SYSTEMS & ENTREPRENEURIAL ENGINEERING, MS

For the degree of Master of Science in Systems & Entrepreneurial Engineering

The Department of Industrial & Enterprise Systems Engineering offers both an MS with thesis and an MS non-thesis program. Students in the MS with thesis program 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.

Opportunity exists for specializing in computational science and engineering via the Computational Science & Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/) optional graduate concentration.

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/gre) 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.

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
- reliability engineering
- financial engineering
- operations research
- management science
- biometrics
- 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 (https://ise.illinois.edu/research/labs/).

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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/).

Thesis Option

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>SE 599</td>
<td>Thesis Research</td>
<td>A maximum of 8 credit hours of SE 599 (or other approved thesis) may be counted toward the degree</td>
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<tr>
<td>SE 590</td>
<td>Seminar (registration for 0 hours every term while in residence)</td>
<td>0</td>
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<tr>
<td>500-level SE Courses</td>
<td>STEM course must be approved and be from a College of Engineering department, including ABE and CHBE (or other approved department). Excludes TE and ENG courses.</td>
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<tr>
<td>Electives in consultation with advisor</td>
<td>A maximum of 4 hours of SE 594 (or other approved independent study/project design) may be applied toward the elective coursework requirement.</td>
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</table>

Total Hours: 32

Other Requirements and Conditions (may overlap)

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<tr>
<th>Requirement</th>
<th>Description</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Minimum 500-level credit hours applied toward the degree:</td>
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<td>12</td>
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<tr>
<td>Minimum program GPA:</td>
<td>3.0</td>
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Non-Thesis Option

<table>
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<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>SE 594</td>
<td>Project Design</td>
<td>4</td>
</tr>
<tr>
<td>SE 590</td>
<td>Seminar (registration for 0 hours every term while in residence)</td>
<td>0</td>
</tr>
<tr>
<td>500-level SE Courses</td>
<td>STEM course must be approved and be from a College of Engineering department, including ABE and CHBE (or other approved department). Excludes TE and ENG courses.</td>
<td>4</td>
</tr>
<tr>
<td>Electives in consultation with advisor</td>
<td>A maximum of 4 additional credit hours of SE 594 (or other approved project design/independent study) may be counted toward the elective coursework requirement.</td>
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Total Hours: 36
### Other Requirements and Conditions (may overlap)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Minimum 500-level credit hours applied toward the degree:</td>
<td>12</td>
</tr>
<tr>
<td>Minimum program GPA:</td>
<td>3.0</td>
</tr>
</tbody>
</table>

*For the degree of Master of Science in Systems & Entrepreneurial Engineering*

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**Department of Industrial & Enterprise Systems Engineering**

Department Head: Jeff Shamma (jshamma@illinois.edu)

Associate Head of Graduate Studies: Ramavarapu S Sreenivas (rsree@illinois.edu)

Department of Industrial & Enterprise Systems Engineering website (https://ise.illinois.edu/)

Department of Industrial & Enterprise Systems Engineering faculty (https://ise.illinois.edu/directory/faculty.html)

Program website (https://ise.illinois.edu/graduate/degrees-and-programs/master-science-systems-entrepreneurial-engineering/)

117 Transportation Building, 104 S Mathews Ave, Urbana, IL 61801

(217) 333-2731

Department of Industrial & Enterprise Systems Engineering email (ise-grad@illinois.edu)

**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/)

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*Information listed in this catalog is current as of 12/2023*