BIOLOGY, BACHELOR OF SCIENCE (BS) - CONCENTRATION IN CONSERVATION BIOLOGY

Program Learning Outcomes

- **Competence in Laboratory and Research Skills: To conduct, assess, and communicate research investigations using established scientific practices.** (SRU UG 1, 2, 3, 4, 5, 7 10)
- **Core Concepts for Biological Literacy:** (SRU UG 1, 2, 3, 4, 5, 7, 9)
  - Knowledge/Content
    - Evolution
    - Structure and function across all levels of biological organization
    - Diversity and interactions of life
    - Information flow, exchange and storage in biological systems
  - Critical Thinking/Problem Solving
    - Connect information from cognate science courses and liberal arts courses to biological concepts
    - Apply scientific information to current and future societal problems
- **Participation in Diverse, Enriching Scientific Activities:** Apply technical and professional skills in hands-on laboratory, clinical or field experiences. (SRU UG 1, 2, 3, 4, 5, 7, 8, 9)
- **Professional Attitude:** Graduates demonstrate professional attitude, behavior, and ability to interact with people from diverse backgrounds and cultures. (SRU UG 1, 5, 7, 8, 9)

Related Links

Biology - Conservation Biology, BS Program Page (https://www.sru.edu/academics/colleges-and-departments/ces/departments/biology/programs/)

Professional Licensure/Certification Page (https://www.sru.edu/students/student-consumer-information/professional-licensures/)

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
Rock Studies 2 Requirements		45
Major Requirements/Concentration		60
Natural Science and Math College-Wide Requirements		12
Electives		15

* 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.

Rock Studies 2 Requirements

Code	Title	Hours
The Rock		
SUBJ 139	Foundations of Academic Discovery [1]	3
ENGL 102	Critical Writing	3
ENGL 104	Critical Reading	3
MATH 125	Precalculus	4
or MATH 225	Calculus I	
Select one of the following:		3
COMM 200	Civil Discourse: Theory & Practice	
PHIL 110	Ethics and Civil Discourse	
POLI 235	Civil Discourse and Democracy	
Subtotal		16
Integrated Inquiry		
Creative and Aesthetic Inquiry		
Select 3 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Humanities Inquiry		
Select 3 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Social Science Inquiry		
Select 3 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Natural Sciences Inquiry		
CHEM 107	General Chemistry I	3
CHEM 111	General Chemistry I Lab	1
Physical Sciences Inquiry		
PHYS 201	Elements of Physics I with Lab	4
or PHYS 216	University Physics 1 with Lab	
Subtotal		17
Thematic Thread		
Select 12 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/) [2]		12
Total Hours		**45**

[1] Course offered in multiple subjects; cannot take course in first major subject

[2] One course from each category; six credits must be 300-level or above; no more than 4 credits from one subject area; specific courses required in first major, regardless of prefix of course, cannot be used to satisfy thread requirements; any course with same prefix as first major cannot be used to satisfy thread requirements, even if it is not a course in the first major.

DIVERSITY, EQUITY, AND INCLUSION REQUIREMENT

Students must take and pass a course with the Diversity, Equity, and Inclusion (DEI) designation prior to graduation. Students can meet this requirement by taking any DEI - designated course in any program at any time during their undergraduate career.

Major Requirements/Concentration

- 30 major credits must be taken at SRU or PASSHE
- 28 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.

- Students should complete all 200-level Biology requirements by the end of their sophomore year.
- Students must earn a "C" or better in both Biology I with Lab (BIOL 113) and Biology II with Lab (BIOL 114) before proceeding to their next biology course.
- Students must earn a "C" or better in both Genetics with Lab (BIOL 250) and Biometry with Lab (BIOL 325) prior to graduating.
- To view the SRU policy on senior undergraduate students earning graduate credit, click here (https://catalog.sru.edu/academic-policies/senior-undergraduate-students-earning-graduate-credit/).

