

University of Indianapolis – Shaheen College of Arts & Sciences

2025-2026 Curriculum Guide for Roche Academy Chemistry (CHEM) Majors

Bachelor of Science or Bachelor of Arts

Chemistry Core Courses

Freshman Year - Semester I

- **CHEM 150** General Chemistry I (3) and **CHEM 151** General Chemistry Lab I (1)

Freshman Year - Semester II

- **CHEM 160** General Chemistry II (3) and **CHEM 161** General Chemistry Lab II (1)
- **BIOL 165** Introduction to Cell Biology (4)
- **MATH 190** Calculus and Analytic Geometry I (4)

Sophomore Year - Semester I

- **CHEM 250** Organic Chemistry I (3) and **CHEM 251** Organic Chemistry Lab I (2)
- **MATH 191** Calculus and Analytic Geometry II (4)

Sophomore Year - Semester II

- **CHEM 260** Organic Chemistry II (3) and **CHEM 261** Organic Chemistry Lab II (2)
- **PHYS 153** General Physics I and Lab, Calculus Based (4) (recommended) **OR**
- **PHYS 150** General Physics I and Lab (4)
- Application to Roche Academy at the end of the sophomore year

Junior Year - Semester I

- **PHYS 163** General Physics II and Lab, Calculus Based (4) (recommended) **OR**
- **PHYS 160** General Physics II and Lab (4)
- **CHEM 310** Analytical Chemistry (5)

Summer after Junior Year: Internship at Roche Diagnostics

Upper Level Required Courses

- **CHEM 301** Chemistry Seminar (1) SII
- **CHEM 370** Physical Chemistry: Thermodynamics and Kinetics (3) **AND**
- **CHEM 375** Thermodynamics Laboratory (1) [capstone]
- **CHEM 380** Physical Chemistry: Quantum Mechanics and Spectroscopy (3) **AND**
- **CHEM 385** Quantum Laboratory (1)
- **CHEM 400** Instrumental Methods (4) SII

Required Support Courses

- **BIOL 220** General Microbiology (4)
- **BIOL 225** Introduction to Genetics (4)
- **BIOL 370** Immunology (3)
- **BIOL 310** Histology (4)
- **PHYS 230** Laboratory Instrumentation (3)

All CHEM courses require a grade of C or above

Required support courses require a grade of C- or above

Completion of the Chemistry Major – Roche Academy Concentration requires a minimum of 74 hours.

The above courses earn the student a Bachelor of Science in Chemistry.

NOTE: The Bachelor of Science and Bachelor of Arts Degrees require a minimum of 120 hours. See the Shaheen College of Arts & Sciences General Education Core Guide/Bachelor of Science and General Education Core Guide/Bachelor of Arts for additional course requirements. A student may complete more than one major as long as each major has at least 24 discrete hours. Please see the Academic Catalog for additional details.

REMEMBER: If you have any questions about the Chemistry major and its requirements, contact a faculty advisor from the Chemistry Department (Dr. David Styers-Barnett; 317-788-2061; Lilly Science Hall, Room 332D), or your academic advisor. Courses and requirements sometimes change, so keep in contact with your advisor.