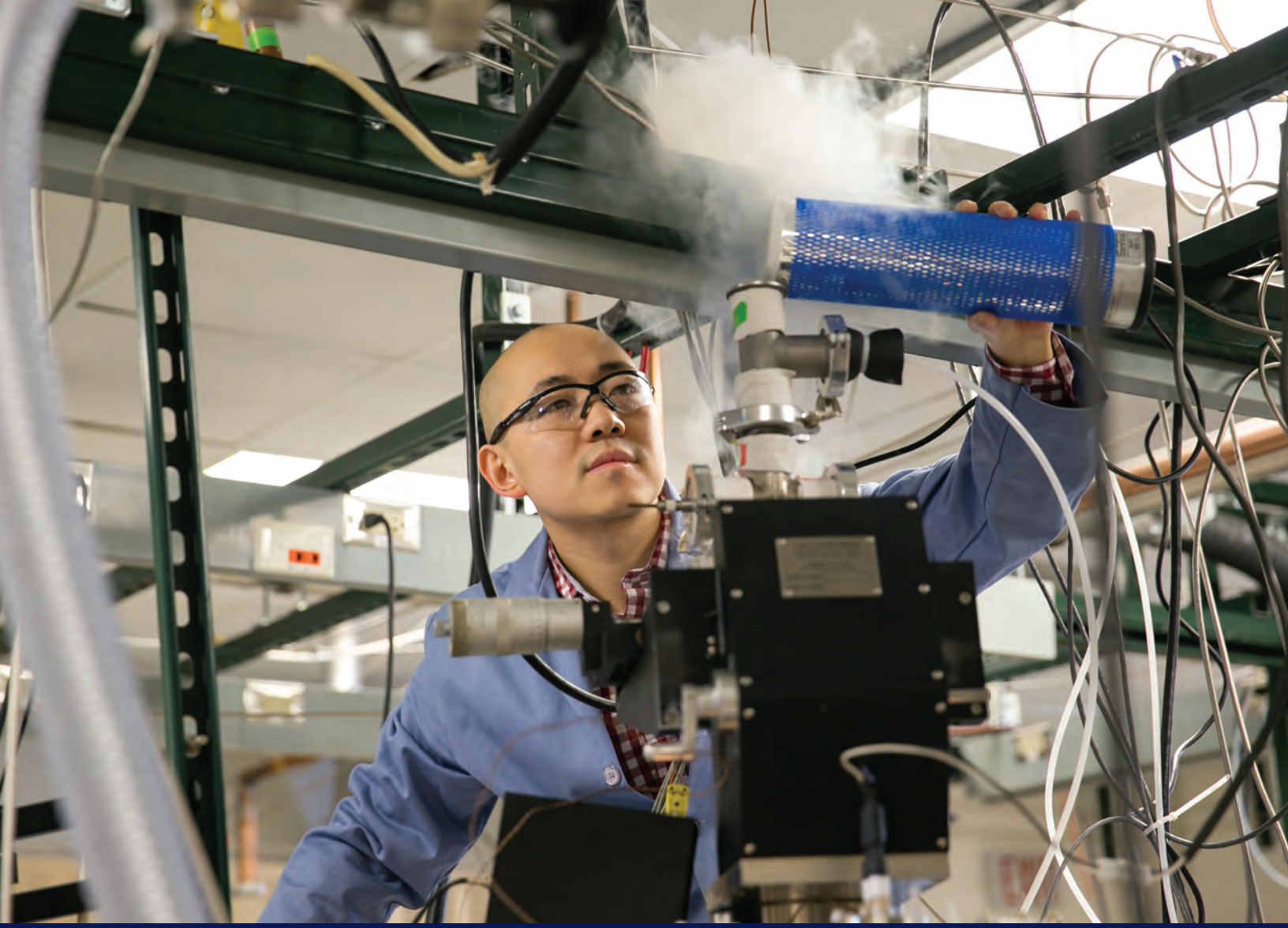
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

Choose Illinois

Ph.D. in Chemical and Biomolecular Engineering



The University of Illinois Urbana-Champaign
Department of Chemical & Biomolecular Engineering
is tackling the world's most daunting challenges
in health, energy and the environment.