Code	Title	Hours
Biology Core Requirements		
BIOL 113	Biology I: Foundations of Ecology, Evolution and Diversity with Lab [1]	4
BIOL 114	Biology II: Foundations of Molecules, Genes and Cells with Lab [1]	4
BIOL 250	Genetics with Lab [1]	4
BIOL 325	Biostatistics and Experimental Design with Lab [1]	3
Subtotal		15
Required Upper-Level Biology and PCRM Courses		
BIOL 401	Ecology with Lab	3
PCRM 204	Environmental Communication	3
PCRM 347	Interpretive Methods and Programming	3
PCRM 348	Natural History of Ecosystems I	3
PCRM 349	Natural History of Ecosystems II	3
PCRM 477	Wildlife & Wildlands Field Methods and Management	3
or BIOL 321	Wildlife Management/Lab	
Subtotal		18
Upper-Level Biology Electives		
Select 9 credits in BIOL or MARS courses from Additional Upper Level Biology Electives Below (1)		12
Select 3 credits in a Field Course (2) in Biology or MARS from the List Below		
Upper-Level Biology Electives (p. 2) [1]		
Subtotal		12
Related Sciences – Chemistry		
CHEM 108	General Chemistry II [2]	3
CHEM 112	General Chemistry II Lab [2]	1
CHEM 201	Organic Chemistry I [2]	3
CHEM 211	Organic Chemistry Laboratory I [2]	1
Subtotal		8
Related Sciences – Physics		
Select one of the following:		
PHYS 202	Elements of Physics II/ Lab [2]	4
or PHYS 217	University Physics 2 with Lab	
Subtotal		4
Independent Study Options		
Select one of the following options:		3
Independent Study Option		
BIOL 490	Independent Study [1]	
or BIOL 450	Biology Internship	
Non-Independent Study Option		
Select 3 credits in BIOL or MARS course from Additional Upper Level Electives below.		
Upper-Level Biology Electives (p. 2) [1]		
Subtotal		3
Total Hours		**60**

[1] Course counts for 50% of Major requirements and Major GPA
[2] Course counts for 50% of Major requirements but not for Major GPA

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	

Additional Upper-Level Biology Electives[1] And Field Courses[2]

Code	Title	Hours
BIOL 301	Forest Ecology [1,2]	3
BIOL 302	Ecology of Amphibians & Reptiles/Lab [1,2]	3
BIOL 303	Behavioral Ecology/Lab [1,2]	3
BIOL 305	Wetlands and Aquatic Plants/Lab [1,2]	3
BIOL 306	Freshwater Biomonitoring/Lab [1,2]	3
BIOL 307	Vertebrate Ecology/Lab [1,2]	3
BIOL 308	Aquatic Ecosystem Management / Lab [1, 2]	3
BIOL 310	Plant Diversity with Lab [1]	3
BIOL 311	Entomology/Lab [1,2]	3
BIOL 313	Herpetology/Lab [1,2]	3
BIOL 314	Parasitology with Lab [1]	3
BIOL 317	Ecology and Fungi [1,2]	3
BIOL 320	Ornithology/Lab [1,2]	3
BIOL 321	Wildlife Management/Lab [1,2]	3
BIOL 322	Conservation Biology/Lab [1,2]	3
BIOL 323	Stream Ecology/Lab [1,2]	3
BIOL 326	Field Methods in Biogeography/Lab [1,2]	3
BIOL 327	Limnology/Lab [1,2]	3
BIOL 331	Mammology/Lab [1,2]	3
BIOL 340	Vertebrate Anatomy with Lab [1]	3
BIOL 350	Evolution [1]	3
BIOL 356	Field Ecology / Lab [1,2]	3
BIOL 357	Environmental Microbiology with Lab [1]	4
BIOL 360	Field Botany [1,2]	3
BIOL 361	Flora of Western Pennsylvania [1,2]	3
BIOL 371	Vertebrate Field Zoology [1,2]	3
BIOL 373	Ichthyology/Lab [1,2]	3
BIOL 375	Ecology of Fish / Lab [1,2]	3
BIOL 380	Endocrinology [1]	3
BIOL 400	Disease Ecology [1,2]	3
BIOL 402	Biogeography/Lab [1,2]	3
BIOL 405	Animal Physiological Ecology with Lab [1]	4

