MATERIALS SCIENCE & ENGINEERING

Courses highlighted below are available at North Greenville University

Curriculum Example*

FRESHMAN YEAR

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

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

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

_____ 3 COMM 2500 Public Speaking
_____ 2 ECE 2070 Basic Electrical Engineering *OR*
2 ENGR 2080 Engr. Graphics and Machine Design
_____ 2 MSE 4910 Undergraduate Research
_____ 6 Technical Requirement [3]
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_____ 3 MSE 4070 Senior Capstone Design
_____ 9 Technical Requirement [3]
_____ 3 Gen Ed[2] _____
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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 University students. There are Six Gen Ed requirements for students pursuing 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.

*See catalog for current curriculum at catalog.clemson.edu

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