# MAJOR SEQUENCE AND DEGREE REQUIREMENTS

Major: **BS CHEMISTRY**
Option: **BIOCHEMISTRY**
Major Field Requirements: **49.0 credits**
Other Requirements: **32.0-33.0 credits**

When applicable, up to six of the **REQUIRED RELATED** courses may be credited toward the Liberal Arts Core subject to normal distribution rules.

## REQUIRED CHEMISTRY COURSES (47.0 credits)

| Course No. | Short Title | C.H. | Grade | Q.P. |
|---|---|---|---|---|
| CHEM 111 | Intro Chemistry I | 4.0 | ____ | ____ |
| CHEM 112 | Intro Chemistry II | 4.0 | ____ | ____ |
| CHEM 188 | Freshman Seminar | 1.0 | ____ | ____ |
| CHEM 231 | Organic Chem I | 4.0 | ____ | ____ |
| CHEM 232 | Organic Chem II | 4.0 | ____ | ____ |
| CHEM 251 | Inorganic Chem I | 3.0 | ____ | ____ |
| CHEM 265 | Quant Analysis | 4.0 | ____ | ____ |
| CHEM 326 | Biochemistry I | 4.0 | ____ | ____ |
| CHEM 327 | Biochemistry II | 4.0 | ____ | ____ |
| CHEM 328 | Analytical Bioch Lab | 1.0 | ____ | ____ |
| CHEM 341 | Physical Chem I | 4.0 | ____ | ____ |
| CHEM 342 | Physical Chem II | 4.0 | ____ | ____ |
| CHEM 465 | Analytical Chemistry | 4.0 | ____ | ____ |
| CHEM 487 | Seminar in Chem 1 | 0.5 | ____ | ____ |
| CHEM 488 | Seminar in Chem II | 0.5 | ____ | ____ |
| CHEM 498 | Independent Study | 1.0 | ____ | ____ |

## CHEMISTRY ELECTIVES (2.0 credits)

| | | | | |
|---|---|---|---|---|
| CHEM 300 | Cooperative Educ. | 3.0 | ____ | ____ |
| CHEM 400 | Cooperative Educ. | 3.0 | ____ | ____ |
| CHEM 324 | Plant Biochemistry | 4.0 | ____ | ____ |
| CHEM 375 | Environmental Chem | 4.0 | ____ | ____ |
| CHEM 381 | Polymer Chemistry I | 4.0 | ____ | ____ |
| CHEM 391 | Advanced Lab I | 1.0 | ____ | ____ |
| CHEM 392 | Advanced Lab II* | 1.0 | ____ | ____ |
| CHEM 435 | Advanc Organ Chem | 3.0 | ____ | ____ |
| CHEM 452 | Inorganic Chem II | 3.0 | ____ | ____ |
| CHEM 476 | Environ. Chem II | 4.0 | ____ | ____ |
| CHEM 482 | Polymer Chemistry II | 3.0 | ____ | ____ |
| CHEM 486 | Topics in Chemistry | 1.0-4.0 | ____ | ____ |
| CHEM 498 | Independent Study** | 1.0-3.0 | ____ | ____ |
| CHEM 489 | Dept. Honors | 1.0-3.0 | ____ | ____ |
| CHEM 499 | Dept. Honors | 1.0-3.0 | ____ | ____ |

*This elective must be completed to gain ACS certification in Biochemistry.
** Students seeking ACS certification must take a minimum of two credit hours of CHEM 498 under Chemistry Electives

## REQUIRED RELATED (32.0-33.0 credits)

### Mathematics (12.0 credits)

| Course No. | Short Title | C.H. | Grade | Q.P. |
|---|---|---|---|---|
| MATH 161 | Calculus I | 4.0 | ____ | ____ |
| MATH 211 | Calculus II | 4.0 | ____ | ____ |
| MATH 311 | Calculus III | 4.0 | ____ | ____ |

### Physics (10.0 credits)

| | | | | |
|---|---|---|---|---|
| PHYS 231 | Physics I with Calc | 5.0 | ____ | ____ |
| PHYS 232 | Physics II with Calc | 5.0 | ____ | ____ |

### Biology (10.0-11.0 credits)

| | | | | |
|---|---|---|---|---|
| Demonstrate | competency in Biology | 100* | | |
| BIOL 263 | Cell Biology | 4.0 | ____ | ____ |

Select two additional courses from the following:

| | | | | |
|---|---|---|---|---|
| BIOL 365 | Genetics | 3.0 | ____ | ____ |
| BIOL 461 | General Microbiol | 3.0 | ____ | ____ |
| BIOL 462 | Molecular Biology | 4.0 | ____ | ____ |

### General Electives (as necessary)

| | | | | |
|---|---|---|---|---|
| _____ | _____ | ____ | ____ | ____ |
| _____ | _____ | ____ | ____ | ____ |
| _____ | _____ | ____ | ____ | ____ |
| _____ | _____ | ____ | ____ | ____ |
| _____ | _____ | ____ | ____ | ____ |
| _____ | _____ | ____ | ____ | ____ |
| _____ | _____ | ____ | ____ | ____ |
| _____ | _____ | ____ | ____ | ____ |
| _____ | _____ | ____ | ____ | ____ |
| _____ | _____ | ____ | ____ | ____ |

*Competency may be demonstrated by one of the following:
1) a course grade of "A" or "B" in AP Biology
2) a score of 3 or better in the national AP exam
3) a successful score on the CLEP exam
4) a passing grade for General Biology (BIOL 100)