

Department of Materials Science and Engineering

Four Year Plan (2012-13 Catalog, ready for calculus)

FIRST YEAR	FALL SEMESTER		SPRING SEMESTER	
	UF 100 Intellectual Foundations	3	ENGL 101 Introduction to College Writing	3
	CHEM 111, 111L General Chemistry I with Lab	4	CHEM 112, 112L General Chemistry II with Lab	4
	MATH 170 Calculus I	4	MATH 175 Calculus II	4
	ENGR 120 or ENGR 130 Introduction to Engineering	3	PHYS 211, 211L Physics I with Calculus and Lab	5
	SEMESTER TOTAL	14	SEMESTER TOTAL	16

SECOND YEAR	FALL SEMESTER		SPRING SEMESTER	
	MATH 275 Multivariable and Vector Calculus	4	MATH 333 Differential Equations	4
	PHYS 212, 212L Physics II with Calculus and Lab	5	PHYS 309, 309L Modern Physics with Lab	4
	ENGR 245, 245L Introduction to MSE and Lab	4	(CID) MSE 215 Materials Processing	3
	ENGL 102 College Writing and Research	3	UF 200 Civil and Ethical Foundations	3
	SEMESTER TOTAL	16	Computer science elective	3
		SEMESTER TOTAL	17	

THIRD YEAR	FALL SEMESTER		SPRING SEMESTER	
	MSE 305 Bonding, Crystallography, and Crystal Defects	3	ENGR 240 or ECE 210 Electrical Circuits	3
	MSE 308 Thermodynamics of Materials	3	MSE 418 Phase Transformations and Kinetics	3
	MSE 498 Materials Science Seminar	1	MSE 312 Mechanical Behavior of Materials	3
	ENGR 210 Statics	3	MSE 380 Materials Science and Engineering Lab	2
	MATH 360 Engineering Statistics	3	Technical or engineering elective	3
	Technical or engineering elective	3	DLL, DLV, or DLS course	3
	SEMESTER TOTAL	16	SEMESTER TOTAL	17

FOURTH YEAR	FALL SEMESTER		SPRING SEMESTER	
	PHYS 423 Materials Characterization	3	(FF) MSE 482 Senior Project II	3
	MSE 404L Materials Analysis Lab	1	Technical or engineering elective	3
	MSE 310 Electrical Properties of Materials	3	Technical or engineering elective	3
	MSE 480 Senior Project	3	DLL, DLV, or DLS course	3
	DLL, DLV, or DLS course	3	DLL, DLV, or DLS course	3
	SEMESTER TOTAL	13	SEMESTER TOTAL	15

HIGHLIGHTED COURSES are offered only in the semester in which they are listed.

COMPSCI ELECTIVE: The following courses fulfill the computer science elective requirement – CS 115 (Intro to C), CS 117 (Intro to C++), CS 119 (Intro to Java), CS 120 (Intro to Programming Concepts), and CS 125 (Intro to Computer Science)

DISCIPLINARY LENS COURSES: Students need to take one DLL, one DLV, and two DLS courses. DLS courses must come from two different fields.

TECHNICAL + ENGINEERING ELECTIVES: Students must complete 12 credits of technical and engineering electives. Six of these credits need to be in engineering disciplines (ENGR, MSE, ECE, CE, or MBE). The other 6 can come from engineering, math or science disciplines. Of the 12 credits, 6 must be upper division (300- or 400-level). All technical and engineering electives must be approved by the student's advisor.

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Four Year Plan (2012-13 Catalog, ready for pre-calculus)

		FALL SEMESTER	SPRING SEMESTER
FIRST YEAR	MATH 147 Pre-calculus	5	MATH 170 Calculus I 4
	ENGL 101 Introduction to College Writing	3	CHEM 111, 111L General Chemistry I with Lab 4
	COMPSCI 119 or 120 computer science elective	2	ENGL 102 College Writing and Research 3
	UF 100 Intellectual Foundations	3	ENGR 120 or ENGR 130 Introduction to Engineering 3-4
	DLL, DLV, or DLS course	3	DLL, DLV, or DLS course 3
	SEMESTER TOTAL	16	SEMESTER TOTAL 17+
		FALL SEMESTER	SPRING SEMESTER
SECOND YEAR	MATH 175 Calculus II	4	MATH 333 Differential Equations 4
	CHEM 112, 112L General Chemistry II with Lab	4	PHYS 212, 212L Physics II with Calculus and Lab 5
	ENGR 245, 245L Introduction to MSE and Lab	4	(CID) MSE 215 Materials Processing 3
	PHYS 211, 211L Physics I with Calculus and Lab	5	UF 200 Civil and Ethical Foundations 3
	SEMESTER TOTAL	17	SEMESTER TOTAL 15
		FALL SEMESTER	SPRING SEMESTER
THIRD YEAR	MATH 275 Multivariable and Vector Calculus	4	MATH 360 Engineering Statistics 3
	MSE 305 Bonding, Crystallography, and Crystal Defects	3	PHYS 309, 309L Modern Physics with Lab 4
	MSE 308 Thermodynamics of Materials	3	MSE 418 Phase Transformations and Kinetics 3
	MSE 498 Materials Science Seminar	1	MSE 312 Mechanical Behavior of Materials 3
	ENGR 210 Statics	3	MSE 380 Materials Science and Engineering Lab 2
	Technical or engineering elective	3	(or computer science elective here)
	SEMESTER TOTAL	17	SEMESTER TOTAL 15
		FALL SEMESTER	SPRING SEMESTER
FOURTH YEAR	PHYS 423 Materials Characterization	3	(FF) MSE 482 Senior Project II 3
	MSE 404L Materials Analysis Lab	1	ENGR 240 or ECE 210 Electrical Circuits 3
	MSE 310 Electrical Properties of Materials	3	Technical or engineering elective 3
	MSE 480 Senior Project	3	Technical or engineering elective 3
	DLL, DLV, or DLS course	3	DLL, DLV, or DLS course 3
	Technical or engineering elective	3	
	SEMESTER TOTAL	16	SEMESTER TOTAL 15

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