

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

## 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    |
|      | Other Basic Requirements                           | 0-3   |
|      | 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 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-------|
| <b>The Rock</b>                                                                                                                                                                              |                                                |       |
| SUBJ 139                                                                                                                                                                                     | Foundations of Academic Discovery <sup>1</sup> | 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    |
| <b>Integrated Inquiry</b>                                                                                                                                                                    |                                                |       |
| <i>Creative and Aesthetic Inquiry</i>                                                                                                                                                        |                                                |       |
| Select 3 Credits ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> ) |                                                | 3     |
| <i>Humanities Inquiry</i>                                                                                                                                                                    |                                                |       |
| Select 3 Credits ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> ) |                                                | 3     |
| <i>Social Science Inquiry</i>                                                                                                                                                                |                                                |       |
| Select 3 Credits ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> ) |                                                | 3     |
| <i>Natural Sciences Inquiry</i>                                                                                                                                                              |                                                |       |
| CHEM 107                                                                                                                                                                                     | General Chemistry I                            | 3     |
| CHEM 111                                                                                                                                                                                     | General Chemistry I Lab                        | 1     |
| <i>Physical Sciences Inquiry</i>                                                                                                                                                             |                                                |       |
| PHYS 201                                                                                                                                                                                     | Elements of Physics I with Lab                 | 4     |

|                                                                                                                                                                                                            |                               |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------|
| or PHYS 216                                                                                                                                                                                                | University Physics 1 with Lab |           |
| Subtotal                                                                                                                                                                                                   |                               | 17        |
| <b>Thematic Thread</b>                                                                                                                                                                                     |                               |           |
| Select 12 Credits ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> ) <sup>2</sup> |                               | 12        |
| <b>Total Hours</b>                                                                                                                                                                                         |                               | <b>45</b> |

<sup>1</sup> Course offered in multiple subjects; cannot take course in first major subject

<sup>2</sup> 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.

### 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:                 |                   |            |
| Meet required minimum SAT or ACT math score OR |                   |            |
| ESAP 110                                       | Beginning Algebra | 0-3        |
| <b>Total Hours</b>                             |                   | <b>0-3</b> |

### 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 |
|----------------------------------|----------------------------------------------------------------------------------|-------|
| <b>Biology Core Requirements</b> |                                                                                  |       |
| BIOL 113                         | Biology I: Foundations of Ecology, Evolution and Diversity with Lab <sup>1</sup> | 4     |
| BIOL 114                         | Biology II: Foundations of Molecules, Genes and Cells with Lab <sup>1</sup>      | 4     |
| BIOL 250                         | Genetics with Lab <sup>1</sup>                                                   | 4     |

|                                                                                                  |                                                             |           |
|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------|
| BIOL 325                                                                                         | Biostatistics and Experimental Design with Lab <sup>1</sup> | 3         |
| Subtotal                                                                                         |                                                             | 15        |
| <b>Required Upper-Level Biology and PCRM Courses</b>                                             |                                                             |           |
| 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        |
| <b>Upper-Level Biology Electives</b>                                                             |                                                             |           |
| 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) <sup>1</sup>                                                |                                                             |           |
| Subtotal                                                                                         |                                                             | 12        |
| <b>Related Sciences – Chemistry</b>                                                              |                                                             |           |
| CHEM 108                                                                                         | General Chemistry II <sup>2</sup>                           | 3         |
| CHEM 112                                                                                         | General Chemistry II Lab <sup>2</sup>                       | 1         |
| CHEM 201                                                                                         | Organic Chemistry I <sup>2</sup>                            | 3         |
| CHEM 211                                                                                         | Organic Chemistry Laboratory I <sup>2</sup>                 | 1         |
| Subtotal                                                                                         |                                                             | 8         |
| <b>Related Sciences – Physics</b>                                                                |                                                             |           |
| Select one of the following:                                                                     |                                                             |           |
| PHYS 202                                                                                         | Elements of Physics II/ Lab <sup>2</sup>                    | 4         |
| or PHYS 217                                                                                      | University Physics 2 with Lab                               |           |
| Subtotal                                                                                         |                                                             | 4         |
| <b>Independent Study Options</b>                                                                 |                                                             |           |
| Select one of the following options:                                                             |                                                             | 3         |
| <i>Independent Study Option</i>                                                                  |                                                             |           |
| BIOL 490                                                                                         | Independent Study <sup>1</sup>                              |           |
| or BIOL 450                                                                                      | Biology Internship                                          |           |
| <i>Non-Independent Study Option</i>                                                              |                                                             |           |
| Select 3 credits in BIOL or MARS course from Additional Upper Level Electives below.             |                                                             |           |
| Upper-Level Biology Electives (p. 2) <sup>1</sup>                                                |                                                             |           |
| Subtotal                                                                                         |                                                             | 3         |
| <b>Total Hours</b>                                                                               |                                                             | <b>60</b> |

