

MATERIALS SCIENCE AND ENGINEERING MINOR

College of Engineering

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

Program Description

Offered by the Department of Materials Science and Engineering

Students affiliated with all majors except Materials Science and Engineering are eligible to participate in this minor.

Additional Information

Materials properties are the foundation of many engineering disciplines including mechanical, civil, chemical, and electrical engineering.

This minor provides students with a fundamental understanding of mechanisms that determine the ultimate performance, properties, and processing characteristics of modern materials.

Academic Standards

- At least C in each course in the minor.

Minor Requirements

At least six courses (≥ 18 credits), chosen as follows:

Code	Title	Hours
Select one of the following:		3-4
ENGRD 2610	Mechanical Properties of Materials: From Nanodevices to Superstructures (crosslisted)	
ENGRD 2620	Electronic Materials for the Information Age (crosslisted)	
Select two of the following:		3-4
MSE 2060	Atomic and Molecular Structure of Matter (crosslisted)	
MSE 3010	Materials Chemistry	
MSE 3030	Thermodynamics of Condensed Systems	
MSE 3040	Kinetics, Diffusion, and Phase Transformations	
MSE 3050	Electronic, Magnetic, and Dielectric Properties of Materials	
MSE 4020	Mechanical Properties of Materials, Processing, and Design (crosslisted)	

Three electives chosen from:

Any MSE course at the 3000-level or above or selected courses in materials properties and processing (at the 3000-level or above) from AEP, CHEME, CEE, ECE, MAE, PHYS, and CHEM. Any questions regarding allowable courses can be directed to the MSE Undergraduate Coordinator.

transcript. Not all departments offer minors. Additional information on specific minors can be found above, in the *Engineering Undergraduate Handbook*, in the undergraduate major office of the department or school offering the minor, and in Engineering Advising.

An engineering minor recognizes formal study of a particular subject area in engineering normally outside the major. Students undertaking a minor are expected to complete the requirements during the time of their continuous undergraduate enrollment at Cornell. Completing the requirements for an engineering minor (along with a major) may require more than the traditional eight semesters at Cornell. However, courses that fulfill minor requirements may also satisfy other degree requirements (e.g., distribution courses, advisor-approved, or major-approved electives), and completion within eight semesters is possible.

An engineering minor requires:

- successful completion of all requirements for an undergraduate degree.
- enrollment in a major that approves participation in the minor.
- satisfactory completion of six courses (at least 18 credits) in a college-approved minor.

Students may apply for certification of a minor at any time after the required course work has been completed in accordance with published standards. An official notation of certification of a minor appears on the Cornell transcript following graduation.

Graduation Requirements for Engineering Minor Degree Programs

Requirements

Students may pursue minors in any department in any college that offers them, subject to limitations placed by the department offering the minor or by the students' major. Completed minors will appear on the student's