

Material Science Engineering Sample Schedule

	Total	Term:							
	Credit Hours	1	2	3	4	5	6	7	8
Subjects Required by all Programs (55 hours)									
Mathematics 115, 116, 215, and 216	16	4	4	4	4	-	-	-	-
Engineering 100, Introduction to Engineering	4	4	-	-	-	-	-	-	-
Engineering 101, Introduction to Computers	4	-	4	-	-	-	-	-	-
Chemistry 125/126 and 130 or Chemistry 210 and 211 ¹	5	5	-	-	-	-	-	-	-
Physics 140 with Lab 141; Physics 240 with Lab 24	10	-	5	5	-	-	-	-	-
Intellectual Breadth ⁴	16	4	4	-	4	-	4	-	-
Science and Technical Subjects (14 hours)									
ME 211, Introduction to Solid Mechanics	4	-	-	-	4	-	-	-	-
Science and Technical Electives (Must include CHEM 210 - if not already taken)	10	-	-	4	-	-	3	3	-
Program Subjects (47 hours)									
MSE 250, Principles of Engineering Materials or MSE 220, Introduction to Materials and	4	-	-	4	-	-	-	-	-
MSE 242, Physics of Materials	4	-	-	-	4	-	-	-	-
MSE 330, Thermodynamics of Materials	4	-	-	-	-	4	-	-	-
MSE 335, Kinetics and Transitions in Materials Engineering	4	-	-	-	-	-	4	-	-
MSE 350, Principles of Engineering Materials II	4	-	-	-	-	4	-	-	-
MSE 360, Materials Lab I	3	-	-	-	-	3	-	-	-
MSE 365, Materials Lab II	3	-	-	-	-	-	3	-	-
MSE 420, Mechanical Behavior of Materials	3	-	-	-	-	-	-	3	-
MSE 480, Materials and Engineering Design	3	-	-	-	-	-	-	-	3
MSE 489, Materials Processing Design	3	-	-	-	-	-	-	3	-
Electives									
Elect 3 MSE Electives ⁴	9	-	-	-	-	3	3	3	-
MSE Elective	3	-	-	-	-	-	-	-	3
Unrestrictive Electives	12	-	-	-	-	-	-	3	9
Total	128	17	17	17	16	14	17	15	15

Revised: April-18

Candidates for the Bachelor of Science Degree in Engineering in Materials Science and Engineering - B.S.E. in Matl. Sci. & E. - must complete the program listed above. This sample schedule is an example of one leading to graduation in eight terms.

Notes:

¹If you have a satisfactory score or grade in Chemistry AP, A-Level, IB Exams or credit from another institution you will have met the Chemistry Core Requirement for the College of Engineering.

²If you have a satisfactory score or grade in Physics AP, A-Level, IB Exams or credit from another institution you will have met the Physics Core Requirement for the College of Engineering.

³ A macro- or micro-economic course is required (Econ 101 or 102)

⁴Elect 3 From the Following List:

- MSE 400, EMO Materials for Modern Device Technology (3 hours)
- MSE 410, Design and Applications of Biomaterials (3 hours)
- MSE 412, Polymeric Materials (3 hours)
- MSE 440, Ceramic Materials (3 hours)
- MSE 454, Computational Approaches in Materials (3 hours)
- MSE 465, Structure & Chemical Characteristics of Materials (3 hours)
- MSE 470, Physical Metallurgy (3 hours)
- MSE 514, Composite Materials (3 hours)