL 311	Entomology/Lab [1]	3
BIOL 313	Herpetology/Lab [1]	3
BIOL 314	Medical Parasitology with Lab [1]	1
BIOL 315	Medical Mycology/Lab [1]	1
BIOL 316	Medical Immunology with Lab [1]	1
BIOL 317	Ecology and Fungi [1]	3
BIOL 319	Medical Virology with a Lab [1]	1
BIOL 320	Ornithology/Lab [1]	3
BIOL 321	Wildlife Management/Lab [1]	3
BIOL 322	Conservation Biology/Lab [1]	3
BIOL 323	Stream Ecology/Lab [1]	3
BIOL 325	Biometry with Lab [1]	3
BIOL 326	Field Methods in Biogeography/Lab [1]	3
BIOL 327	Limnology/Lab [1]	3
BIOL 330	Microbiology/Lab [1]	3
BIOL 331	Mammology/Lab [1]	3
BIOL 343	Embryology with Lab [1]	3
BIOL 345	Introduction to Biological Electron Microscopy [1]	2
BIOL 350	Evolution [1]	3
BIOL 356	Field Ecology / Lab [1]	3
BIOL 357	Environmental Microbiology with Lab [1]	4
BIOL 360	Field Botany [1]	3
BIOL 361	Flora of Western Pennsylvania [1]	3
BIOL 370	Molecular Biology with Lab [1]	3
BIOL 371	Vertebrate Field Zoology [1]	3
BIOL 373	Ichthyology/Lab [1]	3
BIOL 375	Ecology of Fish / Lab [1]	3
BIOL 400	Disease Ecology [1]	3
BIOL 401	Ecology with Lab [1]	3
BIOL 402	Biogeography/Lab [1]	3
BIOL 405	Animal Physiological Ecology with Lab [1]	4
BIOL 410	Animal Physiology with Lab [1]	3
BIOL 412	Population Biology [1]	3
BIOL 430	Pathogenic Microbiology with Lab [1]	3
BIOL 450	Biology Internship [1]	3
BIOL 451	Plant Physiology/Lab [1]	3
BIOL 465	Plant Anatomy with Lab [1]	3
BIOL 470	Histology with Lab [1]	3
BIOL 498	Selected Topics [1]	3
MARS 221	Marine Invertebrates [1]	3
MARS 241	Marine Biology [1]	3
MARS 250	Wetland Ecology [1]	3
MARS 260	Marine Ecology [1]	3
MARS 270	Coastal Vegetation [1]	3
MARS 298	Selected Topics	3
MARS 300	Behavior of Marine Organisms [1]	3
MARS 310	The Mammals of Coastal Ecosystems [1]	3
MARS 320	Marine Microbiology [1]	3
MARS 330	Tropical Invertebrates [1]	3
MARS 342	Marine Botany [1]	3
MARS 343	Marine Ichthyology [1]	3
MARS 344	Anatomy of Marine Chordates [1]	3
MARS 345	Ornithology [1]	3
MARS 350	Physiology of Marine Invertebrates [1]	3
MARS 398	Selected Topics [1]	3
MARS 420	Marine Micropaleontology [1]	3
MARS 431	Ecology of Marine Plankton [1]	3
MARS 458	Exploration Methods in Marine Geology [1]	3
MARS 490	Independent Study [1]	3
MARS 491	Coral Reef Ecology [1]	3
MARS 492	Marine Mammals [1]	3
MARS 498	Selected Topics [1]	3
MARS 500	Problems in Marine Science [1]	3

[1] Course counts for 50% of Major requirements and Major GPA

Important Curriculum Guide Notes

This Curriculum Guide is provided to help SRU students and prospective students better understand their intended major curriculum. Enrolled SRU students should note that the My Rock Audit may place already-earned and/or in progress courses in different, yet valid, curriculum categories. Enrolled SRU students should use the My Rock Audit Report and materials and information provided by their faculty advisers to ensure accurate progress towards degree completion. *The information on this guide is current as of the date listed. Students are responsible for curriculum requirements at the time of enrollment at the University*.

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