

MATERIALS SCIENCE AND ENGINEERING (MS)

Graduate School

Program Website (<https://www.engineering.cornell.edu/mse/ms/>)

CIP: 14.1801 | HEGIS: 0915.00 | NYSED: 05604

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Materials Science and Engineering (<https://catalog.cornell.edu/graduate-school/materials-science-engineering/>)

Program Description

The focus of current advanced materials research at Cornell includes ceramics, complex fluids, metals, polymers and semiconductors in the form of thin films and in the bulk. Electrical, magnetic, mechanical, optical, and structural properties are investigated. Some special topics of interest are composites, inorganic-organic hybrids, nanocomposites, organic optoelectronics, and, in relation to the structure of materials, the investigation of grain boundaries, surfaces and structural defects. Also studied are materials synthesis and processing and solid state reactions in model systems. Many faculty are involved in electronic packaging. Numerous interactions exist with other fields at Cornell.

A strong catalyst for materials research activities at Cornell has been provided by the Cornell Center for Materials Research (<https://www.ccmr.cornell.edu/>) (formerly: Materials Science Center), which provides substantial financial assistance to graduate students and maintains central research facility.

The M.S. program results in a “terminal” master’s degree; it is not related to the Ph.D. program and is not a pathway into the Ph.D. program in Cornell MSE.

Concentrations by Subject

- Materials engineering
- Materials science

Program Information

- Instruction Mode: In Person
- Location: Ithaca, NY
- Minimum Credits for Degree: 60

Program Requirements

- Minimum Semesters for Degree: 4

Graduate School Milestones

- Responsible Conduct of Research Training: Required
- Open Researcher and Contributor ID (ORCID): Required
- Student Progress Reviews (SPR) begin: Second Year
- Masters Exam (M Exam): Spring of second year
- Thesis: Spring of second year

Field Specific Milestones

- Field progress review conducted in the spring of the first year

Course Requirements

Additional course requirements may be set by the student’s Special Committee. Program specific requirements that apply to all students are included below.

Required in every term

- MSE 8000 Research in Materials Science
- MSE 8010 Materials Science and Engineering Colloquium
- MSE 8020 Materials Science Research Group Seminars

University Graduation Requirements Requirements for All Students

In order to receive a Cornell degree, a student must satisfy academic and non-academic requirements.

Academic Requirements

A student’s college determines degree requirements such as residency, number of credits, distribution of credits, and grade averages. It is the student’s responsibility to be aware of the specific major, degree, distribution, college, and graduation requirements for completing their chosen program of study. See the individual requirements listed by each college or school or contact the college registrar’s office (<https://registrar.cornell.edu/service-resources/college-registrar-directory/>) for more information.

Non-academic Requirements

Conduct Matters. Students must satisfy any outstanding sanctions, penalties or remedies imposed or agreed to under the Student Code of Conduct (Code) or Policy 6.4. Where a formal complaint under the Code or Policy 6.4 is pending, the University will withhold awarding a degree otherwise earned until the adjudication process set forth in those procedures is complete, including the satisfaction of any sanctions, penalties or remedies imposed.

Financial Obligations. Outstanding financial obligations will not impact the awarding of a degree otherwise earned or a student’s ability to access their official transcript. However, the University may withhold issuing a diploma until any outstanding financial obligations owing to the University are satisfied.