INNOVATIVE, IMPACTFUL & INCLUSIVE

As a graduate student in the Department of Chemical & Biomolecular Engineering, you will be part of a creative and rigorous research enterprise. You could be involved in investigating implantable biomaterials to regenerate tendons, developing nanomaterials for energy and biotechnology, or working on greener alternatives for chemical processes, among many other exciting research projects across four research areas:

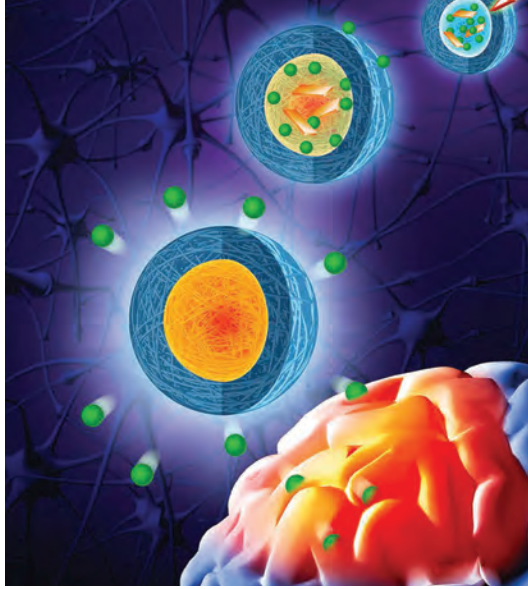
Biomolecular Engineering
Synthetic Biology and Biochemical Engineering, Regenerative Medicine, Cellular and Molecular Biophysics, Bioimaging

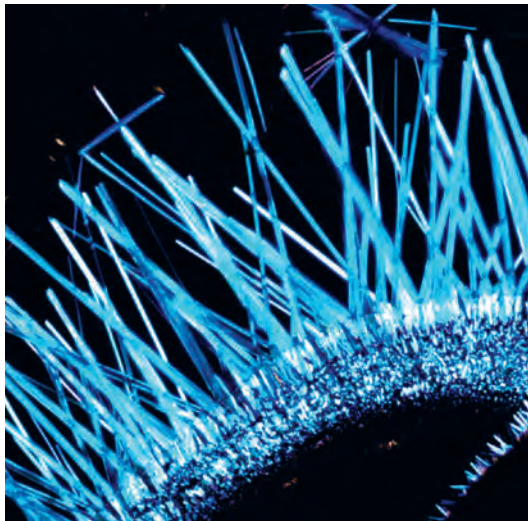
Energy and Sustainability
Catalytic Production of Fuels and Chemicals, Photo and Electrocatalysis, Environmental Remediation, Fuel Cells, CO_2 Utilization

Soft Matter and Advanced Materials
Functional Materials, Polymer Physics, Self-Assembly

Computational Research
Quantum Mechanics, Molecular Simulations, Coarse-Grained Simulations, Theoretical & Computational Methods

Visit our website to learn more! go.chbe.illinois.edu/PhD





STRONG RESEARCH FUNDING & PARTNERSHIPS

We're highly collaborative. Our faculty and students are involved in numerous cross-campus collaborations and work closely with industry partners, national labs and other universities.

MAJOR RESEARCH INITIATIVES

BioMADE
An $87 million grant from the U.S. Department of Defense to advance sustainable and reliable bioindustrial manufacturing technologies.

Center for Advanced Bioenergy and Bioproducts Innovation
CABBI is a $125 million Department of Energy center focused on developing sustainable, cost-effective biofuels and bioproducts. Illinois leads a team of 20 institutions and more than 200 scientists and engineers.

Dow University Partnership Initiative
This initiative investigates catalysis and reaction engineering, synthesis of electronic materials, and new methods to produce soft materials.

