SYSTEMS & ENTREPRENEURIAL ENGINEERING, PHD

for the degree of Doctor of Philosophy in Systems & Entrepreneurial Engineering

The Department of Industrial & Enterprise Systems Engineering offers both a traditional doctoral program and a direct doctoral program. A Master's degree is not required for admission to the direct doctoral program. Students in both programs are required to have a research advisor and applicants are encouraged to contact department faculty (https://ise.illinois.edu/directory/faculty.html) in their areas of interest to inquire about possible research and funding opportunities.

Admission Requirements

Applicants who have completed degree requirements in an accredited engineering program or its equivalent are eligible to apply for admission. A minimum grade point average of 3.25 (A = 4.00) for the last two years of undergraduate study is required.

Scores on the Graduate Record Examination (GRE) (http://www.ets.org/) general test are recommended of all applicants. Based upon the previous preparation of the student for either program, prerequisite courses may be specified by the advisor, but the credit may not be applied toward a degree.

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

Qualified students may compete for financial assistance in the form of teaching/graduate/research assistantships, fellowships, grants, and tuition waiver scholarships. Under certain conditions, fellowships may be augmented by part-time assistantships. Starting in Fall 2020, Grainger Engineering PhD students in their first five years of enrollment who meet the minimum eligibility requirements (https://grainger.illinois.edu/academics/graduate/phd-funding-guarantee/) are guaranteed a funded appointment for fall and spring that includes a full tuition waiver, a partial fee waiver, and a stipend.

All applicants, regardless of US citizenship, whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency (http://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 English Proficiency Interview (http://cte.illinois.edu/testing/oral_eng/epi_overview.html) (EPI), 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

Faculty research by ISE faculty is pursued in the following fields:

- computer-aided design
- data analytics
- optimization
- design systems
- manufacturing systems
- nondestructive testing and evaluation
- system dynamics and simulation
- control
- robotics
- real-time decision making
- reliability engineering
- financial engineering
- operations research
- management science
- biomechanics
- human factors
- supply chain logistics

Members of the ISE Department have access to a wide range of excellent research facilities. These laboratories support a wide range of activity and are described at the department's research laboratories website.

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For additional details and requirements refer to the department's Graduate Programs website (http://ise.illinois.edu/graduate/) and the Graduate College Handbook (http://grad.illinois.edu/gradhandbook/).

Entering with approved M.S./M.A. degree

Code	Title	Hours
SE 599	Thesis Research A maximum of 32 credit hours of SE 599 (or other approved thesis) may be counted toward the degree	32
SE 590	Seminar (registration for 0 hours every term while in residence)	0
400/500-level SE Courses		20
STEM courses from outside of major STEM courses must be approved and be from a College of Engineering department, including ABE and CHBE (or other approved department). Excludes TE and ENG courses.		12
Total Hours		**64**

Other Requirements and Conditions (may overlap)

Requirement	Description
Minimum GPA:	3.25
Minimum 500-level credit hours applied toward the degree:	16
Independent study/project design do not count toward 500-level requirement.	

A maximum of 8 credit hours of SE 594 (or other approved project design/independent study) may be counted toward the degree.	
Ph.D. exam and dissertation requirements:	
Qualifying exam	
Preliminary exam	
Final exam or dissertation defense	
Dissertation deposit	

Entering with approved B.S./B.A. degree

Code	Title	Hours
SE 599	Thesis Research A maximum of 40 credit hours of SE 599 (or other approved thesis) may be counted toward the degree	40
SE 590	Seminar (registration for 0 hours every term while in residence)	0
400/500-level SE Courses		32
STEM courses from outside of major STEM courses must be approved and be from a College of Engineering department, including ABE and CHBE (or other approved department). Excludes TE and ENG courses.		12
Electives in consultation with advisor		12
Total Hours		**96**

Other Requirements and Conditions (may overlap)

Requirement	Description
Minimum GPA:	3.25
Minimum 500-level credit hours applied toward the degree:	28
Independent study/project design do not count toward 500-level requirement.	
A maximum of 8 credit hours of SE 594 (or other approved project design/independent study) may be counted toward the degree.	
Ph.D. exam and dissertation requirements:	
Qualifying exam	
Preliminary exam	
Final exam or dissertation defense	
Dissertation deposit	

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Department of Industrial & Enterprise Systems Engineering

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Department of Industrial & Enterprise Systems Engineering faculty (https://ise.illinois.edu/directory/faculty.html)
Program website (https://ise.illinois.edu/graduate/degrees-and-programs/phd-systems-entrepreneurial-engineering/)
117 Transportation Building, 104 S Mathews Ave, Urbana, IL 61801
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Grainger College of Engineering

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

Admissions

Department of Industrial & Enterprise Systems Engineering Overview of Admissions & Requirements (https://ise.illinois.edu/graduate/admissions/)
Graduate College Admissions & Requirements (https://grad.illinois.edu/admissions/apply/)