

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 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 the B.A. in Chemistry and the B.S. in Chemistry. Both the B.A. and the B.S. are 120-hour programs 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

This publication is available in alternate format by request. To request an alternate format, please contact the UIW Office of Admissions at (210) 829-6005. 5/2021 500

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IN THE WORLD**

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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: Unity of Life and Lab (4 hours)
 DWHP 1200: Dimensions 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 hours)
 ENGL 1312: Composition II (3 hours)
 MATH 1311: Pre-Calculus (3 hours)
 PEHP 11XX (1 hour)
 Elective (3 hours)

Total Hours: 14

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 Studies (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)
 RELS 13XX (3 hours)
 Modern Language II (3 hours)
 Fine Arts (3 hours)

Total Hours: 16

JUNIOR YEAR

Fall

CHEM 3321: Quantitative Analysis (3 hours)
 CHEM 3221: Quantitative Analysis Lab (2 hours)
 CHEM 3341: Inorganic Chemistry (3 hours)
 CHEM 3160: Introduction to Chemistry Research and
 Careers (1 hour)
 PHYS 2305: Physics I (3 hours)
 PHYS 2105: Physics I Lab (1 hour)
 RESL/PHIL 33XX (3 hours)

Total Hours: 16**Spring**

CHEM 3342: Coordination and Solid State Chemistry
 (3 hours)
 CHEM 3142: Experimental Methods of Inorganic
 Chemistry (1 hour)
 Elective (3 hours)
 Social Science (3 hours)
 CHEM 4260: Advanced Chemistry Research (2 hours)
 PHYS 2106: Physics II Lab (1 hour)
 PHYS 2306: Physics II (3 hours)

Total Hours: 16

SENIOR YEAR

Fall

CHEM 4431: Physical Chemistry: Thermodynamics (4
 hours)
 CHEM 4231: Physical Chemistry: Thermodynamics Lab
 (2 hours)
 CHEM 4351: Biochemistry I (3 hours)
 CHEM 4251: Biochemistry I Lab (2 hours)
 Elective (Upper Division) (3 hours)

Total Hours: 14**Spring**

Chemistry Elective (Upper Division) (3 or 4 hours)
 CHEM 4322: Instrumental Analysis (3 hours)
 CHEM 4222: Instrumental Analysis Lab (2 hours)
 CHEM 4332: Physical Chemistry: Quantum
 Mechanics (3 hours)
 CHEM 4132: Physical Chemistry: Quantum
 Mechanics Lab (1 hour)

Total Hours: 12

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