MATERIALS SCIENCE & ENGINEERING, MS

for the degree of Master of Science in Materials Science & Engineering

department head: Nancy Sottos (n-sottos@illinois.edu)
director of graduate studies: Moonsub Shim (mshim@illinois.edu)
overview of admissions & requirements: https://matse.illinois.edu/admissions/graduate-admissions (https://matse.illinois.edu/admissions/graduate-admissions/)
overview of grad college admissions & requirements: https://grad.illinois.edu/admissions/apply (https://grad.illinois.edu/admissions/apply/)
department website: https://matse.illinois.edu
program website: https://matse.illinois.edu/academics/graduate-programs (https://matse.illinois.edu/academics/graduate-programs/)
department faculty: https://matse.illinois.edu/people/faculty/department-faculty (https://matse.illinois.edu/people/faculty/department-faculty/)
college website: https://grainger.illinois.edu/
contact: Ashley Phillips Smith (aphilli5@illinois.edu)
address: 201 Materials Science and Engineering Bldg, 1304 W Green St, Urbana, IL 61801
phone: (217) 333-1441
email: matse@illinois.edu

Opportunity exists for specializing in i) biomechanics via the Biomechanics (http://catalog.illinois.edu/graduate/engineering/concentration/biomechanics/) optional graduate concentration, ii) cancer nanotechnology via the Cancer Nanotechnology (http://catalog.illinois.edu/graduate/engineering/concentration/cancer-nanotechnology/) optional graduate concentration, and iii) computational science and engineering via the Computational Science & Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/) optional graduate concentration.

Admission Requirements

Students with bachelor's or master's degrees in the natural sciences or engineering will be considered for admission if they have a grade point average of at least 3.00 (A = 4.00) for the last two years of undergraduate study. The general test of the Graduate Record Examination (GRE) (http://www.ets.org/) is required. Admission is possible for the spring semester under special circumstances, but most admissions are for the fall semester. Full details of admission requirements are on the department's graduate admissions Web site (https://matse.illinois.edu/admissions/graduate-admissions/).

All applicants whose native language is not English are required to submit the results of the TOEFL (http://www.toefl.org/) or International English Language Testing System (IELTS) (http://www.ielts.org/) as evidence of meeting the English proficiency requirements for full admission status (http://grad.illinois.edu/admissions/instructions/04c/). Under certain circumstances applicants may be exempt (https://grad.illinois.edu/admissions/instructions/04c/) from the TOELF/IELTS requirement.

Financial Aid

Except for special circumstances, MatSE does not provide financial aid to students in the MS program. When available, financial aid is in the form of teaching 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 TOEFL iBT or IELTS, a minimum score of 4CP, 5 or 6 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

The backgrounds of faculty members vary widely within the broad areas of Nanoscale Science and Technology, Materials for Energy and the Environment, Materials for Medicine, and Mechanical Properties and Materials for Extreme Conditions. In addition, research collaborations with other faculty outside the department are frequent. For a detailed list of faculty research interests and publications, view the MatSE department's faculty biographies. (https://matse.illinois.edu/directory/faculty/)

The MatSE department has an outstanding array of facilities available for materials research. These facilities, in addition to laboratories in the department's buildings, include, among others, the Materials Research Laboratory, Center for Microanalysis of Materials, Beckman Institute for Advanced Science and Technology, and Micro and Nanotechnology Laboratory. The National Center for Supercomputing Applications and the MRL

Center for Computation are readily available. Information about these facilities may be found at the MatSE department's facilities information Web site (http://www.matse.illinois.edu/research/facilities.html).

Other Graduate Programs in the Department of Materials Science & Engineering

degrees:

Materials Science & Engineering, PhD (http://catalog.illinois.edu/graduate/engineering/materials-science-engineering-phd/)
optional concentrations:
Biomechanics (http://catalog.illinois.edu/graduate/engineering/concentration/biomechanics/)|Cancer Nanotechnology (http://catalog.illinois.edu/graduate/engineering/concentration/cancer-nanotechnology/)|Computational Science & Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/)

The Department of Materials Science & Engineering (MatSE) offers graduate programs leading to degrees of Master of Science and Doctor of Philosophy in Materials Science & Engineering. The department is consistently ranked among the top programs in the nation (undergraduate and graduate) by U.S. News and World Report. It offers opportunities to specialize in Nanoscale Science and Technology, Materials for Energy and the Environment, Materials for Medicine, and Mechanical Properties and Materials for Extreme Conditions with strong research programs in all of the areas.

for the degree of Master of Science in Materials Science & Engineering

For additional details and requirements, please refer to the department's Graduate Degree Requirements Handbook (http://mse.illinois.edu/academics/grad/handbook.html) and the Graduate College Handbook (http://grad.illinois.edu/gradhandbook/).

Thesis Option

Code	Title	Hours
MSE 599	Thesis Research (min-max applied toward the degree)	8
MSE 492	Lab Safety Fundamentals (credit does not apply toward the degree)	0
MSE 595	Materials Colloquium	0-2
Advisor group meetings (MSE 590) and area seminars (MSE 529, MSE 559) (subject to Other Requirements and Conditions below)		0-4
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		18-24
Total Hours		**32**

Other Requirements

Requirement	Description
Other Requirements and Conditions may overlap	
Minimum hours of MSE course work	18
Minimum of 500-level credit hours overall applied toward the degree.	14
MSE 595 (0 or 1 hour) must be taken every semester in the first two years of residence. A maximum of 2 hours may be applied toward the degree.	
MSE 529 or MSE 559 (0 or 1 hour) must be taken every semester. A maximum of 4 hours may be applied toward the degree.	
The completed master's thesis must be approved by the advisor and the department head.	
Miminum GPA:	3.0

Non-Thesis Option

Code	Title	Hours
MSE 492	Lab Safety Fundamentals (credit does not apply toward the degree)	0
MSE 595	Materials Colloquium	0-2
Advisor group meetings (MSE 590) and area seminars (MSE 529, MSE 559) (subject to Other Requirements and Conditions below)		0-4
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		30-36
Total Hours		**36**

Other Requirements

Requirement	Description
Other Requirements and Conditions may overlap	
Minimum hours of MSE course work	18
Minimum of 500-level credit hours overall applied toward the degree	14
MSE 595 (0 or 1 hour) must be taken every semester in the first two years of residence. A maximum of 2 hours may be applied toward the degree.	
MSE 529 or MSE 559 (0 or 1 hour) must be taken every semester. A maximum of 4 hours may be applied toward the degree.	
Generally, students on a research assistantship will not be allowed in the non-thesis option.	
Minimum GPA:	3.0