

Chemistry



Chemistry is the science of change. By studying the fundamental properties of substances and the many transformations they undergo, the chemist finds solutions to scientific challenges and contributes to the development of new technologies. New medicines, renewable fuels, green manufacturing processes, innovative materials — all are the work of chemists.

Why Chemistry at Illinois Wesleyan?

- The Center for Natural Sciences features superior facilities, including a 400MHz NMR spectrometer, a scanning electron microscope and a fluorescence spectrometer.
- Students gain in-depth understanding in each of the major areas of chemistry (analytical, inorganic, organic, physical and biochemistry) and are encouraged to relate their study of chemistry to other disciplines including biology, physics, environmental studies, education and business.
- Provides quality, individualized instruction from our faculty — professors work closely with students inside and outside of class, in the laboratory, and in collaborative research.
- Offers coursework leading to certification by the American Chemical Society.
- Continues the University-wide emphasis on the liberal arts with which students come to understand — not just memorize — the concepts they need to know.
- Provides the necessary background for admission to graduate programs, schools of medicine, dentistry, veterinary medicine, environmental science, pharmacy, optometry or paramedical programs.

Learning from a Quality Faculty

The chemistry faculty are all professionally active and engaged in research with Illinois Wesleyan students.

- **Melinda Baur**, *Assistant Professor of Chemistry*
Ph.D. — University of North Carolina
Specializes in biochemistry
- **Brian Brennan**, *Associate Professor of Chemistry*
Ph.D. — University of Michigan
Specializes in bio-organic chemistry
- **Ram Mohan**, *Wendell and Lorretta Hess Professor of Chemistry*
Ph.D. — University of Maryland
Specializes in organic chemistry

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A Sampling of Courses Offered in Chemistry:

Instrumental Analysis
Biochemistry
Organic Chemistry
Inorganic Chemistry
Special Topics in Chemistry
Thermodynamics
Kinetics
Quantum Mechanics
Advanced Organic Chemistry
Advanced Inorganic Synthesis and Analysis
Internship in Chemistry
Quantitative Analysis

Recent May Term Courses Related to Chemistry:

Biochemistry of Food: Hawaii
Chemistry Research/Independent Study
Biochemistry of Fermentation: From Beverages to Biofuels
Medical Externship



“The size of the Illinois Wesleyan Chemistry Department is one of its big advantages. Because we are relatively small, our students have the

- **Manori Perera**, *Assistant Professor of Chemistry*
Ph.D. — University of Massachusetts Amherst
Specializes in analytical chemistry and astrochemistry
- **Tim Rettich**, *Professor of Chemistry*
Ph.D. — Case Western Reserve University
Specializes in physical chemistry
- **Rebecca Roesner**, *Chair and Professor of Chemistry*
Ph.D. — University of Kansas
Specializes in synthetic inorganic chemistry

Putting Learning into Practice

- Students gain frequent, hands-on experience with research-grade instrumentation including a JEOL 400 MHz nuclear magnetic resonance spectrometer, a Nicolet iS10 infrared spectrometer, a Horiba Scientific Fluoromax-4 spectrofluorometer, Shimadzu and Varian high performance liquid chromatography (HPLC) equipment, and a Hewlett-Packard model 6890 gas chromatograph with a mass selective detector (GC-MS).
- Students are encouraged to pursue collaborative research with faculty members during the academic year. Students routinely present their research at the annual John Wesley Powell Research Conference and at regional and national meetings of the American Chemical Society.
- Chemistry majors frequently participate in paid summer research experiences at IWU, at large university research centers such as Boston University and the University of Illinois, and in government laboratories such as Argonne National Laboratory or the National Center for Agricultural Utilization Research. Other students pursue paid summer internships at private corporations such as Pfizer or AbbVie or spend the summer exploring careers in medicine, pharmacy or forensic science.
- IWU science majors study abroad in locations such as Australia, New Zealand, the UK and Denmark. IWU chemistry majors have recently participated in summer research in Germany, Thailand and Argentina.
- Our chemistry alumni pursue a wide variety of rewarding careers including teaching (university and high school), research, medicine, law, pharmacy, forensic science and physical therapy.
- Recent Illinois Wesleyan chemistry graduates have pursued graduate study at major research universities, including the University of Michigan, University of Wisconsin-Madison, Johns Hopkins, University of Illinois, Boston College, California Institute of Technology and The Scripps Research Institute.

opportunity to work individually with faculty members, collaborating with them on projects in such areas as green chemical synthesis, electrochemical analysis of biochemical signal transduction, treatments for sickle cell anemia, environmental photochemistry and supramolecular chemistry. Because our students have the ability to talk in detail about the research they have done as undergraduates, they have a distinct edge when seeking admission to graduate schools or positions with industrial research firms.”

Dr. Becky Roesner

Professor of Chemistry and
Department Chair



ILLINOIS WESLEYAN
UNIVERSITY

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