

MATERIALS SCIENCE, BA

2nd Major for College Students only.

College students can apply for Materials Science and Engineering (MSE) as a second major within the College. Under this program, a College student will receive one diploma from the College of Arts and Sciences with a dual major (note that this option is only for students in the College of Arts and Sciences, not Engineering students)

For more information <https://mse.seas.upenn.edu/undergraduate/second-major-in-materials-science/>

Curriculum

Code	Title	Course Units
CHEM 1012	General Chemistry I	1
MSE 2010	Materials Lab I	.5
MSE 2020	Materials Lab II	.5
MSE 2150	Introduction to Functional Materials: From Macro to Nanoscale	1
MSE 2200	Fundamentals of Materials Science and Engineering	1
MSE 2210	Quantum Physics of Materials	1
or PHYS 1240	Principles of Physics IV: Modern Physics (without laboratory)	
or PHYS 1250	Principles of Physics IV: Modern Physics	
MSE 2600	Energetics of Macro and Nano-scale Materials	1
MSE 3010	Materials Lab III	.5
MSE 3300	Self-Assembly of Soft Materials	1
MSE 3600	Structure at the Nanoscale	1
MSE 3930	Materials Selection	1
MSE 4050	Mechanical Properties of Macro/Nanoscale Materials	1
or MSE 5050	Mechanical Properties of Macro/Nanoscale Materials	
MSE 4400	Phase Transformations	1
MSE 4600	Computational Materials Science	1
Total Course Units		12.5

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.
