BIOLOGY, BACHELOR OF SCIENCE (BS) - CONCENTRATION IN CELLULAR AND MOLECULAR BIOLOGY - CONCENTRATION IN BIOINFORMATICS

RECOMMENDED FOUR-YEAR PLAN

Course	Title	Hours
First Year		
Fall		
BIOL 113	Biology I: Foundations of Ecology, Evolution and Diversity with Lab	4
CHEM 107	General Chemistry I	3
CHEM 111	General Chemistry I Lab	1
ENGL 102	Critical Writing	3
ESAP 101	FYRST Seminar *	1
SUBJ 139	Foundations of Academic Discovery [1]	3
	Hours	**15**
Spring		
BIOL 114	Biology II: Foundations of Molecules, Genes and Cells with Lab	4
CHEM 108	General Chemistry II	3
CHEM 112	General Chemistry II Lab	1
ENGL 104	Critical Reading	3
Creative & Aesthetic Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
	Hours	**14**
Second Year		
Fall		
BIOL 250	Genetics with Lab	4
CHEM 201	Organic Chemistry I	3
CHEM 211	Organic Chemistry Laboratory I	1
CPSC 146	Programming Principles	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	
Humanities Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Declare a Thematic Thread [2]		
	Hours	**17**
Spring		
BIOL 325	Biostatistics and Experimental Design with Lab	3
Select one of the following:		3
CHEM 202 & CHEM 212	Organic Chemistry II and Organic Chemistry Laboratory II	
BIOL 300+	Upper Level BIOL Elective	
CPSC 246	Advanced Programming Principles	3
Social Science Inquiry (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 340	Vertebrate Anatomy with Lab	3
CHEM 335 or CHEM 301	Biochemistry I or Physical Chemistry 1	3
MATH 225	Calculus I	4
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
	Hours	**16**
Spring		
MATH 230	Calculus II	4
BIOL 330	Microbiology/Lab	3
BIOL 335	Cell Biology	3
BIOL 435	Cellular and Molecular Analysis Laboratory	3
CPSC 374	Algorithms and Data Structures	3
	Hours	**16**
Fourth Year		
Fall		
BIOL 300+	Upper Level BIOL Elective	3
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
BIOL 401	Ecology with Lab	3
PHYS 201 or PHYS 216	Elements of Physics I with Lab or University Physics 1 with Lab	4
Elective with DEI attribute		3
	Hours	**16**
Spring		
BIOL 450	Biology Internship	3
BIOL 490	Independent Study	3
BIOL 492	Biology Seminar	1
BIOL 300+	Upper Level BIOL Elective	3
PHYS 202 or PHYS 217	Elements of Physics II/ Lab or University Physics 2 with Lab	4
CPSC 480	Topics in Computer Science: Machine Learning	3
	Hours	**17**
	Total Hours**	**126**

[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.

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

Major/Concentration: 6108/CEMB/BIFF

Revised: 05.22.2023