

MATERIALS ENGINEERING MINOR

Overview

The Materials Engineering minor complements various STEM and non-STEM majors at Tulane by offering a focused exploration of material systems and characterization. It includes fundamental courses in kinetics and thermodynamics, providing essential knowledge in the field while allowing further exploration via electives. This minor enhances career prospects across industries including electronics, energy, and manufacturing, preparing students for diverse engineering challenges.

Requirements

Course ID	Title	Credits
Prerequisites		
MATH 1210 & MATH 1220	Calculus I and Calculus II	8
PHYS 1310 & PHYS 1320	General Physics I and General Physics II	8
CHEM 1070 & CHEM 1075	General Chemistry I and General Chemistry Lab I	4

Total Credit Hours **20**

Course ID	Title	Credits
Required Courses		
CENG 3120 or ENGP 3120	Materials Science & Engr Materials Science and Engineering	9
ENGP 3350	Kinetics of Material Systems	
ENGP 3760 or CHEM 3120	Thermodynamics of Materials Physical Chemistry II	

Electives (Choose 3) **9**

ENGP 3360	Structure of Materials	
ENGP 3720	Mechanic Behavior of Materials	
PHYS 3700	Electronic Properties of Materials	
BMEN 3400	Biomaterials & Tissue Engineering	
CENG 4890	Polymer Engr & Science	
ENGP 3380	Materials for Energy	
ENGP 3620	MicroFab and Nanotech	
PHYS 3210	Molecular Biophysics & Polymer Physics	
ENGP 3370	Processing of Biomaterials	
ENGP 3290	Computational Materials Scienc	
CENG 4130	Surf. & Colloid Phenomen	
ENGP 3560	Photonic Materials & Devices	
CENG 4140 or CENG 6140	Electrochemistry Electrochemistry	
ENGP 3390	Synthesis of Nanomaterials	
ENGP 2430	Mechanics of Materials	
PHYS 2350	Modern Physics I	
CHEM 3410	Macromolecular, Supramolecular, and Nanochemistry	
EENS 3190	Earth Materials	
ENGP 3570	Semiconductor Devices	

Total Credit Hours **18**

At least three courses (9 credits) counting toward the minor must not overlap with a student's major.