

University of the Incarnate Word®

## Bachelor of Science in **Biochemistry**

School of Mathematics, Science and Engineering

### **PROGRAM OVERVIEW**

The Bachelor of Science (BS) in Biochemistry degree at the School of Mathematics, Science and Engineering prepares students for careers of discovery in biotechnology, medical research, pharmaceutical chemistry or the health professions.

The B.S. in Biochemistry is a 120-hour degree program designed to give students a strong foundation in the chemical and biological sciences. Students can expect an exciting and challenging program with courses that span a broad array of study, including organic and physical chemistry, research methods, cell biology, enzymology and molecular biochemistry among others. As part of their studies, students will have the opportunity to work with high-tech instruments and in the Nuclear Magnetic Resonance (NMR) facility.

Biochemistry and chemistry majors are also encouraged to enrich their studies by participating in research under the direction of faculty as part of their courses, independently or via the Welch Summer Research Series.

They may also pursue advanced work as part of the Cardinal Chemistry Scholars, a National Science Foundation-funded scholarship program, that offers professional development and support for research endeavors.

### **ADMISSION REQUIREMENTS**

The requirements for admission to the B.S. in Biochemistry program are the same as the requirements for admission to the University of the Incarnate Word.

### **CONTACT**

#### **UIW Admissions**

(210) 829-6005

admission@uiwtx.edu

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WE BECOME  
THE WORD  
IN THE WORLD**

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**Biochemistry (B.S.)**

B.S. in **Biochemistry****FRESHMAN YEAR****Fall**

CHEM 1301: Chemical Principles I (3 hours)  
 CHEM 1101: Chemical Principles I Lab (1 hour)  
 BIOL 1402: Unity of Life and Lab (4 hours)  
 DWHP 1200: Dimension of Wellness (2 hours)  
 ENGL 1311: Composition I (3 hours)  
 HIST 13XX (3 hours)

**Total Hours: 16****Spring**

CHEM 1302: Chemical Principles II (3 hours)  
 CHEM 1102: Chemical Principles II Lab (1 hour)  
 BIOL 1403: Evolution, Ecology, and Biodiversity (4 hours)  
 MATH 1311: Pre-Calculus (3 hours)  
 ENGL 1312: Composition II (3 hours)  
 PEHP 11XX (1 hour)

**Total Hours: 15****SOPHOMORE YEAR****Fall**

CHEM 2311: Organic Chemistry I (3 hours)  
 CHEM 2111: Organic Chemistry I Lab (1 hour)  
 MATH 2312: Calculus I (3 hours)  
 BIOL 3311 or BIOL 3361 (3 hours)  
 PHIL 1381: Introduction to Philosophy (3 hours)  
 Modern Language I (3 hours)

**Total Hours: 16****Spring**

CHEM 2312: Organic Chemistry II (3 hours)  
 CHEM 2112: Organic Chemistry II Lab (1 hour)  
 MATH 2313: Calculus II (3 hours)  
 BIOL 3311 or BIOL 3361 or BIOL3202 (3 hours)  
 RELS 13XX (3 hours)  
 Modern Language II (3 hours)

**Total Hours: 16****JUNIOR YEAR****Fall**

CHEM 4351: Biochemistry I (3 hours)  
 CHEM 4251: Biochemistry I Lab (1 hour)  
 CHEM 3160: Introduction to Chemistry Research & Careers (1 hour)  
 BIOL 3471 (4 hours)  
 PHYS 2305: Physics I (3 hours)  
 PHYS 2105: Physics I Lab (1 hour)

**Total Hours: 14****Spring**

CHEM 3321: Quantitative Analysis (3 hours)  
 CHEM 3221: Quantitative Analysis Lab (2 hours)  
 CHEM 4352: Biochemistry II (3 hours)  
 CHEM 4252: Biochemistry II Lab (2 hours)  
 CHEM 4260: Advanced Chemistry Research (3 hours)  
 PHYS 2306: Physics II (3 hours)  
 PHYS 2106: Physics II Lab (1 hour)

**Total Hours: 16****SENIOR YEAR****Fall**

CHEM 4331: Physical Chemistry: Thermodynamics (3 hours)  
 CHEM 4231 Physical Chemistry: Thermodynamics Lab (2 hours)  
 Fine Arts (3 hours)  
 Social Science (3 hours)  
 RELS/PHIL 33XX (3 hours)

**Total Hours: 14****Spring**

Chemistry Elective (Upper Division) (4 hours)  
 Elective (Upper Division) (3 hours)  
 Elective (3 hours)  
 ENGL 2310: World Literature Studies (3 hours)

**Total Hours: 13**

120 hours needed to complete the B.S. in Biochemistry.