

Materials Science Engineering (MSE) Program of Study

	Fall Semester			Spring Semester		
	Course	Course Title	Hrs.	Course	Course Title	Hrs.
Freshman	CH 115/116	Chemistry I/Lab	4	CH 117/118	Chemistry II/Lab	4
	EGR 110	Introduction to Engineering I	1	EGR 111	Introduction to Engineering II	1
	EH 101	Written Composition I	3	EH 102	Written Composition II	3
	MA 125	Calculus I	4	MA 126	Calculus II	4
	ME 102	Engineering Graphics	2	PH 221/L	General Physics I/Lab	4
	EGR 150	Computer Methods for Engineering	3			
		Total Credits:		17		Total Credits:
Sophomore	CE 210	Statics	3	CE 220	Mechanics of Solids	3
	HFA 1	Area II Core Curriculum	3	EE 312	Electrical Systems	3
	EGR 265	Mathematical Tools for ENG Problem Solving	4	SBS 1	Area IV Core Curriculum	3
	MSE 280	Engineering Materials	3	ME 251	Introduction to Thermal Sciences	2
	PH 222/L	General Physics II/Lab	4	MSE 281	Physical Materials I	3
		Total Credits:		17		Total Credits:
Junior	CE 344	Engineering Analysis I	3	HFA	Area II Core Curriculum	3
	MSE 401	Materials Processing	3	HFA	Area II Core Curriculum	3
	MSE 380	Thermodynamics of Materials	3	SME XXX	SCI/MA/ENG Elective	3
	MSE 381	Physical Materials II	3	MSE 310	Materials Engineering Laboratory II	2
	MSE 465	Materials Characterization	4	MSE 382	Mechanical Behavior	3
				MSE 470	Ceramic Materials	3
	Total Credits:		16		Total Credits:	17
Senior	SBS 2	Area IV Core Curriculum	3	SBS 3	Area IV Core Curriculum	3
	MSE 498	Senior Design I	2	MSE 499	Senior Design II	3
	MSE 410	Materials Engineering Laboratory III	2	MSE 484	Elect., Mag., and Thermal Prop. of Materials	3
	MSE 413	Composite Materials	3	MSE 4XX	Materials Elective	3
	MSE 430	Polymeric Materials	3	SME XXX	SCI/MA/EGR Elective	3
	MSE 464	Metals & Alloys	3			
	Total Credits:		16		Total Credits:	1

¹ Students may meet the requirements of EGR 100 and EGR 111 with EGR 100. ²ME 130 and EE 134 will also meet this requirement for the Mt.E. curriculum if taken previously.

³ Students entering prior to Fall 2005 may meet this requirement with CE 212: Statics and Dynamics ⁴HSS: Humanities and Social Science Courses, Core Curriculum Areas II and IV.

⁵ MA 227 - Calculus III and MA 252 - Differential Equations may be substituted for EGR 265 - Mathematical Tools for Engineering Problem Solving and one of the SCI/MA/EGR Electives

⁶ Students who enrolled prior to Fall 2007 who already have taken ME 250 may substitute that course for ME 251 in this curriculum. ⁷ HSS: Humanities and Social Science Courses, Core Curriculum Areas II and IV.

⁸ Students may take ME 405 if necessary with department permission. ⁹HSS: Humanities and Social Science Courses, Core Curriculum Areas II and IV.

¹⁰ MSE 380 will always be taught fall semester of odd-numbered years. Additional offerings may be available. Students should take this course at the first opportunity after meeting the prerequisite requirements.

¹¹ MSE 484 will be taught Spring Semester in odd numbered years. Students should take this course when the MSE 280 and PH 221 prerequisites are met. HSS courses may be moved to accommodate MSE 484 scheduling. ¹² MSE 464 will be taught Fall Semester in even numbered years. Students should take this course when the MSE 281 prerequisite is met.