CHEMICAL ENGINEERING, PHD

for the degree of Doctor of Philosophy in Chemical Engineering

Admission Requirements

Ideal candidates for advanced degrees in chemical engineering should have a background in chemistry and chemical engineering comparable to the training offered in the undergraduate chemical engineering curriculum at the University of Illinois Urbana-Champaign. Students whose prior training is deficient in one or more basic areas of chemistry or chemical engineering may be admitted with the understanding that extra coursework will be required to address their deficiencies. Graduate College admission requirements also apply.

All applicants whose native language is not English are required to submit TOEFL (http://www.toefl.org/) or International English Language Testing System (IELTS) (http://www.ielts.org/) scores as evidence of English proficiency. Minimum admission requirements (https://grad.illinois.edu/admissions/instructions/04c/) are set by the Graduate College.

Financial Aid

Students who remain in good standing and continue to make satisfactory academic progress are guaranteed a funded appointment that includes a full tuition waiver, a partial fee waiver, and a stipend for the duration of their studies in the program.

Graduate Teaching Experience

Experience in teaching is considered a vital part of the Chemical & Biomolecular Engineering PhD program. As part of their academic work, all students in the program are required to serve as a teaching assistant for at least three semesters.

In order to satisfy this requirement, all students whose native language is not English, regardless of US citizenship, must demonstrate spoken English language proficiency (http://www.grad.illinois.edu/admissions/taengprof.htm) by achieving a minimum score of 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS. For students who are unable to take the iBT or IELTS, a minimum score of 4CP is required on the EPI test (http://cte.illinois.edu/testing/oral_eng/epi_overview.html), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (https://citl.illinois.edu/citl-101/teaching-learning/grad-academy-for-college-teaching/) conducted prior to the start of the semester.

Department Research

Please see our website (http://catalog.illinois.edu/graduate/las/chemical-engineering-phd/chbe.illinois.edu/research/).

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For additional details and requirements refer to the department's degree programs information (http://chbe.illinois.edu/graduate-program/) and the Graduate College Handbook (http://www.grad.illinois.edu/gradhandbook/).

Chemical Engineering, PhD

Code	Title	Hours
Minimum four of graduate-level courses in chemical engineering		16
A coherent program of four additional graduate level courses		16
CHBE 599	Thesis Research (0 min applied toward degree)	0
Total Hours		**96**

Other Requirements

Requirement	Description
Other requirements may overlap	
Minimum Hours Overall Required Within the Unit:	16
Minimum 500-level Hours Required Overall:	20
Teaching experience is required	
Requirements include satisfactory performance on qualifying and certification examinations, and a thesis.	
Masters Degree Required for Admission to PhD?	No
Qualifying Exam Required	Yes, the qualifying examination is a written test usually taken during the first year of study.
Preliminary Exam Required	Yes, the preliminary examination is an individual oral examination taken after the student has satisfied the course requirements.
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

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Upon completion of the program, students will be able to:

1. Apply problem-solving skills in mathematics, science, and engineering to identify, formulate, and solve extensive research problems in the field of chemical and biomolecular engineering.
2. Clearly and persuasively communicate (orally and in writing) the motivation for a research project, relevant scientific and engineering concepts, approach, experimental data, data interpretation, conclusions drawn from the research, and the significance of the findings to both experts in the field of chemical and biomolecular engineering and non-expert scientists and engineers.
3. Develop and conduct appropriate experimentation or computer simulation that addresses a research question in the field of chemical and biomolecular engineering, analyze and interpret the resulting data, and use engineering judgment to draw conclusions.

4. Acquire and apply new knowledge as required to solve extensive problems relevant to the field of chemical and biomolecular engineering.

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Department of Chemical & Biomolecular Engineering

Department Head: Paul JA Kenis (kenis@illinois.edu)
Director of Graduate Studies: Mary L Kraft (mlkraft@illinois.edu)
Department Website (https://chbe.illinois.edu/)
Department Directory (https://chbe.illinois.edu/directory/)
Overview of Academics (https://chbe.illinois.edu/academics/graduate/)
Contact: C (cknight4@illinois.edu)onnie Knight (cknight4@illinois.edu)
99 Roger Adams Lab, 600 S Mathews Ave, Urbana, IL 61801
(217) 333-3640
chbe-gradrecruiting@illinois.edu

College of Liberal Arts & Sciences

College of Liberal Arts & Sciences website (https://las.illinois.edu/)

Grainger College of Engineering

Grainger College of Engineering website (https://grainger.illinois.edu/)

Admissions

Chemical & Biomolecular Engineering Overview of Admissions (https://chbe.illinois.edu/admissions/)
Graduate College Admissions & Requirements (https://grad.illinois.edu/admissions/apply/)