

University of Indianapolis – Shaheen College of Arts & Sciences

2024-2025 Curriculum Guide for Chemistry Majors (CHEM) pursuing Pre-Medical Preparation (PMED)
Bachelor of Science (BS) or Bachelor of Arts (BA)

This is a suggested pattern for CHEM/PMED students. Consult the Curriculum Guide for Chemistry Majors and the Curriculum Guide for the Pre-Medical Program for specific information.

Freshman Year - Semester I

- **CHEM 150** General Chemistry I** (3) and CHEM 151 General Chemistry Lab I** (1)
- **BIOL 155** Introduction to the Diversity of Life* (4)

Freshman Year - Semester II

- **CHEM 160** General Chemistry II** (3) and CHEM 161 General Chemistry Lab II** (1)
- **MATH 190** Calculus and Analytic Geometry I* (4)
- **PHIL 270** Philosophy and Ethics of Science (3) [recommended]
- **BIOL 165** Introduction to Cell Biology* (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)
- **SOC 101** Principles of Sociology (3) or
- **SOC 103** Social Problems (3)

Sophomore Year - Semester II

- **CHEM 260** Organic Chemistry II** (3) and CHEM 261 Organic Chemistry Lab II** (2)
- **PHYS 153** General Physics I, Calculus Based* (4) †
- **Biomedical Sciences Elective (4)**
- **MATH 245** Statistics for the Sciences (4)

Junior Year - Semester I

- **CHEM 310** Analytical Chemistry** (5) SI
- **PHYS 163** General Physics II, Calculus Based* (4) †
- **CHEM 320** Biochemistry I** (3) (BA) OR BIOL320 (BS)
- **PSY 120** Introduction to Psychology (3)

Junior Year - Semester II

- **CHEM 301** Chemistry Seminar** (1)
- **CHEM 395** Biochemistry II** (3) (BA) or BIOL395 (BS)
- **Biomedical Sciences Elective (4)**

Junior Year

- **Biomedical Sciences Elective (4)**
- **CHEM 280/400** Intermediate Inorganic Chemistry or Instrumental Methods (BS) OR Chemistry Elective (3/4) (BA)
-

Senior Year - Semester I

- **CHEM 370** Physical Chemistry I** (3) SI

Senior Year - Semester II

- **CHEM 375** Physical Chemistry Laboratory** (2) [capstone]
- **CHEM 380** Physical Chemistry II** (3) (BS) **OR** Chemistry Elective (3/4) (BA)

†**PHYS 153** and **PHYS 163** are recommended. PHYS150 and PHYS160 also may be used to satisfy the major requirement. Chemistry Electives must total 7 credit hours for BA students.

Biomedical Sciences Electives

- **BIOL 220** General Microbiology (4)
- **BIOL 225** Introduction to Genetics (4) ^
- **BIOL 300** Internship Health/Life Science (1-4)
- **BIOL 305** Human Functional Anatomy (4)
- **BIOL 325** Advanced Genetics (4)

- **BIOL 330** Biomedical Physiology (4) ^
- **BIOL 335** Cell Biology (4) ^
- **BIOL 390** Molecular Biology (4)

Other Recommended Courses

- **PSY 230** Brain and Behavior (3)
- **PSY 315** Health Psychology (3)

^ Strongly recommended for MCAT preparation.

* Requires a grade of C- or above

**Requires a grade of C or above

The Chemistry major requires a minimum of 72 hours.

The above courses allow the student to have a major in Chemistry. Students are encouraged to use courses outside of Chemistry to build a minor or second major area. Consult curriculum guides for minors or majors of interest for details. The Bachelor of Arts Degree requires competency in a modern language through 201-level (additional 4 credits). See the General Education Core Guide requirements for details.

Consult the Pre-Medical Curriculum Guide for more information and other suggested courses.

NOTE: The Bachelors Degree requires a minimum of 120 hours.

See the General Education Core Guide 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/PMED 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.