CHEMISTRY AND BIOCHEMISTRY

Faculty: Professors Andersh, Bosma, Campbell, Field (emeritus), Glover (emeritus), McQuade, Remsen (emeritus); Associate Professors Flint, Fry (chair), Schnupf (associate chair), Sengupta; Assistant Professors Bergman, Kregel; Lecturers Moroz (emeritus), Montag, Woods; Lecturer in Residence Wentzel; Instructor in Residence Bonich. Stockroom and Chemical Safety Coordinator Taylor; Electronics Technician Kahila.

Mission

The mission of the Mund-Lagowski Department of Chemistry and Biochemistry is to

- Engage students in robust scholarly education and experiential learning in chemistry and biochemistry
- Cultivate an environment that promotes student learning and engagement
- Empower students to excel in a broad variety of professions, such as industry, research, healthcare, education, government, and business
- Advance the fields of chemistry and biochemistry through ethical scientific research that emphasizes sustainability
- Serve the public interest through community engagement

Learning Outcomes

Successful students will be able to

- Describe and integrate the fundamental principles of chemistry and apply them to scientific problems
- Distinguish between ethical and unethical behaviors and implement safe laboratory practices
- Design and implement appropriate experimental methods to solve problems, employing the principles of green chemistry whenever possible
- Effectively collaborate to solve problems
- Identify and use scientific literature to interpret and solve scientific problems
- Analyze data, interpret results, and draw appropriate conclusions
- Effectively communicate science to diverse audiences

Undergraduate Programs of Study

All majors must complete the all-University degree requirements, the departmental common curriculum requirements, and additional courses required for their chosen major or concentration. Completion of any of the programs of study we offer fulfills the requirements for the Bachelor of Science degree. Students who complete specified University requirements may earn a Bachelor of Arts degree. Our curriculum has been approved by the American Chemical Society's Committee on Professional Training.

The Mund-Lagowski Department of Chemistry and Biochemistry offers six undergraduate majors:

- Biochemistry
- Chemistry
  - American Chemical Society-Certified Concentration
  - Chemical Engineering Concentration
  - Pre-Health Professions (medical, dental, optical, pharmacy, physician's assistant, veterinary) Concentration
  - High School (9-12) Education Concentration
  - Bachelor of Arts in Chemistry

We also offer a Minor in Chemistry

The Department of Chemistry and Biochemistry collaborates with the Department of Biology to offer three interdepartmental undergraduate majors:

- Medical Laboratory Science
  - Clinical Concentration
  - General Concentration
- Environmental Science - Chemistry Concentration

Internal Transfer Students: Before declaring a major or minor in the Department, internal transfer students must have achieved a 2.25 overall grade point average and earned a C or better in at least one Bradley CHM course in the departmental common curriculum.

Advanced Placement: Course credit for AP Chemistry exam scores will be awarded as follows:

- 5 earns credit for CHM 110 General Chemistry I, CHM 111 General Chemistry I Lab, and CHM 112 Engineering Chemistry
- 4 earns credit for CHM 110 General Chemistry I and CHM 111 General Chemistry I Lab
- 3 earns credit for CHM 100 Fundamentals of General Chemistry and CHM 101 Fundamentals of General Chemistry Lab

International Baccalaureate: Course credit for IB Chemistry exam scores will be awarded as follows:

- SL exam score of 4, 5, or 6 earns credit for CHM 100 Fundamentals of General Chemistry and CHM 101 Fundamentals of General Chemistry Lab
- SL exam score of 7 earns credit for CHM 110 General Chemistry I and CHM 111 General Chemistry I Lab
- HL exam score of 4 or 5 earns credit for CHM 100 Fundamentals of General Chemistry and CHM 101 Fundamentals of General Chemistry Lab
- HL exam score of 6 or 7 earns credit for CHM 110 General Chemistry I and CHM 111 General Chemistry I Lab General Chemistry I Lab

Combined Undergraduate/Graduate Degree (4+1) Programs

The Department offers two combined Bachelor's and Master's degree options, the B.S./M.S. Chemistry and the B.S./M.S. Biochemistry. These accelerated, research-intensive programs provide opportunities for students to earn both degrees in less time than traditionally required. Up to nine hours of graduate credit, taken prior to the completion of the bachelor's degree, can be counted toward both degrees.

Students are strongly encouraged to apply to the combined degree programs in their junior year, but applications from seniors who have significant research experience will also be considered. To be admitted, a student must have completed CHM 252 Organic Chemistry I and must have an overall GPA of 2.50, a GPA of 2.75 in chemistry courses, and a C or better in all chemistry, mathematics, biology, and physics courses.

For further information, please contact the Department's graduate coordinator.

Student Organizations

The Bradley Chem Club is a student affiliate chapter of the American Chemical Society that coordinates many educational, service, and social activities. Chem Club has been consistently ranked in the top tier of the approximately 900 student chapters nationwide. Students in the Chem Club Demo Crew perform chemical demonstrations at local schools, libraries, and museums.

Internship and Co-Op Programs

The Peoria area offers many opportunities for students to gain off-campus career-related work experiences with employers such as Caterpillar, Inc., University of Illinois College of Medicine, local hospitals, NCAUR (a USDA research facility), and other labs.

Study Abroad

Majors in the department are encouraged to participate in study abroad experiences coordinated by the University's Study Abroad Office. Majors who choose to study abroad generally do so during their sophomore or junior year.

- Biochemistry (BA or BS)
- Biochemistry (BS/MS 4+1 Program)
- Chemistry (BA)
- Chemistry (BS/MS 4+1 Program)
- Chemistry (Minor)
- Chemistry - American Chemical Society Certified Concentration (BS)
- Chemistry - Chemical Engineering Concentration (BS)
- Chemistry - High School Education (9-12) Concentration (BS)
- Chemistry - Pre-Health Professions Concentration (BS)
- Environmental Science Major - Chemistry Concentration (BA or BS)
- Medical Laboratory Science - Clinical Concentration (BA or BS)
- Medical Laboratory Science - General Concentration (BA or BS)