Cutting-Edge Programs, Smart People, Cool Research

FIND IT ALL AT ILLINOIS TECH

BE IT ALL CHEMICAL ENGINEERING.

Illinois Tech’s accredited Department of Chemical and Biological Engineering—established in 1901—is one of the first chemical engineering programs in the country. It continues to be one of the most innovative programs on the leading edge of relevance to society and industry. For example, to respond to emerging industry changes, the department has expanded its curriculum to introduce biology modules in course and laboratory instruction.

Our professors are engaging in breakthrough research that is addressing some of the most serious problems society will be facing in the coming years. Projects include managing and purifying water, developing alternates to fossil fuels, designing strategies for environmental cleanup, and engineering technologies for improved drug delivery. Our students and faculty look at the world through a different lens—and are working on projects that will impact cities and communities across the globe.

Chemical Engineering (CHE) Specializations at Illinois Tech
Receive your bachelor’s degree while specializing in an area of greatest interest to you.

- Energy/Environment/Economics
- Environmental Engineering
- Polymer Science and Engineering
- Bioengineering
- Process Design and Operation

Research—Even As an Undergrad!

Our chemical engineering faculty conduct cutting-edge research with real-world applications—and there are countless opportunities for undergraduates to participate.

A team of researchers led by Professor of Chemical Engineering Ali Cinar, director of Illinois Tech’s Engineering Center for Diabetes Research and Education, is working to ease the burden of insulin management in diabetes patients. The team is developing a fault-tolerant, next-generation artificial pancreas system that will automatically monitor and infuse insulin according to metabolic changes that occur in response to food intake and various types of exercise, from solo fitness efforts to organized sports.

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I became interested in Professor Joseph Orgel’s collagen research due to a past knee injury. I was able to join his research lab last summer, where I worked on a project for him studying the collagen matrices. The impact of this research could lead to a better understanding of brain damage.

— Sarah Kirby
(Chemical Engineering/M.A.S. ’15), Tinley Park, Illinois

2’fer Advantage

Illinois Tech’s special degree programs allow you to receive both your bachelor’s and master’s degrees in as few as five years.

- B.S. Chemical Engineering/M.A.S. Biological Engineering
- B.S. Chemical Engineering/M.A.S. Biomedical Engineering
- B.S. Chemical Engineering/M.A.S. Chemical Engineering
- B.S. Chemical Engineering/M.A.S. Environmental Engineering
- B.S. Chemical Engineering/M.A.S. Food Process Engineering
Learn to Innovate in IPROs

In Illinois Tech’s signature Interprofessional Projects (IPRO) Program, you’ll work with students from various majors to solve real-world problems. Recent CHE-oriented IPROs include:

- Auto engines as combined heat+power systems
- Large-scale solar desalination
- Creating a viable tissue implant for human joints
- Developing a new strategy to detect smuggled nuclear material

DISTINCTIVE EDUCATION

At Armour College of Engineering, we integrate innovative thought, entrepreneurship, creativity, and design with engineering theory, research, and practice. You will get the chance to work on projects that are normally open only to graduate students—and have the opportunity to apply what you have learned in the classroom to some of the most complex problems facing society today.

We enhance our college’s already strong curriculum with lecture series, forums, interactive problem solving, professional site exploration, and team-intensive engineering projects focusing on four themes: water, health, energy, and security. As you take part in these theme opportunities, your activity is tracked in your own personal online portfolio for use as a supplement to your résumé or as additional material for your application to graduate school.

Having a complete understanding of the research and development process will also help ensure your success after you graduate. Our Armour R&D Program includes two programs: Program for Undergraduate Research Education (PURE), which focuses on research, and Mentored Innovation and Development (MIND), which focuses on developing research-based technology. Both programs aim to give undergraduate students a hands-on experience with research and development that is unique to Armour College.

All distinctive education programs are designed to give you a competitive edge and tangible experience in global issues. Be confident in the fact that when you graduate from Armour College of Engineering, you will already be working on relevant and impactful solutions.

My company designs systems for industrial chemical and wastewater recovery, cleaning up water in industrial applications for reuse and recovery. My job sends me all across the globe utilizing our technologies to start up and troubleshoot our equipment. I am enjoying seeing parts of the world I have always dreamed of visiting, like Austria and the Australian Outback! My job is full of new experiences, with different challenges to overcome and people to meet at every site I go to. It’s always exciting!

— Peter Zurowski
(Chemical Engineering/M.A.S. ’15), Western Springs, Illinois
Peter is currently a field service engineer with Veolia Water Technologies.

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