

Materials Science & Engineering Curriculum Map 2017-2018

Freshman Year – First Semester

	Course Name	Credits
CHEM 1127Q or 1147Q	General Chemistry	4
MATH 1131Q	Calculus I	4
ENGR 1000	Orientation to Engineering	1
CSE 1010	Introduction to Computing for Engineers	3
ENGL 1010 or 1011	Sem. Acad. Writing or Sem. Writing thr Lit	4
	Total	16

Freshman Year – Second Semester

	Course Name	Credits
CHEM 1128Q or 1148Q	General Chemistry	4
MATH 1132Q	Calculus II	4
ENGR 1166	Foundations of Engineering	3
	General Education Elective (Content Area 2)	3
	General Education Elective (Content Area 2)	3
	Total	17

Sophomore Year – First Semester

	Course Name	Credits
PHYS 1501Q	Physics for Engineering I	4
MATH 2110Q	Multivariable Calculus	4
PHIL 1104	Philosophy & Ethics	3
MSE 2001	Intro to Materials Science and Engineering I	3
CE 2110	Applied Mechanics I	3
	Total	17

Sophomore Year – Second Semester

	Course Name	Credits
PHYS 1502Q	Physics for Engineering II	4
MATH 2410Q	Differential Equations	3
MSE 2002	Intro to Material Science and Engineering II	3
MSE 2053	Material Lab	1
CE 3110	Mechanics of Materials	3
	General Education Elective (Content Area 4)	3
	Total	17

Junior Year – First Semester

	Course Name	Credits
MSE 3001	Applied Thermodynamics of Materials	4
MSE 3003	Phase Transformation, Kinetics & Applications	3
MSE 3055	Materials Processing and Microstructures Laboratory	1
	Technical Elective (Note B)	3
	General Education Elective (Content Area 1)	3
	General Education Elective (Content Area 4)	3
	Total	17

Junior Year – Second Semester

	Course Name	Credits
MSE 3002	Transport Phenomena in Materials	4
MSE 3004	Mechanical Behavior of Materials	3
MSE 3056	Mech. Behavior Lab	2
	Professional Elective (Note A)	3
	Technical Elective	3
	Total	15

Senior Year – First Semester

	Course Name	Credits
MSE 4003	Materials Characterization	3
MSE 4001	Elect & Magnetic Prop of Materials	3
MSE 4005	Proc Mtls Liquid & Vapor State (Mat. Processing)	3
MSE 4901W	Mater. Capstone Project I	3
	Professional Elective (Note A)	3
	Total	15

Senior Year – Second Semester

	Course Name	Credits
MSE 4004	Thermal Mech Proc of Mtls	3
MSE 4902W	Mater. Capstone Project II	3
	Professional Elective (Note A)	3
	Professional Elective (Note A)	3
	Technical Elective (Note B)	3
	Total	15