BIOCHEMISTRY (B.S.)

Biochemistry (B.S.) majors complete a minimum of 120 credits to earn a bachelor's degree: 49–51 credits of core courses (https://catalog.salve.edu/undergraduate/curriculum-degree-programs/) and 80–81 credits (22–24 courses) in their major:

Code	Title	Credits
Required Courses (Chemistry)		
CHM-113	General Chemistry I	4
CHM-114	General Chemistry II	4
CHM-301	Analytical Chemistry	4
CHM-205	Organic Chemistry I	4
CHM-206	Organic Chemistry II	4
CHM-305	Physical Chemistry I	4
CHM-408	Inorganic Chemistry	4
CHM-410	Topics in Chemistry and Research Capstone	3
Undergraduate Research:		4
CHM-497	Undergraduate Research I	
or BIO-497	Undergraduate Research	
Required Courses (Biology)		
BIO-112	General Biology II	4
BIO-220	Cell Biology and Chemistry	4
BIO-253	Genetics: Classical, Molecular and Population	4
Required Courses (Biochemistry)		
BCH-403	Biochemistry	4
BCH-404	Advanced Biochemistry	4
Mathematics		
MTH-195	Calculus I	4
MTH-196	Calculus II	4
Physics		
PHY-205	Principles of Physics I	4
PHY-206	Principles of Physics II	4
Additional Required Courses		
Select two of the following:		6
CHM-425	Chemistry of Proteins	
CHM-430	Molecular Spectroscopy of Bio-Macromolecules	
CHM-435	Biophysical Chemistry	
CHM-440	Chemical and Enzyme Kinetics	
CHM-445	Medicinal Natural Products	
CHM-450	Total Synthesis of Natural Products	
CHM-455	Organic Chemistry of Drug Design and Drug Addition	
CHM-460	Bioinorganic Chemistry	
CHM-465	Metals in Cells	
Electives		
Select one elective (3-4 credits) from the following or one course from Additional Requirements:		3-4
CHM-306	Physical Chemistry II	
CHM-309	Instrumental Analysis	
CHM-407	Advanced Organic Chemistry	
CHM-498	Undergraduate Research II	
BCH-410	Pharmacology and Toxicology	
BIO-370	Molecular Biology	
BIO-399	Special Topics	
BIO-420	Immunology	
BIO-425	Neuroscience	
Total Credits		**80-81**

Degree Plan for Biochemistry (B.S.)

Course	Title	Credits
First Year		
Fall		
UNV-101 & FYT-101	University Seminar and First Year Studio	4
CHM-113	General Chemistry I	4
MTH-195	Calculus I	4
Core Course		3
	Credits	**15**
Spring		
Core Course		3
UNV-102	University Seminar II	3
BIO-112	General Biology II	4
CHM-114	General Chemistry II	4
MTH-196	Calculus II	4
	Credits	**18**
Second Year		
Fall		
RTS-225 or PHL-225	The Quest for the Ultimate: Dialogue with Global Religious Traditions [1] or Quest for the Good Life	3
BIO-220	Cell Biology and Chemistry	4
CHM-205	Organic Chemistry I	4
Core Course		3
Core Course		3
	Credits	**17**
Spring		
RTS-225 or PHL-225	The Quest for the Ultimate: Dialogue with Global Religious Traditions [1] or Quest for the Good Life	3
Core Course		3
Core Course		3
BIO-253	Genetics: Classical, Molecular and Population	4
CHM-206	Organic Chemistry II	4
	Credits	**17**
Third Year		
Fall		
CHM-301	Analytical Chemistry	4
BCH-403	Biochemistry	4
PHY-205	Principles of Physics I	4
CHM-497	Undergraduate Research I	1-4
Core Course		3
	Credits	**16-19**
Spring		
CHM-497	Undergraduate Research I	1-4
Core Course		3
Core Course		3
PHY-206	Principles of Physics II	4
BCH-404	Advanced Biochemistry	4
	Credits	**15-18**
Fourth Year		
Fall		
CHM-305	Physical Chemistry I	4
CHM-410	Topics in Chemistry and Research Capstone	3

Elective		3
Select one CHM Requirement:		3
CHM-425	Chemistry of Proteins	
CHM-430	Molecular Spectroscopy of Bio-Macromolecules	
CHM-435	Biophysical Chemistry	
CHM-440	Chemical and Enzyme Kinetics	
CHM-445	Medicinal Natural Products	
CHM-450	Total Synthesis of Natural Products	
CHM-455	Organic Chemistry of Drug Design and Drug Addition	
CHM-460	Bioinorganic Chemistry	
CHM-465	Metals in Cells	
CHM Elective		3
	Credits	**16**
Spring		
Elective		3
Select one CHM Requirement:		3
CHM-425	Chemistry of Proteins	
CHM-430	Molecular Spectroscopy of Bio-Macromolecules	
CHM-435	Biophysical Chemistry	
CHM-440	Chemical and Enzyme Kinetics	
CHM-445	Medicinal Natural Products	
CHM-450	Total Synthesis of Natural Products	
CHM-455	Organic Chemistry of Drug Design and Drug Addition	
CHM-460	Bioinorganic Chemistry	
CHM-465	Metals in Cells	
CHM Elective		3
CHM-408	Inorganic Chemistry	4
CHM Elective		4
	Credits	**17**
	Total Credits	**131-137**

[1] One each semester.