MATERIALS SCIENCE AND ENGINEERING - MINOR

The Department of Materials Science and Engineering minor program is designed to provide a strong materials science educational program for undergraduate science and engineering majors and to integrate a materials focus into their undergraduate training. It 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. Students will have the flexibility to select relevant coursework to customize this program of study to best suit their intended area of focus through consultation with an MSEN faculty advisor.

All students are required to have completed a prerequisite course [*introductory materials science and engineering]* before applying for the minor. The prerequisite course *does not apply* to the minor. Completion of the minor will be recorded on the student's university transcript.

For more information, visit the Department of Materials Science and Engineering website.

Program Requirements

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

1. 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.
2. Up to 2 of these electives (6 credits total) could consist of "Materials-focused course(s)" within the student's home major.
3. Except MSEN 201, MSEN 205, MSEN 222/MEEN 222, MSEN 281, MSEN 301, MSEN 302, MSEN 380, MSEN 400, MSEN 401, MSEN 402.
4. 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.