

BIOLOGY, BACHELOR OF SCIENCE (BS) - CONCENTRATION IN MEDICAL TECHNOLOGY

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 - Medical Technology, BS Program Page (<https://www.sru.edu/academics/majors-and-minors/biology-medical-technology/>)

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

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 Requirements	44
	Other Basic Requirements	0-3
	Computer Competency	0-3
	Major/Concentration Requirements	60
	Natural Science and Math College-Wide Requirements	12
	Electives	16

* 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 Requirements

Code	Title	Hours
The Rock		
SUBJ 139	University Seminar ¹	3
ENGL 102	Critical Writing	3
ENGL 104	Critical Reading	3
STAT 152	Elementary Statistics I	3
Select one of the following:		3
COMM 200	Civil Discourse: Theory & Practice	
PHIL 110	Ethics and Civil Discourse	
POLS 235	Civil Discourse and Democracy	
Subtotal		15
Integrated Inquiry		
<i>Creative and Aesthetic Inquiry</i>		
Select 3 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/)		3
<i>Humanities Inquiry</i>		
Select 3 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/)		3
<i>Social Science Inquiry</i>		
Select 3 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/)		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 211	General Physics I with Lab	4
Subtotal		17
Thematic Thread		
Select 12 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/) ²		12
Total Hours		44

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

² From at least 3 categories; no more than 6 credits from one department; 6 credits must be 300-level or above.

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		
ESAP 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

- 60 credits = 42 coursework credits; 18 clinical credits
- 30 major credits must be taken at SRU or PASSHE
- 30 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 (<https://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 ^{1,2}	4
BIOL 210	Medical Microbiology with Lab ^{1,2}	3
BIOL 216	Anatomy and Physiology I with Lab ^{1,2}	3
BIOL 217	Anatomy and Physiology II with Lab ^{1,2}	3
BIOL 250	Genetics with Lab ^{1,2}	4
Subtotal		17
Required Upper-Level Biology		
BIOL 316	Medical Immunology with Lab ¹	1
BIOL 330	Microbiology/Lab ¹	3
BIOL 335	Cell Biology/Lab ¹	3
or BIOL 370	Molecular Biology with Lab	
Subtotal		7
Upper-Level Biology Elective		
Students must take 2 of the following courses:		2
BIOL 314	Medical Parasitology with Lab ¹	
BIOL 315	Medical Mycology/Lab ¹	
BIOL 319	Medical Virology with a Lab ¹	
Subtotal		2
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 202	Organic Chemistry II ³	3

CHEM 211	Organic Chemistry Laboratory I ³	1
CHEM 212	Organic Chemistry Laboratory II ³	1
CHEM 335	Biochemistry I ³	3
CHEM 336	Biochemistry Laboratory I ³	1
Subtotal		16

Clinical Experience (18 credits to complete 120 hrs in degree)

Minimum of 91 hrs on campus plus 1 yr (12 months) at an affiliated School of Medical Technology or one acceptable to SRU		
NSM 390	Experimental ³	18
Total Hours		60

- ¹ Course counts for 50% of Major requirements and Major GPA
- ² Core GPA
- 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 225	Calculus I	4
PHYS 211	General Physics I with Lab	4

Electives

Code	Title	Hours
NSM 390	Clinical Experience	14

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. Career education and development
2. Student-faculty research
3. Volunteering
4. Job Shadowing

BIOLOGY - BS (6108)
 Concentration in Medical Technology (MEDT)
 This program is effective as of Fall 2019.
 Revised 07.15.2021
 UCC 2.5.2019

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

Recommended Four-Year Plan

Course	Title	Hours
First Year		
Fall		
ENGL 102	Critical Writing	3
BIOL 104	Principles of Biology with Lab	4
CHEM 107	General Chemistry I	3
CHEM 111	General Chemistry I Lab	1
SUBJ 139	University Seminar ¹	3
INDS 101	FIRST Seminar *	1
Hours		15
Spring		
ENGL 104	Critical Reading	3
CHEM 108	General Chemistry II	3
CHEM 112	General Chemistry II Lab	1
BIOL 216	Anatomy and Physiology I with Lab	3
BIOL 250	Genetics with Lab	4
Hours		14
Second Year		
Fall		
Select one of the following:		3
COMM 200	Civil Discourse: Theory & Practice	
PHIL 110	Ethics and Civil Discourse	
POLS 235	Civil Discourse and Democracy	
BIOL 210	Medical Microbiology with Lab	3
CHEM 201	Organic Chemistry I	3
CHEM 211	Organic Chemistry Laboratory I	1
BIOL 217	Anatomy and Physiology II with Lab	3
Creative & Aesthetic Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/)		3
Declare a Thematic Thread ²		
Hours		16
Spring		
BIOL 335	Cell Biology/Lab	3
CHEM 202	Organic Chemistry II	3
CHEM 212	Organic Chemistry Laboratory II	1
STAT 152	Elementary Statistics I	3
Humanities Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/)		3
Social Science Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/)		3
Hours		16
Third Year		
Fall		
MATH 225	Calculus I	4
CHEM 335	Biochemistry I	3
CHEM 336	Biochemistry Laboratory I	1
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/)		3

Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/)		3
Hours		14
Spring		
Select two of the following:		2
BIOL 314	Medical Parasitology with Lab	
BIOL 315	Medical Mycology/Lab	
BIOL 319	Medical Virology with a Lab	
BIOL 316	Medical Immunology with Lab	1
BIOL 330	Microbiology/Lab	3
PHYS 211	General Physics I with Lab	4
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/)		3
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/)		3
Hours		16
Fourth Year		
Fall		
NSM 390	School of Medical Technology	16
Hours		16
Spring		
NSM 390	School of Medical Technology	16
Hours		16
Total Hours**		123

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

² Work with your Academic Adviser to declare a Thematic Thread by the end of your fall semester in your second year. Click **here** to declare a thread.

* Students are encouraged to take INDS 101 as a Free Elective.

Major Code: 6108
Concentration Code: MEDT
Revised date: 07.15.2021

** This document is meant to serve as a guide. Some planners may show more than 120 credits because faculty have created flexibility in choosing courses. However, only 120 credits are required to obtain a degree. Please consult with your academic adviser and refer to your curriculum guide prior to registering for courses. This plan should be reviewed, and verified, by you and your academic adviser at least once each academic year.