<sup>1</sup> Course counts for 50% of Major requirements and Major GPA<sup>2</sup> 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<sup>1</sup> And Field Courses<sup>2</sup>

| Code     | Title                                               | Hours |
|----------|-----------------------------------------------------|-------|
| BIOL 301 | Forest Ecology <sup>1,2</sup>                       | 3     |
| BIOL 302 | Ecology of Amphibians & Reptiles/Lab <sup>1,2</sup> | 3     |
| BIOL 303 | Behavioral Ecology/Lab <sup>1,2</sup>               | 3     |
| BIOL 305 | Wetlands and Aquatic Plants/Lab <sup>1,2</sup>      | 3     |
| BIOL 306 | Freshwater Biomonitoring/Lab <sup>1,2</sup>         | 3     |
| BIOL 307 | Vertebrate Ecology/Lab <sup>1,2</sup>               | 3     |
| BIOL 308 | Aquatic Ecosystem Management / Lab <sup>1, 2</sup>  | 3     |
| BIOL 310 | Plant Diversity with Lab <sup>1</sup>               | 3     |
| BIOL 311 | Entomology/Lab <sup>1,2</sup>                       | 3     |
| BIOL 313 | Herpetology/Lab <sup>1,2</sup>                      | 3     |
| BIOL 314 | Parasitology with Lab <sup>1</sup>                  | 3     |
| BIOL 317 | Ecology and Fungi <sup>1,2</sup>                    | 3     |
| BIOL 320 | Ornithology/Lab <sup>1,2</sup>                      | 3     |
| BIOL 321 | Wildlife Management/Lab <sup>1,2</sup>              | 3     |
| BIOL 322 | Conservation Biology/Lab <sup>1,2</sup>             | 3     |
| BIOL 323 | Stream Ecology/Lab <sup>1,2</sup>                   | 3     |
| BIOL 326 | Field Methods in Biogeography/Lab <sup>1,2</sup>    | 3     |
| BIOL 327 | Limnology/Lab <sup>1,2</sup>                        | 3     |
| BIOL 331 | Mammology/Lab <sup>1,2</sup>                        | 3     |
| BIOL 340 | Vertebrate Anatomy with Lab <sup>1</sup>            | 3     |
| BIOL 350 | Evolution <sup>1</sup>                              | 3     |
| BIOL 356 | Field Ecology / Lab <sup>1,2</sup>                  | 3     |
| BIOL 357 | Environmental Microbiology with Lab <sup>1</sup>    | 4     |
| BIOL 360 | Field Botany <sup>1,2</sup>                         | 3     |
| BIOL 361 | Flora of Western Pennsylvania <sup>1,2</sup>        | 3     |
| BIOL 371 | Vertebrate Field Zoology <sup>1,2</sup>             | 3     |
| BIOL 373 | Ichthyology/Lab <sup>1,2</sup>                      | 3     |
| BIOL 375 | Ecology of Fish / Lab <sup>1,2</sup>                | 3     |
| BIOL 380 | Endocrinology <sup>1</sup>                          | 3     |
| BIOL 400 | Disease Ecology <sup>1,2</sup>                      | 3     |
| BIOL 402 | Biogeography/Lab <sup>1,2</sup>                     | 3     |
| BIOL 405 | Animal Physiological Ecology with Lab <sup>1</sup>  | 4     |
| BIOL 312 | Zoology with Lab <sup>1</sup>                       | 3     |
| BIOL 410 | Animal Physiology with Lab <sup>1</sup>             | 3     |
| BIOL 412 | Population Biology <sup>1,2</sup>                   | 3     |
| MRSC 221 | Marine Invertebrates <sup>2</sup>                   | 3     |
| MRSC 241 | Marine Biology                                      | 3     |
| MRSC 250 | Wetland Ecology <sup>2</sup>                        | 3     |
| MRSC 260 | Marine Ecology <sup>2</sup>                         | 3     |
| MRSC 270 | Coastal Vegetation <sup>2</sup>                     | 3     |
| MRSC 298 | Selected Topics <sup>2</sup>                        | 1-3   |
| MRSC 300 | Behavior of Marine Organisms <sup>1,2</sup>         | 3     |
| MRSC 310 | The Mammals of Coastal Ecosystems <sup>1,2</sup>    | 3     |
| MRSC 320 | Marine Microbiology <sup>1,2</sup>                  | 3     |
| MRSC 330 | Tropical Invertebrates <sup>1,2</sup>               | 3     |
| MRSC 342 | Marine Botany <sup>1,2</sup>                        | 3     |

|          |                                                   |     |
|----------|---------------------------------------------------|-----|
| MRSC 343 | Marine Ichthyology <sup>1,2</sup>                 | 3   |
| MRSC 344 | Anatomy of Marine Chordates <sup>1,2</sup>        | 3   |
| MRSC 345 | Ornithology <sup>1,2</sup>                        | 3   |
| MRSC 350 | Physiology of Marine Invertebrates <sup>1,2</sup> | 3   |
| MRSC 398 | Selected Topics <sup>1,2</sup>                    | 1-3 |
| MRSC 420 | Marine Micropaleontology <sup>1,2</sup>           | 3   |
| MRSC 431 | Ecology of Marine Plankton <sup>1,2</sup>         | 3   |
| MRSC 441 | Biology of Molluscs <sup>1,2</sup>                | 3   |
| MRSC 490 | Independent Study <sup>1,2</sup>                  | 1-3 |
| MRSC 491 | Coral Reef Ecology <sup>1,2</sup>                 | 3   |
| MRSC 492 | Marine Mammals <sup>1,2</sup>                     | 3   |
| MRSC 498 | Selected Topics <sup>1,2</sup>                    | 1-3 |

<sup>1</sup> Course counts for 50% of Major requirements and Major GPA

<sup>2</sup> 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