Energy & Biosciences Institute
The EBI is a $250 million collaboration between Illinois and the University of California, Berkeley, that is helping the world transition to a carbon neutral future.

Molecule Maker Lab Institute
The MMLI works toward Artificial Intelligence-enabled synthesis planning, catalyst development, molecule manufacturing and molecule discovery.

CAMPUS INSTITUTES & CENTERS

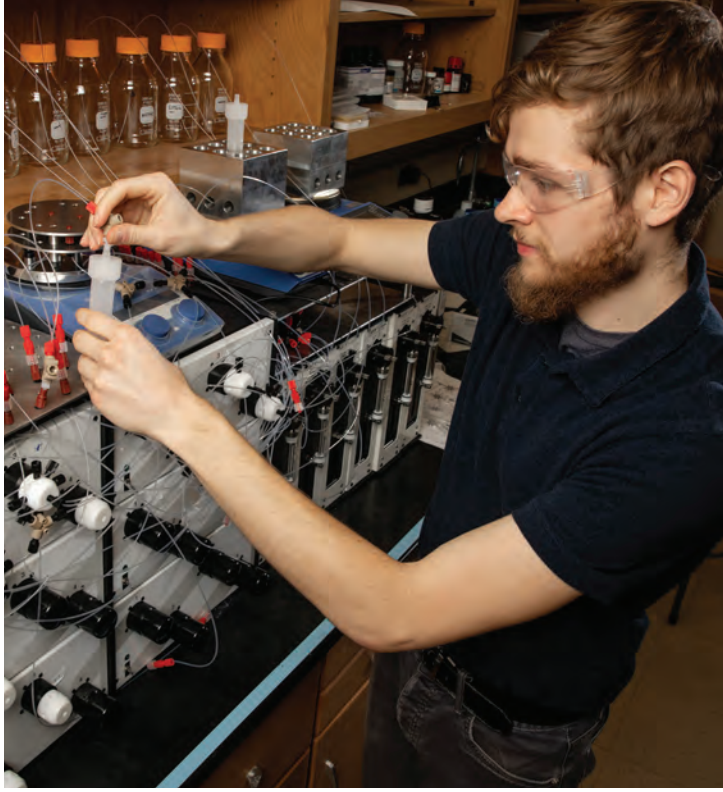
Beckman Institute for Advanced Science and Technology
We have a strong presence in the Molecular Design and Engineering group in the Beckman Institute, an interdisciplinary research center.

Cancer Center at Illinois
The CCIL unites our department with other world-class and interdiciplinary faculty who work together to uncover fundamental knowledge, innovate new technologies and enable cancer-free lives.

Carl R. Woese Institute for Genomic Biology
IGB is dedicated to transformative research and technology in life sciences. It is home to 11 research themes, including Biosystems Design and Regenerative Biology & Tissue Engineering.

National Center for Supercomputing Applications
NCSA is a hub of transdisciplinary research and digital scholarship, providing integrated cyberinfrastructure.

Other campus collaborations include the Materials Research Laboratory and Holonyak Micro & Nanotechnology Lab.



COMMITTED TO DIVERSITY AND A SUPPORTIVE ENVIRONMENT

We believe that diversity strengthens excellence and innovation. We know that a diverse workforce is more productive, creative and adept at solving complex challenges. We are actively recruiting and training future global leaders and recognize that we as a department should strive to reflect the world and communities that we serve. We are committed to creating and maintaining a safe and welcoming environment for students, faculty and staff to succeed. We're here to support you – from submitting your application, through graduation and beyond when you join 5,000+ alumni who still call our department home.

Campus Resources

Our campus is home to cultural houses and offices that offer a variety of programs and services for a diverse student body. The Sloan Scholars and SURGE fellowship programs provide support for graduate students from underrepresented communities. The McKinley Health Center and Counseling Center provide physical and mental health services. Disability Resources and Education Services offers academic support and living accommodations.

