

B.S and B.A. Curriculum and Graduation Requirements

⌘ Overall Description

The department of chemistry has several fundamental responsibilities. They are (a) to train students to understand, to criticize meaningfully and to carry out scientific investigations, (b) to provide instruction and laboratory experience for those who wish to make chemistry their livelihood and/or pursue advanced study in chemistry, (c) to provide instruction and laboratory experience for those who wish to use chemistry as a background in an allied profession, and (d) to provide students not majoring in chemistry with up-to-date instruction in the principles of chemistry and methods of scientific inquiry.

⌘ Description of Concentrations

- **Standard (B.S.)**
The department offers a Bachelor of Science degree in the standard chemistry concentration and administers and contributes to interdisciplinary concentrations in biochemistry and environmental chemistry. Students interested in continuing their studies in chemistry toward advanced degrees may choose to complete a chemistry or biochemistry concentration accredited by the American Chemical Society for which they will receive a Certificate of Merit
- **Standard (B.A.)**
The department offers Bachelor of Arts degree in chemistry. Because student take fewer required courses in chemistry than with the B.S. degree, they can also combine this degree with courses outside the department to develop concentrations in many different areas, including health-related science, business, marketing, management and computational chemistry.
- **Chemistry/Education**
This program is offered in cooperation with the School of Education to prepare students for a career in teaching science, including chemistry in junior high and secondary schools.
- **Pre-engineering**
This program focuses on courses in chemical, materials, and petroleum engineering and prepares students for simultaneous completion of two degrees: a bachelor's degree in chemistry from DePaul University and an engineering degree from Illinois Institute of Technology.

⌘ Faculty and Department Highlights

Most of the faculty are active in research and several are prominent in their field of specialization, which include the physical and chemical properties of polymers, the molecular evolution of mitochondrial and nuclear DNA, atmospheric sources of pollutants in the Great Lakes, the study of solid waste chemistry, development of spectroscopic methods to characterize tropospheric particulate matter, and the study of carbon and rocks associated with impacts and extinctions in Earth's history

⌘ Accreditation

The chemistry department is accredited by the American Chemical Society.

⌘ **Number of Majors**

The department averages about 50 declared majors.

⌘ **Career Possibilities**

- Industry: Basic chemicals, consumer chemical, petroleum, petrochemicals, pharmaceuticals, polymers (plastics), paints, foods, food additives, cosmetics, pollution control, chemical process design
- Government: National laboratories, regulatory agencies, legislative staff, forensic laboratories
- Academe: University, college, high school
- Research: Hospitals, research laboratories, material testing laboratories, product testing laboratories, industrial hygiene laboratories
- Non-traditional careers: Science writing, patent law, forensic science, sales, market research and toxicology

⌘ **Graduate/Professional Schools Students Have Entered**

Schools include DePaul University Graduate School, Northwestern University Graduate and Medical Schools, Rush Medical School, University of Chicago Graduate and Medical Schools, Loyola Medical School, University of Wisconsin/Madison MD/PhD Program, Texas A & M, Case Western Reserve University, Boston University Dental School, University of North Carolina Veterinary School, University of Illinois/Champaign Urbana and Eastern Michigan University.

⌘ **Additional Comments**

All of our chemistry programs are strong and our graduates are successful in obtaining good positions in industry or gaining admission to Ph.D. programs at other Universities. The chemistry department at DePaul University is committed to helping students with special interests and career goal

Department of Chemistry Curriculum

⌘ **Liberal Studies Program**

First Year Core

- Focal Point
- Discover Chicago or Chicago Focal Point
- Composition I and II

Second Year Core

- Multiculturalism in the U.S.

Third Year Core

- Experiential Learning

Fourth Year Core

- Capstone Seminar

⌘ **Learning Domains**

- **Understanding the Past:** (2 courses) One course must be pre-1800 and one must be 1800-1945; courses also must come from two different categories
- **Religious Dimensions:** (2 courses) One course will be selected from the category of *Patterns and Problems* and the other from *Traditions in Context*.
- **Philosophical Inquiry:** (2 courses)

- **Self Society and the Modern World: (3 courses)** Courses from areas such as anthropology, economics, geography, political science, psychology, sociology and social sciences.
- **Arts & Literature: (3 courses)** Courses to be chosen from areas such as art, comparative literature, English, theatre and musicianship

⌘ **Core Requirements** (11 courses)

- General Chemistry I or II or General and Analytical Chemistry I, II and III
Mechanistic Organic Chemistry I, II and III or Organic Chemistry I, II and III
- Quantitative Analysis or Analytical Techniques
- Physical Chemistry I and II
- Instrumental Analysis
- University Physics I, II, and III
- Calculus for Mathematics and Science Majors I, II, and III

B.S. Concentration Requires Core Courses Plus

⌘ **Standard**

- Physical Chemistry III
- Intermediate Inorganic Chemistry
- Air Chemistry or Water Chemistry of Natural Systems or Solid Waste Chemistry
- Electives

⌘ **Biochemistry**

- Physical Chemistry III
- Biochemistry I, II, and III
- Experimental Biochemistry I
- Three Biology Courses
- Electives

⌘ **Environmental**

- Physical Chemistry III
- Air Chemistry
- Water Chemistry of Natural Systems
- Toxicological Chemical Hazards or Principals of Toxicology
- Solid Waste Chemistry
- One Geography Course
- One Computer Science Course
- Electives

⌘ **B.A. Concentration Requires Core Courses Plus**

- Demonstration of Competence in a Modern
- Language Electives depend upon Concentration

⌘ **Health-Related Sciences Concentration B.A.**

- Biochemistry I and II
- Experimental Biochemistry I
- General Biology I, II, and III
- Electives

⌘ **Business, Marketing, or Management Concentration B.A**

- Business Statistics or Elements of Statistics or Probability and Statistics I
- Principal of Accounting I and II
- Principal of Microeconomics

- Principal of Macroeconomics
- Legal and Ethical Aspects in the Business Environment
- Managerial Concepts and Practices I and II
- Electives

⌘ **Computational Chemistry Concentration B.A.**

- Computational Chemistry
- Discrete Mathematics I
- Introduction to Structured Programming using C++
- Principals of Computer Science I and II
- Design and Analysis of Algorithms
- Introduction to Operating Systems
- Electives