

University of Indianapolis – Shaheen College of Arts & Sciences

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

This is a suggested pattern for CHEM/PDEN students. Consult the Curriculum Guide for Chemistry Majors and the Curriculum Guide for the Pre-Dental 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**
- **PSY 120** Introduction to Psychology (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) †
- **BIOL 225** Introduction to Genetics* (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 BIOL 320** (BS)
- **BIOL 220** General Microbiology (4)

Junior Year - Semester II

- **CHEM 301** Chemistry Seminar** (1) SII
- **CHEM 395** Biochemistry II** (3) (BA) **OR**
- **BIOL 395** Biochemistry II** (BS)
- **BIOL 330** Biomedical Physiology* (4)

Junior Year

- **CHEM 280/400** Intermediate Inorganic Chemistry or Instrumental Methods** (BS)
OR Chemistry Elective** (3/4) (BA)
- **BADM 110** Introduction to Business* (3) **OR**
- **BADM 120** Introduction to Business Finance* (3)

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)

* Requires a grade of C- or above

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†**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.

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-Dental 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/PDEN Major 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.