

BIOCHEMISTRY (B.S.)

Biochemistry (B.S.) majors complete a minimum of 120 credits to earn a bachelor's degree, including 41–44 credits of core courses (<https://catalog.salve.edu/undergraduate/curriculum-degree-programs/>) and 80–81 credits (21–24 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-113 | Biology I | 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 | | |
| FYT-101 | First Year Studio | 1 |
| UNV-101 | University Seminar | 3 |
| CHM-113 | General Chemistry I | 4 |
| MTH-195 | Calculus I | 4 |
| BIO-113 | Biology I | 4 |
| BIO-113L | Biology I Lab | 0 |
| BIO-113R | Biology I Recitation | 0 |
| Credits | | 16 |
| Spring | | |
| UNV-102 | University Seminar II | 3 |
| CHM-114 | General Chemistry II | 4 |
| MTH-196 | Calculus II | 4 |
| Core Course | | 3 |
| Core Course | | 3 |
| Credits | | 17 |
| Second Year | | |
| Fall | | |
| GST-098 | Sophomore Studio ¹ | 1 |
| RTS-225 | The Quest for the Ultimate: Dialogue with Global Religious Traditions ² | 3 |
| or PHL-225 | or Quest for the Good Life | |
| BIO-220 | Cell Biology and Chemistry | 4 |
| CHM-205 | Organic Chemistry I | 4 |
| Core Course | | 3 |
| Credits | | 15 |
| Spring | | |
| RTS-225 | The Quest for the Ultimate: Dialogue with Global Religious Traditions ² | 3 |
| or PHL-225 | or Quest for the Good Life | |
| BIO-253 | Genetics: Classical, Molecular and Population | 4 |
| CHM-206 | Organic Chemistry II | 4 |
| Core Course | | 3 |
| Core Course | | 3 |
| 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 | | |
| PHY-206 | Principles of Physics II | 4 |
| BCH-404 | Advanced Biochemistry | 4 |
| CHM-497 | Undergraduate Research I | 1-4 |
| Core Course | | 3 |
| Core Course | | 3 |
| Credits | | 15-18 |

2 Biochemistry (B.S.)

Fourth Year

Fall

| | | |
|-----------------------------|--|--------------|
| CHM-305 | Physical Chemistry I | 4 |
| CHM-410 | Topics in Chemistry and Research Capstone | 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 | | 3-4 |
| Credits | | 13-14 |

Spring

| | | |
|-----------------------------|--|----------------|
| CHM-408 | Inorganic Chemistry | 4 |
| 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 | |
| Elective | | 3 |
| Elective | | 3 |
| Credits | | 13 |
| Total Credits | | 122-129 |

¹ This weekend workshop may be taken in either the fall or spring semester of sophomore year.

² One each semester.