

University of the Incarnate Word[®]
Bachelor of Science in Chemistry

School of Mathematics, Science and Engineering

PROGRAM OVERVIEW

Both the Bachelor of Arts (B.A.) and the Bachelor of Science (B.S.) in Chemistry develop the next generation of chemists, biochemists and chemically literate citizens through an integrated program of teaching and research.

The Bachelor of Science (B.S.) in Chemistry degree is designed to give students a strong foundation in the chemical sciences providing for employment or future study in a variety of specialized areas. This degree is recommended for students pursuing a career in chemical research, industry or the health professions.

The department offers a B.A. in Chemistry and a B.S. in Chemistry. Both degree programs are 120 hours and are designed to offer a comprehensive chemistry education built on a strong foundation of chemistry principles and research. Students can expect rigorous programs with significant lab experiences and research. As part of their studies, students will have the opportunity to work with high-tech instruments and in the Nuclear Magnetic Resonance (NMR) facility.

Chemistry and biochemistry 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 Chemistry 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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OUR MISSION.**

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Chemistry (B.S.)

B.S. in Chemistry

FRESHMAN YEAR

Fall

CHEM 1301: Chemical Principles I (3 hours)
 CHEM 1101: Chemical Principles I Lab (1 hour)
 BIOL 1402: General Biology for Majors I (3 hours)
 BIOL 1402L: General Biology I for Majors Lab (1 hour)
 FYES 1211: First Year Experience Seminar (2 hours)
 ENGL 1311: Composition I* (3 hours)

Total Hours: 13

Spring

CHEM 1302: Chemical Principles II (3 hours)
 CHEM 1102: Chemical Principles II Lab (1 hour)
 ENGL 1312: English Composition II* (3 hours)
 MATH 1311: Pre-Calculus (3 hours)
 Elective (3 hours)
 PHIL 1381: Introduction to Philosophy* (3 hours)

Total Hours: 16

SOPHOMORE YEAR

Fall

CHEM 2311: Organic Chemistry I (3 hours)
 CHEM 2111: Organic Chemistry I Lab (1 hour)
 MATH 2312: Calculus I (3 hours)
 ENGL 2310: World Literature* (3 hours)
 Modern Language I* (3 hours)
 PEHP Activity Course* (1 hour)
 CHEM 3160: Intro to Research and Careers (1 hour)

Total Hours: 15

Spring

CHEM 2312: Organic Chemistry II (3 hours)
 CHEM 2112: Organic Chemistry II Lab (1 hour)
 MATH 2313: Calculus II (3 hours)
 RELS XXXX: Religion* (3 hours)
 Modern Language II* (3 hours)
 Fine Arts* (3 hours)

Total Hours: 16

Summer

Research Experience for Undergraduate

JUNIOR YEAR

Fall

CHEM 3321: Quantitative Analysis (3 hours)
 CHEM 3221: Quantitative Analysis Lab (2 hours)
 CHEM 3341: Inorganic Chemistry (3 hours)
 PHYS 2305: Physics I (3 hours)
 PHYS 2105: Physics I Lab (1 hour)
 Religion or Advanced Philosophy (3 hours)

Total Hours: 15

Spring

CHEM 3342: Coordination and Solid State Chem. (3 hours)
 CHEM 3142: Experimental Methods in Inorganic Chem. (1 hour)
 Social / Behavioral Science (3 hours)
 CHEM 4260: Advanced Chemical Research (2 hours)
 PHYS 2306: Physics II (3 hours)
 PHYS 2106: Physics II Lab (1 hour)

Elective (3 hours)

Total Hours: 16

Summer

Research Experience for Undergraduate

SENIOR YEAR

Fall

CHEM 4331: Physical Chemistry: Thermodynamics[§] (3 hours)
 CHEM 4231: Physical Chem. Lab: Thermodynamics[§] (2 hours)
 CHEM 4351: Biochemistry I (3 hours)
 CHEM 4251: Biochemistry I Lab (2 hours)
 Upper Division Elective (4 hours)

Total Hours: 14

Spring

CHEM 4322: Instrumental Analysis[#] (3 hours)
 CHEM 4222: Instrumental Analysis Lab (2 hours)
 CHEM 4432: Physical Chem.: Quantum Mech.[#] (3 hours)
 CHEM 4432L: Physical Chem.: Quantum Lab (1 hour)
 Chemistry Elective (3000-4000 if needed) (3 hours)
 History* (3 hours)

Total Hours: 15

*Core curriculum #Spring ONLY Course §Fall ONLY Course

A minimum of 120 hours are needed to complete the B.S. in Chemistry.

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