



Technical Electives for Materials Science and Engineering (MSE)

Updated December 2018

It is possible that other courses can be approved that are not on the list, with review by the MSE Curriculum Committee.

*ANTR 350, Human Gross Anatomy for Pre-Health Professionals	3
BMB 401, Comprehensive Biochemistry	4
BMB 461, Advanced Biochemistry I	3
BMB 462, Advanced Biochemistry II	3
BMB 471, Advanced Biochemistry Laboratory	3
*CEM 251, Organic Chemistry I	3
CEM 252, Organic Chemistry II	3
*CEM 351, Organic Chemistry I	3
CEM 352, Organic Chemistry II	3
CEM 411, Advanced Inorganic Chemistry	3
CEM 484, Molecular Thermodynamics	3
CHE 201, Material and Energy Balances	3
CHE 311, Fluid Flow and Heat Transfer	3
CHE 472, Composite Materials Processing	3
CHE 473, Chemical Engineering Principles in Polymers and Materials Systems	3
CSE 231, Introduction to Programming I	4
CSE 232, Introduction to Programming II	4
CSE 260, Discrete Structures in Computer Science	4
ECE 201, Circuits and Systems I	3
ECE 202, Circuits and Systems II	3
ECE 302, Electronic Circuits	3
ECE 474, Principles of Electronic Devices	3
ENE 280, Principles of Environmental Engineering and Science	3
ENE 481, Environmental Chemistry: Equilibrium Concepts	3
ME 201, Thermodynamics	3
ME 423, Intermediate Mechanics of Deformable Solids	3
ME 425, Experimental Mechanics	3
ME 426, Introduction to Composite Materials	3
ME 481, Mechanical Engineering Design Projects	3
*ME 495, Tissue Mechanics	3
MMG 301, Introductory Microbiology	3
*MSE 425, Biomaterials and Biocompatibility	3
MSE 465, Design & Application of Engineering Materials	3
MSE 474, Ceramic and Refractory Materials	3
MSE 476, Physical Metallurgy of Ferrous and Aluminum Alloys	3
MSE 481, Spectroscopic and Diffraction Analysis of Materials	3

MSE 490, Independent Study	3
MSE 491, Selected Topics	3
MSE 499, Senior Research and Design Project (W)	3
MTH 309, Linear Algebra I	3
MTH 314, Matrix Algebra with Applications	3
MTH 320, Analysis I	3
MTH 414, Linear Algebra II	3
PHM 350, Introductory Human Pharmacology	3
PHY 215, Thermodynamics and Modern Physics	3
PHY 321, Classical Mechanics I	3
PHY 480, Computational Physics	3
PSL 250, Introductory Physiology	4
PSL 425, Physiological Biophysics	3
PSL 431, Human Physiology I	4
PSL 432, Human Physiology II	4
STT 441, Probability and Statistics I: Probability	3
STT 442, Probability and Statistics II: Statistics	3
STT 466, Spatial Data Analysis	3
*IBIO 341, Fundamental Genetics	4
*IBIO 425, Cells and Development	4

***Asterisk signifies courses that CANNOT be used as technical electives if student is completing the Biomedical Materials Engineering Concentration.**