Student Organizations

Get involved in GradSWE (Society of Women Engineers), NOBCChE (National Organization for the Advancement of Black Chemists and Chemical Engineers), SHPE (Society of Hispanic Professional Engineers), or our Graduate Student Advisory Council (GSAC) that organizes events to strengthen our community and development opportunities, such as the annual Graduate Research Symposium.

Career Support

Access career resources through the School of Chemical Sciences Career Center, Graduate College and The Grainger College of Engineering.

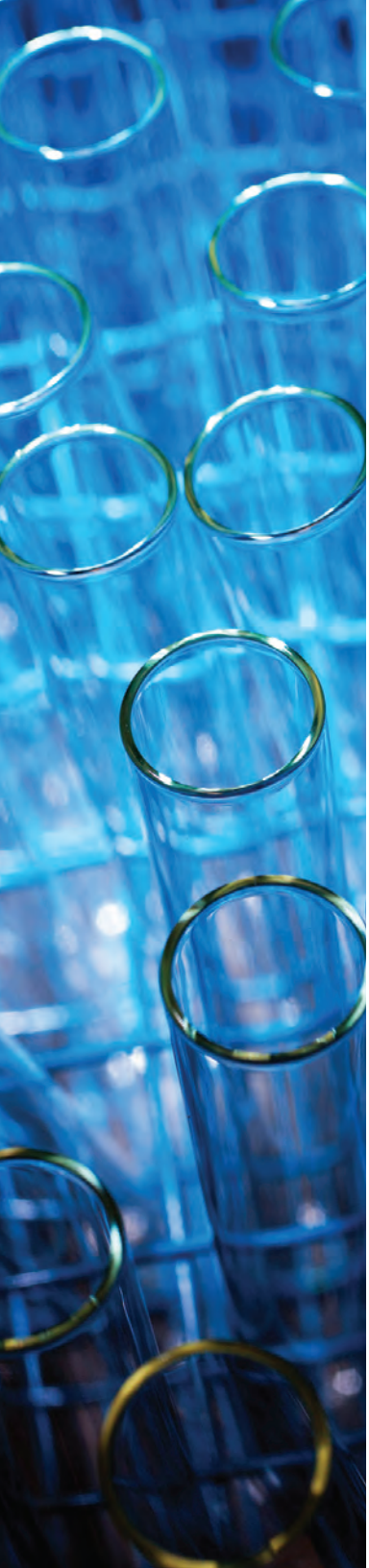
OUR COMMUNITY

The Department of Chemical & Biomolecular Engineering is part of the tradition of excellence at the University of Illinois Urbana-Champaign campus. Since its founding in 1867, the university has earned a reputation as a world-class leader in research, teaching and public engagement. The campus is in the twin cities of Champaign and Urbana (236,000 residents in the metro area) in East Central Illinois. We're connected via interstates and rail lines to Chicago, St. Louis and Indianapolis. Champaign-Urbana boasts a diverse and international population, vibrant arts community, sports and outdoor recreation opportunities, and a thriving tech and start-up scene—all with a very low cost of living. It's also home to the University of Illinois Research Park, where companies like Abbott, Corteva, AbbVie, Yahoo!, Caterpillar and Wolfram have established offices.

