MATERIALS SCIENCE & ENGINEERING

Courses highlighted below are available at Elon University

Curriculum Example*

FRESHMAN YEAR

4 CH 1010 General Chemistry	4 CH 1020 General Chemistry
3 ENGL 1030 Accelerated Composition	3 ENGR 1410 Programming and Problem Solving[1]
2 ENGR 1020 Engineering Discipline and Skills[1]	4 MATH 1080 Calculus of One Variable II
4 MATH 1060 Calculus of One Variable I	3 PHYS 1220 Physics with Calculus I
3 Gen Ed[2] _____	3 Gen Ed[2] _____
16	17

SOPHOMORE YEAR

3 CH 2230 Organic Chemistry	3 CE 2010 Statics
1 CH 2270 Organic Chemistry Lab.	3 CH 2240 Organic Chemistry
3 MSE 2100 Introduction to Materials Science	1 CH 2280 Organic Chemistry Lab.
4 MATH 2060 Calculus of Several Variables	2 ENGR 2080 Engr. Graphics & Machine Design *OR*
3 PHYS 2210 Physics with Calculus II	2 ECE 2070 Basic Electrical Engineering
3 Gen Ed[2] _____	4 MATH 2080 Int. to Ordinary Differential Eqtns
17	3 MSE 3100 Introduction to Metals and Ceramics
	16

JUNIOR YEAR

3 STAT 4110 Stat. Methods for Process Development & Control	3 IE 3840 Engineering Economic Analysis
2 MSE 3010 Materials Synthesis & Fabrication Laboratory	2 MSE 3020 Materials Characterization Laboratory
3 MSE 3260 Thermodynamics of Materials	3 MSE 3190 Materials Processing I
3 MSE 4150 Intro. to Polymer Sci. and Engr.	3 MSE 3270 Transport Phenomena
1 MSE 4450 Practice of Materials Engineering	3 MSE 4020 Solid State Materials
1 MSE 4810 Undergraduate Research Fundamentals	3 MSE 4220 Mechanical Behavior of Materials
3 Gen Ed[2] _____	17
16	

SENIOR YEAR

3 COMM 2500 Public Speaking	3 MSE 4070 Senior Capstone Design
2 ECE 2070 Basic Electrical Engineering *OR*	9 Technical Requirement [3]
2 ENGR 2080 Engr. Graphics and Machine Design	3 Gen Ed[2] _____
2 MSE 4910 Undergraduate Research	15
6 Technical Requirement [3]	
13	

127 Total Semester Hours

[1] ENGR 1070+1080 +1090 may be substituted for ENGR 1410, and ENGR 1050 + 1060 may be substituted for ENGR 1020.

[2] See policy on General Education coursework for Clemson Univeristy students. There are Six Gen Ed requirements for students purusing the MSE major, but all 6 requirements could be met in 4 courses if planned appropriately. Please see advisor.

[3] See Advisor, Acalog or Degreeworks for full current list of Junior/Senior level technical electives for MSE majors.

General Education Requirements						
LIT	Non-Lit	SS1	SS2	ENGR 5th	CCA	STS
Other						
LIFE	Palmetto Fellows	Honors	Athlete	RiSE	ROTC	Med School