BIOL 312	Zoology with Lab [1]	3
BIOL 410	Animal Physiology with Lab [1]	3
BIOL 412	Population Biology [1,2]	3
MRSC 221	Marine Invertebrates [2]	3
MRSC 241	Marine Biology	3
MRSC 250	Wetland Ecology [2]	3
MRSC 260	Marine Ecology [2]	3
MRSC 270	Coastal Vegetation [2]	3
MRSC 298	Selected Topics [2]	1-3
MRSC 300	Behavior of Marine Organisms [1,2]	3
MRSC 310	The Mammals of Coastal Ecosystems [1,2]	3
MRSC 320	Marine Microbiology [1,2]	3
MRSC 330	Tropical Invertebrates [1,2]	3
MRSC 342	Marine Botany [1,2]	3
MRSC 343	Marine Ichthyology [1,2]	3
MRSC 344	Anatomy of Marine Chordates [1,2]	3
MRSC 345	Ornithology [1,2]	3
MRSC 350	Physiology of Marine Invertebrates [1,2]	3
MRSC 398	Selected Topics [1,2]	1-3
MRSC 420	Marine Micropaleontology [1,2]	3
MRSC 431	Ecology of Marine Plankton [1,2]	3
MRSC 441	Biology of Molluscs [1,2]	3
MRSC 490	Independent Study [1,2]	1-3
MRSC 491	Coral Reef Ecology [1,2]	3
MRSC 492	Marine Mammals [1,2]	3
MRSC 498	Selected Topics [1,2]	1-3

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

Co-curricular and Experiential Learning

Students are encouraged to explore additional curricular and co-curricular opportunities. There is a strong correlation between long-term student success and participation in the following types of programs and activities:

1. Student-faculty research
2. Internships
3. Volunteering
4. Job Shadowing

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.*

PASSHE - Pennsylvania State System of Higher Education Institutions

BIOLOGY - BS (6108) / CIM 512
w/ Conservation Biology (COBI)
This program is effective as of Fall 2025

Revised 09.18.2025
UCC 09.24.2024

Course	Title	Hours
First Year		
Fall		
BIOL 113	Biology I: Foundations of Ecology, Evolution and Diversity with Lab	4
CHEM 107 & CHEM 111	General Chemistry I and General Chemistry I Lab	4
ENGL 102	Critical Writing	3
SUBJ 139	Foundations of Academic Discovery	3
ESAP 101	FYRST Seminar	1
	Hours	**15**
Spring		
BIOL 114	Biology II: Foundations of Molecules, Genes and Cells with Lab	4
CHEM 108 & CHEM 112	General Chemistry II and General Chemistry II Lab	4
ENGL 104	Critical Reading	3
MATH 125 or MATH 225	Precalculus or Calculus I	4
	Hours	**15**
Second Year		
Fall		
BIOL 250	Genetics with Lab	4
CHEM 201 & CHEM 211	Organic Chemistry I and Organic Chemistry Laboratory I	4
PCRM 347	Interpretive Methods and Programming	3
Select one of the following:		3
COMM 200	Civil Discourse: Theory & Practice	
PHIL 110	Ethics and Civil Discourse	
POLI 235	Civil Discourse and Democracy	
	Hours	**14**
Spring		
BIOL 325	Biostatistics and Experimental Design with Lab	3
PCRM 204	Environmental Communication	3
BIOL 3XX/$XX	Upper Level Biology Elective	3
Rock Studies 2 Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
	Hours	**15**
Third Year		
Fall		
BIOL 401	Ecology with Lab	3
PHYS 201 or PHYS 216	Elements of Physics I with Lab or University Physics 1 with Lab	4
Rock Studies 2 Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Rock Studies 2 Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3

Professional Elective		3
	Hours	**16**
Spring		
PCRM 348	Natural History of Ecosystems I	3
PHYS 202 or PHYS 217	Elements of Physics II/ Lab or University Physics 2 with Lab	4
BIOL 3XX/4XX	Upper Level Biology Elective	3
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Professional Elective		2
	Hours	**15**
Fourth Year		
Fall		
PCRM 349	Natural History of Ecosystems II	3
BIOL 3XX/4XX	Upper-Level Biology Elective	3
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Professional Elective		3
	Hours	**15**
Spring		
PCRM 477	Wildlife & Wildlands Field Methods and Management	3
BIOL 3XX/4XX	Upper Level Biology Elective	3
BIOL 3XX/4XX	Upper Level Biology Elective	3
Professional Elective		3
Professional Elective		3
	Hours	**15**
	Total Hours**	**120**

Revised: 08.03.2026