YOUR FUTURE

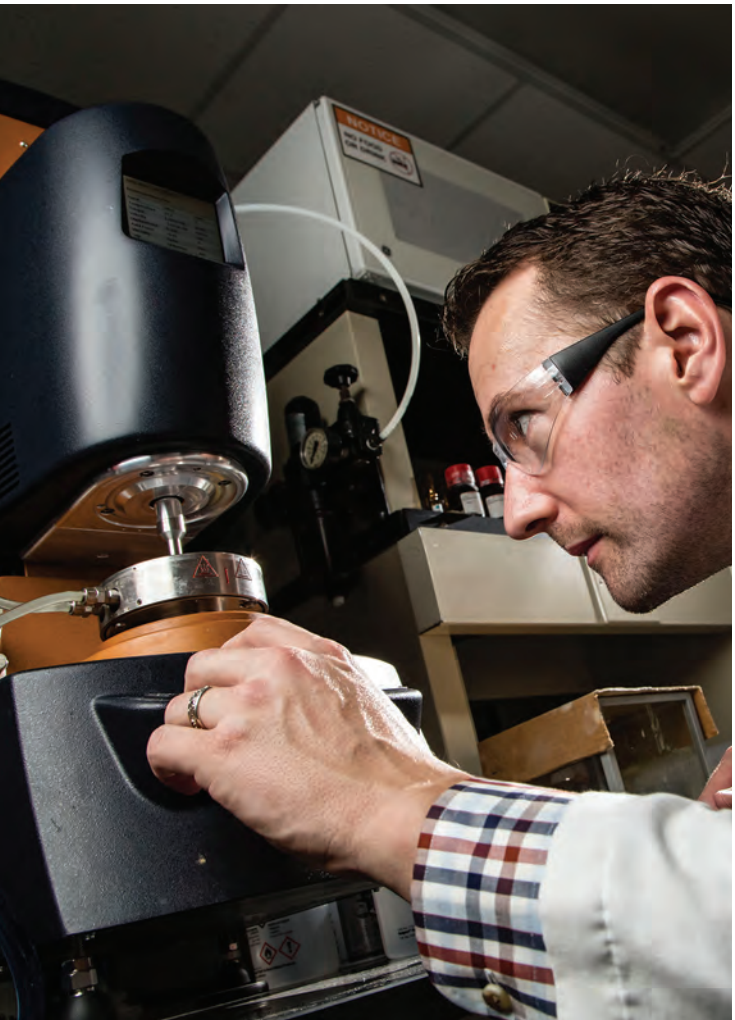
Whether you want to work in academia or industry, Illinois will provide you with the skills and training you need for your career path. Notable alumni have become successful leaders in academia and industry. Some have become faculty members and postdocs at MIT, Caltech, University of Michigan, UPenn, and many others. Others have risen to lead companies such as 3M, AbbVie, ADM, Intel, Eli Lilly, Shell, Phillips66, and many more.

Learn more! go.chbe.illinois.edu/StudentLife



BY THE NUMBERS

#12	Ranked graduate program in chemical engineering
151	ChBE Ph.D. students (2025)
495	ChBE undergraduate students (2025)
23	Faculty members in ChBE
15%	Ph.D. students from underrepresented backgrounds
35%	Ph.D. students are women
5	Average number of years to earn Ph.D.
$114,730	Average salary for ChBE Ph.D. graduates
$13M	Annual ChBE research expenditures
$755M	Annual campuswide research expenditures
1,036	Number of student organizations on campus
150+	Centers, Labs and Research Institutes on campus



JOIN US

Due to our field's interdisciplinary nature, our department is home to students and faculty with backgrounds in chemical and biomolecular engineering as well as physics, chemistry, mechanical engineering, materials science, etc. Many of our graduate students have undergraduate degrees outside of chemical engineering; both ChemE and non-ChemE majors are encouraged to apply. We look at applicants holistically.

Admission Requirements

- Must have baccalaureate degree from an accredited university and an exceptional academic record
- Three recommendation letters
- Personal statement
- TOEFL/IELTS scores (for international students)

**Note: GRE scores are not required.*

Financial Support

Our graduate students receive full financial support while making satisfactory progress toward their Ph.D. Support includes an annual stipend, in the form of research or teaching assistantships and/or fellowships, and a tuition and partial fee waiver. A wide variety of fellowships are available from the department, university, corporate partners and federal, state and private sources.

Master's Degree

Students are admitted directly into the Ph.D. program and have the option of obtaining either a course-based M.S. degree after fulfilling some course requirements or a thesis-based M.S. degree.

Learn more! go.chbe.illinois.edu/PhDApplyNow

Department of Chemical & Biomolecular Engineering

Graduate Program Office

99 Roger Adams Laboratory
600 S. Mathews Avenue
Urbana, IL 61801
(217) 333-3640
chbe.illinois.edu
chbe-gradrecruiting@illinois.edu

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN