MATERIALS SCIENCE AND ENGINEERING, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

Program Requirements

Requirement	Credits
Requirements for the Minor	18

The Minor in Materials Science and Engineering requires the completion of a total of 18 credits in materials related and other supporting courses. With the approval of the student's program chair, some of these courses may also be used to satisfy the requirements for the student's major bachelor's degree. At least 9 unique credits counted toward the requirements for a student's minor must not be used to fulfill the requirements for that student's major.

Requirements for the Minor

A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (https://senate.psu.edu/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/#59-10). In addition, at least six credits of the minor must be unique from the prescribed courses required by a student's major(s).

Code	Title	Credits
Prescribed Courses		
Prescribed Courses: Require a grade of C or better		
MATSE 201	Introduction to Materials Science	3
MATSE 259	Properties and Processing of Engineering Materials	3
MATSE 460	Introductory Laboratory in Materials	1
MATSE 462	General Properties Laboratory in Materials	1
Additional Courses		
Additional Courses: Require a grade of C or better		
Select 10 credits of the following: [1]		10
ESC 314		
MATSE 202	Introduction to Polymer Materials	
MATSE 400	Crystal Chemistry	
MATSE 401	Thermodynamics of Materials	
MATSE 402	Materials Process Kinetics	
MATSE 410	Phase Relations in Materials Systems	
MATSE 413	Solid-State Materials	
MATSE/ESC 417	Electrical and Magnetic Properties	
MATSE 419	Computational Materials Science and Engineering	
MATSE 430	Materials Characterization	
MATSE 436	Mechanical Properties of Materials	
MATSE 471	Metallurgy Laboratory I	
MATSE 496	Independent Studies	
MATSE 497	Special Topics	
PHYS 414	Solid State Physics	

[1] Elective courses may be drawn from a wide variety of courses in Materials Science, Engineering, and Physics.

Completion of the minor may extend graduation date.

Transfer of credits from other institutions may be eligible to satisfy the minor requirements based on adviser review and program approval.

Graduation Requirements

To be given credit for the minor, undergraduate must:

- Maintain a GPA of 3.0 in the minor courses
- Complete 18 credits from the minor