

CHEMISTRY



A FOUNDATION FOR SUCCESS

The Chemistry Department at the University of Southern Indiana prepares you to succeed in a variety of career paths. Chemistry and biochemistry programs are approved through the American Chemical Society. You'll learn to combine concepts revealed in the classroom with experiments performed in the laboratory, and discoveries made during exciting, independent research projects. Our small student-to-faculty ratio, professor-taught classes and diverse campus activities provide a stimulating learning environment.

Chemistry and biochemistry majors gain hands-on experience utilizing state-of-the-art equipment by collaborating with faculty on research projects and service activities. Professional development is supported throughout the program. You are encouraged to network early and often, to attend local, regional and national chemistry meetings and to present your work.

Upon graduation, you'll leave USI well prepared for what comes next, whether it's a career in industry, a slot in graduate or professional school or a secondary teaching position.



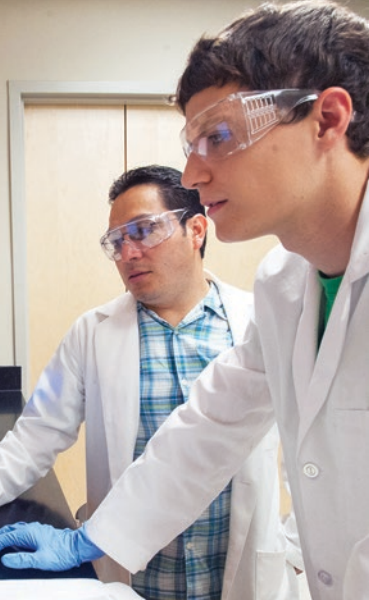
COMMITTED TO EDUCATION

The USI Chemistry Department is dedicated to teaching undergraduate students. Small classes allow faculty to provide important feedback and individualized support. Department faculty, as opposed to teaching assistants, teach all classes and laboratories. Enrollment is limited to 12-24 students for each laboratory section. This is essential since we deploy modern instrumentation in all our laboratory environments.

Faculty encourage you to seek their assistance and provide open-door access outside of regularly scheduled classes. They also serve as academic advisors to all chemistry and biochemistry majors beginning with the selection of your sophomore coursework.



USI.edu/chemistry



UNDERGRADUATE RESEARCH

Our faculty are teacher scholars who actively conduct research in their chosen field. As an undergraduate student, you can start your research journey as early as freshman year. Chemistry and biochemistry majors are required to complete a minimum of two terms of supervised research working with one or more faculty members. This refines your laboratory skills, fosters independent thinking and provides practical exposure to a chemistry subfield. Through research, you will produce original work which is often presented or published. You will have the opportunity to attend a variety of regional and national conferences and contribute as co-authors to peer-reviewed publications such as *Tetrahedron Letters*, *Organometallics*, *ACS Environmental Technology and Engineering*, and *Proceedings of the Indiana Academy of Sciences*.

Grants are available to fund your research through multiple sources. The Victor A. and Elizabeth A. Barnett Research Award is given annually on a competitive basis to Pott College students. The Endeavor! Award is also available to support the creative and research efforts of USI undergraduates. Both grants can be used to fund research or to travel to scientific meetings.



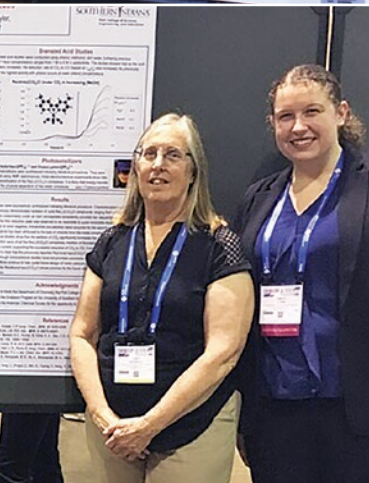
EQUIPMENT AND FACILITIES

The Chemistry Department is well equipped with modern instrumentation used in classes and research experiences.

Recent major equipment acquired includes:

- Gas Chromatograph/Mass Spectrometer
- 400 MHz Nuclear Magnetic Resonance Spectrometer
- Microwave Plasma Atomic Emission Spectrometer
- Bruker Diamond ATR Infra-Red Spectrometer

ACS STUDENT CLUB



As a chemistry or biochemistry major, you can participate in an active and award winning American Chemical Society (ACS) student club. ACS promotes chemistry to the University campus and the surrounding community. USI's chapter hosts webinars or guest lecturers throughout the school year and supports multiple department service activities including, but not limited to, chemistry merit badges, science fair judging, demonstrations and lessons for local children. The organization enables our students to meet other scientists and aspiring chemists in our community and nationwide. Chapter members often attend the national ACS conference where their activities receive significant recognition.



CHEMISTRY

WHAT YOU CAN DO

Degrees Offered

- Chemistry (ACS approved)
- Chemistry (non-ACS)
- Science Teaching (Chemistry)

A chemistry degree prepares majors for a wide variety of careers including:

- Research scientist
- Physician
- Pharmacist
- Forensic scientist
- Chemistry teacher (secondary)
- Polymer chemist
- Quality control analyst
- Medicinal chemist
- Chemical technician
- Chemist and material scientist
- Environmental scientist and specialist
- Flavor chemist



WHAT'S NEXT?

