

# MATERIALS SCIENCE AND ENGINEERING - MINOR

This program is intended for students interested in enriching their major undergraduate program of study to incorporate a fundamental understanding of materials processing and structure–property relationships to complement their primary degree.

## Program Requirements

Code	Title	Semester Credit Hours
MSEN 210	Thermodynamics of Materials	3
	or MSEN 260 or Structure of Materials	
MSEN 200-499 ( <a href="https://catalog.tamu.edu/undergraduate/course-descriptions/msen/">https://catalog.tamu.edu/undergraduate/course-descriptions/msen/</a> ) <sup>1</sup>		6
Select two of the following: <sup>2</sup>		6
MSEN 200-499 ( <a href="https://catalog.tamu.edu/undergraduate/course-descriptions/msen/">https://catalog.tamu.edu/undergraduate/course-descriptions/msen/</a> ) <sup>3,4</sup>		
BAEN 354	Engineering Properties of Biological Materials <sup>2</sup>	
BAEN 427	Engineering Aspects of Packaging <sup>2</sup>	
BMEN 344	Biological Interactions and Testing <sup>2</sup>	
BMEN 482	Polymeric Biomaterials <sup>2</sup>	
BMEN 483	Polymeric Biomaterial Synthesis <sup>2</sup>	
CHEM 466	Polymer Chemistry <sup>2</sup>	
CHEM 468	Materials Chemistry of Inorganic Materials <sup>2</sup>	
CHEN 451	Introduction to Polymer Engineering <sup>2</sup>	
CHEN 475	Microelectronics Process Engineering <sup>2</sup>	
CVEN 342	Materials of Construction <sup>2</sup>	
CVEN 343	Portland Cement Concrete Materials for Civil Engineers <sup>2</sup>	
CVEN 417	Bituminous Materials <sup>2</sup>	
ECEN 370	Electronic Properties of Materials <sup>2</sup>	
ECEN 440	Thin Film Technology and Device Application <sup>2</sup>	
MEEN 360	Materials and Manufacturing Selection in Design <sup>2</sup>	
MEEN 455	Engineering with Plastics <sup>2</sup>	
MEEN 458	Processing and Characterization of Polymers <sup>2</sup>	
MEEN 460	Corrosion Engineering <sup>2</sup>	
MEEN 471	Elements of Composite Materials <sup>2</sup>	
MEEN 475	Materials in Design <sup>2</sup>	
MMET 207	Metallic Materials <sup>2</sup>	
MMET 313	Industrial Welding Processes <sup>2</sup>	
NUEN 465	Nuclear Materials Engineering <sup>2</sup>	
PHYS 416	Physics of the Solid State <sup>2</sup>	
<b>Total Semester Credit Hours</b>		<b>15</b>

<sup>1</sup> Except MSEN 201, MSEN 205, MSEN 222/MEEN 222, MSEN 281, MSEN 301, MSEN 302, MSEN 380, MSEN 400, MSEN 401, MSEN 402, MSEN 485, MSEN 491.

<sup>2</sup> Up to 2 of these electives (6 credits total) could consist of "Materials-focused course(s)" within the student's home major.

<sup>3</sup> Except MSEN 201, MSEN 205, MSEN 222/MEEN 222, MSEN 281, MSEN 301, MSEN 302, MSEN 380, MSEN 400, MSEN 401, MSEN 402.

<sup>4</sup> Maximum of 3 credits of MSEN 485 or MSEN 491

Students must make a grade of C or better in all courses.

Student must achieve an overall GPA of 2.5 in approved minor courses.