

MATERIALS SCIENCE AND ENGINEERING, MINOR

The Materials Science and Engineering (MSE) program reflects the explosive growth of interest in the nano and bio sectors of engineering science and technology. MSE prepares students to use fundamental scientific principles to synthesize, manipulate, design and characterize the structural and functional properties of advanced engineering materials. The program offers students advantages seldom found in other MSE programs: the opportunity to tailor the curriculum to their own interests, guaranteed research experience and an excellent student-faculty ratio.

SEAS Second Major or Minor Option

Students interested in declaring a second major (College students only) or minor with SEAS should check the website of the department overseeing the major/minor for the requirements. Students are encouraged to reach out to the department staff if they have any questions or would like to discuss the requirements and/or their plan of completion. Students then must submit the Declare/Update Field of Study PATH form (<https://srfs.upenn.edu/registrar/studentforms/>), which will go through multiple approval steps before the major/minor is added to the student's record.

For more information: <http://www.seas.upenn.edu/undergraduate/degrees/minors.php>

Materials Science and Engineering Minor (CSCI)

Code	Title	Course Units
MSE 2200	Fundamentals of Materials Science and Engineering	1
MSE 2210	Quantum Physics of Materials	1
MSE 2150	Introduction to Functional Materials: From Macro to Nanoscale	1
MSE 2600	Energetics of Macro and Nano-scale Materials	1
MSE 3300	Self-Assembly of Soft Materials	1
MSE 4400	Phase Transformations	1
Total Course Units		6

The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2025 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.