Graduate and Professional School

Graduate and professional schools that recent USI chemistry graduates have gone on to attend:

- Indiana University
- Purdue University
- Southern Illinois University
- Texas A & M
- University of Illinois
- University of Southern Mississippi
- Virginia Tech
- Indiana University School of Medicine





Industry

Recent USI chemistry graduates have found employment with companies such as:

- AstraZeneca
- SABIC Innovative Plastics
- Red Spot Paint and Varnish
- Mead Johnson
- Alcoa-Warrick Operations
- Argonne National Laboratory
- Boeing
- Bristol-Myers Squibb
- Crane Naval Surface Warfare Center
- DES Plastics
- DOW AgroSciences LLC
- enGene, Inc.
- Enviroplas
- KB Alloys
- Mallinckrodt Chemical Company
- Monsanto
- Solvay



As a chemistry major and pre-med student I felt very prepared for the Medical College Admission Test and my course load once I entered medical school. I had great professors and advisers who were always there to answer questions and provide support. I am so glad I chose to study chemistry at the University of Southern Indiana.

—Lexi Will '18





BIOCHEMISTRY

WHAT YOU CAN DO

Degrees Offered

- Biochemistry (ACS approved)
- Biochemistry (non-ACS)

Biochemistry is the study of the structure, composition and chemical reactions of substances in living systems. Biochemistry emerged as a separate discipline when scientists combined biology with organic, inorganic and physical chemistry and began to study how living things obtain energy from food, the chemical basis of heredity, the fundamental changes that occur in disease and related issues.

A biochemistry degree is good preparation for a wide variety of different careers including:

- Research scientist (Life scientist)
- Biochemist
- Physician
- Pharmaceutical scientist
- Clinical biochemist
- Quality control analyst
- Biotechnologist
- Toxicologist

WHAT'S NEXT:

Graduate and Professional School

Graduate and professional schools that recent USI biochemistry graduates have gone on to attend:

- Kansas City College of Osteopathic Medicine
- Lake Erie College of Osteopathic Medicine
- Marian University School of Osteopathic Medicine
- University of California- Los Angeles
- University of Kentucky College of Medicine
- University of Pennsylvania
- University of Southern Mississippi
- University of Tennessee
- Palmer College of Chiropractic
- Purdue University School of Pharmacy
- Southern Illinois University School of Medicine
- Indiana University School of Dentistry



Industry

Recent USI biochemistry graduates have found employment with companies such as:

- AstraZeneca
- Cook Pharma
- Eli Lilly and Company
- Mead Johnson
- Nestle Purina
- Pharmacia & Upjohn Co.
- Valero Renewable Fuels

Being a USI biochemistry major made my first two years at IUSM relatively easy: biochemistry concepts came natural to me, quantitative analysis concepts helped me visualize the physiology problems differently and the rigor required for organic chemistry prepared me for the rigor required for the medical courses. Reflecting back, the critical thinking skills I learned under the preceptorship of various USI professors during the chemistry seminars translated into the clinical reasoning skills for clinical problems during my clinical years.

I learned how to think!

—Nehal Ninad '16

[USI.edu/chemistry](https://www.usi.edu/chemistry)



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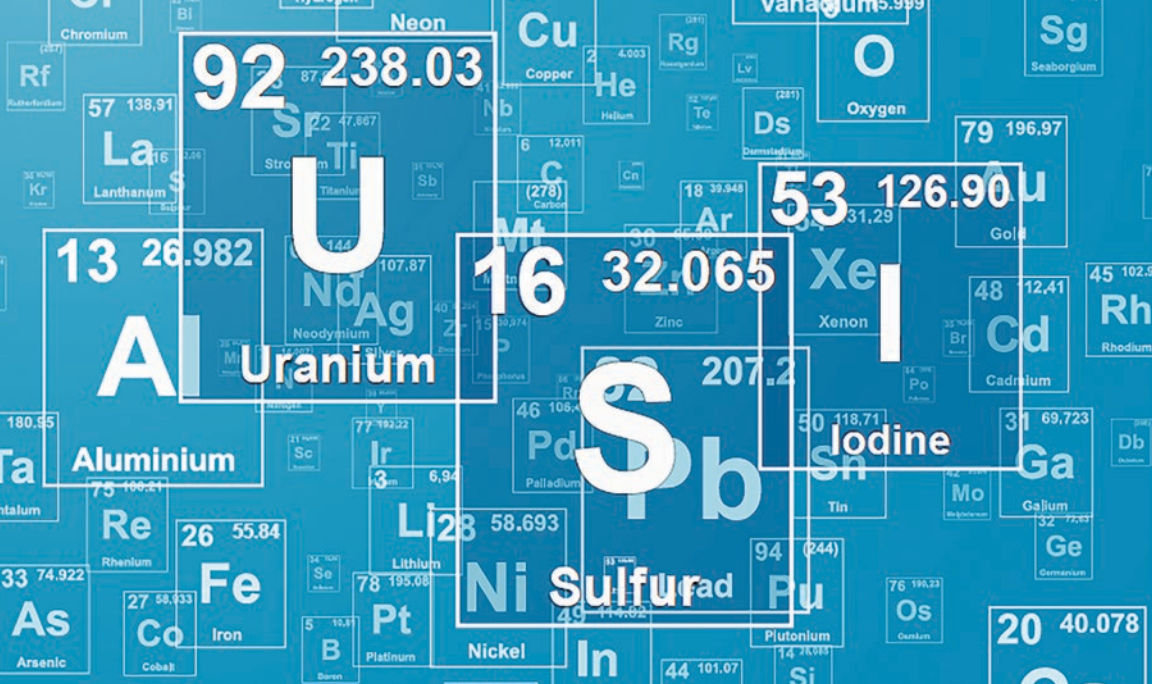


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{ CONTACT INFORMATION }

Undergraduate Admissions

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Chemistry

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**Pott College of Science,
Engineering, and Education**