The Illinois Tech Experience

Illinois Tech offers the advantages of a small, private college combined with a major research university.

The Illinois Tech education is distinguished by the integration of rigorous academic activities, professional perspectives, and applied experiences. It is an environment which is personalized, research-based, and internationally diverse.

Illinois Tech has close collaborations with other science and engineering departments and institutions in the Chicago area. In particular, the department has a strong collaboration with Argonne National Laboratory that provides access to an array of advanced research facilities and instrumentation.

To learn more and apply:

Department of Chemistry
Illinois Institute of Technology
Pritzker Science Center, Suite 136
3101 S. Dearborn Street
Chicago, IL 60616

Phone: 312.567.3278
Fax: 312.567.3289
Email: chemistry@iit.edu

science.iit.edu/chemistry

Chemistry Graduate Program at Illinois Tech
The Department of Chemistry at Illinois Institute of Technology (IIT)

With a legacy dating back to the 1890s, Illinois Tech chemistry offers small classes and a focused, intense learning experience that will help you advance to your next step, whether in academia or industry. By exposure to advanced knowledge in their discipline, our students learn to think creatively and critically, and to communicate effectively what they have learned. Illinois Tech chemistry has close collaborations with other science and engineering departments and institutions, including Fermi National Accelerator Laboratory and Argonne National Laboratory, as well as with industry.

Graduate Programs

We offer graduate programs leading to both the M.S. and Ph.D. degrees in chemistry. The programs span the traditional areas of research in physical, polymer, organic, inorganic, analytical, computational, and biological chemistry, but incorporate cross-disciplinary research projects to solve real-world problems in the areas of catalysis, pharmaceuticals, therapies, materials, and sustainable energy. Inspired by the need to address contemporary problems, the research work in the chemistry department converges into the following two areas:

Materials Chemistry: A number of Illinois Tech Chemistry faculty members are engaged in materials research with an emphasis on materials for energy applications, covering four critical areas—materials synthesis, characterization, evaluation, and computation and modeling.

Biological Chemistry: Exciting advances are being made through interdisciplinary research projects aimed at developing safe, effective and targeted drugs, biosensors, biocomposite materials and computational tools for early diagnosis and effective treatment of cancer and other diseases.

Degree Programs

Doctor of Philosophy in Chemistry (Ph.D.). The doctoral program is designed to inspire students to make original and significant contributions to the field of chemistry. The research degree culminates in a dissertation. Publication of portions of the work is expected. The research for the Ph.D. dissertation is carried out under the direct supervision of a faculty member, who serves as mentor and academic advisor for the student.

Master of Science in Chemistry (M.S.). The Master of Science in Chemistry is a program tailored to each student’s background and goals. Two options are available: a thesis option, and a non-thesis option. The thesis option culminates in a defense and written thesis based on original research. It trains students to acquire critical thinking, advanced lab skills, and problem-solving skills to prepare them for careers in a highly competitive chemical industry, or for further study at the doctoral level. The non-thesis program requires coursework only and is intended to prepare students not only for chemistry theory and lab techniques, but also professional development—giving students a greater sense of understanding for pursuing an enhanced career role in industry, education, or administration.

The Master of Science in Analytical Chemistry. A non-thesis master’s degree designed for professionals working in the chemical industry, education, or government. The curriculum provides students with a solid foundation in separation science, spectroscopy, physical characterization, and method development. The degree also offers courses in communication, industrial leadership, statistics, and business principles, which are essential for a scientific career in the business world. All classes may be completed online, providing flexibility to complete the master’s degree while working full-time. The comprehensive exam is given at the Illinois Tech campus.

The Master of Science in Materials Chemistry. Part-time, online program designed for scientists who wish to broaden their background in synthesis, characterization, and properties of materials and chemical systems. The program is structured to provide students with opportunities to develop a broad understanding of materials synthesis and characterization, learn to design and manage projects, and sharpen intellectual property management and communication skills. All classes may be completed online while the comprehensive exam requires travel to the department on the Illinois Tech main campus in Chicago.

Places Our Graduate Students Have Gone

After graduation, our graduate students have moved on to work at corporations such as AbbVie, Amgen, Baxter, GE, IBM, Intel, and United Space Alliance; others have gone to Argonne National Laboratory and into academia at top universities.

Chemistry Research Facilities Include:

- New Chemistry Computer Cluster for quantum chemistry calculations and molecular visualization
- Ultraviolet-visible spectrometer
- Atomic absorption spectrometer
- Gas-chromatography-mass spectrometer
- Nuclear magnetic resonance spectrometer
- Fluoride transform infrared spectrometer
- Atomic force microscope
- Fluorescence spectrometer
- Raman spectrometer
- Fluorescence microscope
- Thermogravimetric analyzer

The Department of Chemistry is home to a state-of-the-art computational facility that supports outstanding computational chemistry research and teaching activities at Illinois Tech.

The department is also home to the International Center for Sensor Science and Engineering (http://cos.iit.edu). ICSSE brings together researchers from academia, industry and research labs to provide an interdisciplinary environment for broader areas of sensor research.

Financial Support

Teaching and research assistantships and research fellowships are available to qualified students. Some well qualified students are offered graduate scholarships from the College of Science in the first year. Exceptionally well qualified applicants are eligible for additional special scholarships, fellowships or research assistantships. Illinois Tech Chemistry offers the prestigious Kilpatrick Fellowship to top chemistry graduate students, providing them with full tuition and a stipend.

Admission Requirements

All degree applicants must hold a bachelor’s degree from an accredited educational institution, with a minimum GPA of 3.0 on a 4.0 scale. Graduate Record Examination (GRE) is required for all Ph.D., M.S., and Master of Chemistry applicants. Applicants with a GPA less than 3.0 may be granted provisional admission.

- Minimum GRE scores: Ph.D.: 310 (quantitative + verbal) and 3.0 (analytical writing); M.S.: 300/2.5. Master of Chemistry: 285/2.5.
- Minimum TOEFL score: 80, or Minimum IELTS score: 5.5, for international applicants.

Visit the Graduate Admission website at admissions.iit.edu/graduate