

Department of Materials Science and Engineering

Four Year Plan (2014-15 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	3-4	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	
		Computer science elective	3	
SEMESTER TOTAL	16	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	
ENGR 210 Statics	3	MSE 312 Mechanical Behavior of Materials	3	
MATH 360 Engineering Statistics	3	MSE 380 Materials Science and Engineering Lab	2	
Technical, engineering, or MSE elective	3	Technical, engineering, or MSE elective	3	
		DLL, DLV, or DLS course	3	
SEMESTER TOTAL	15	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, engineering, or MSE elective	3	
MSE 310 Electrical Properties of Materials	3	Technical, engineering, or MSE 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	
MSE 498 Materials Science Seminar	1			
SEMESTER TOTAL	14	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 121 (Computer Science I)

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

GRADE POLICY: A C- or above is required for all prerequisite courses and for all upper division courses within the student's major.

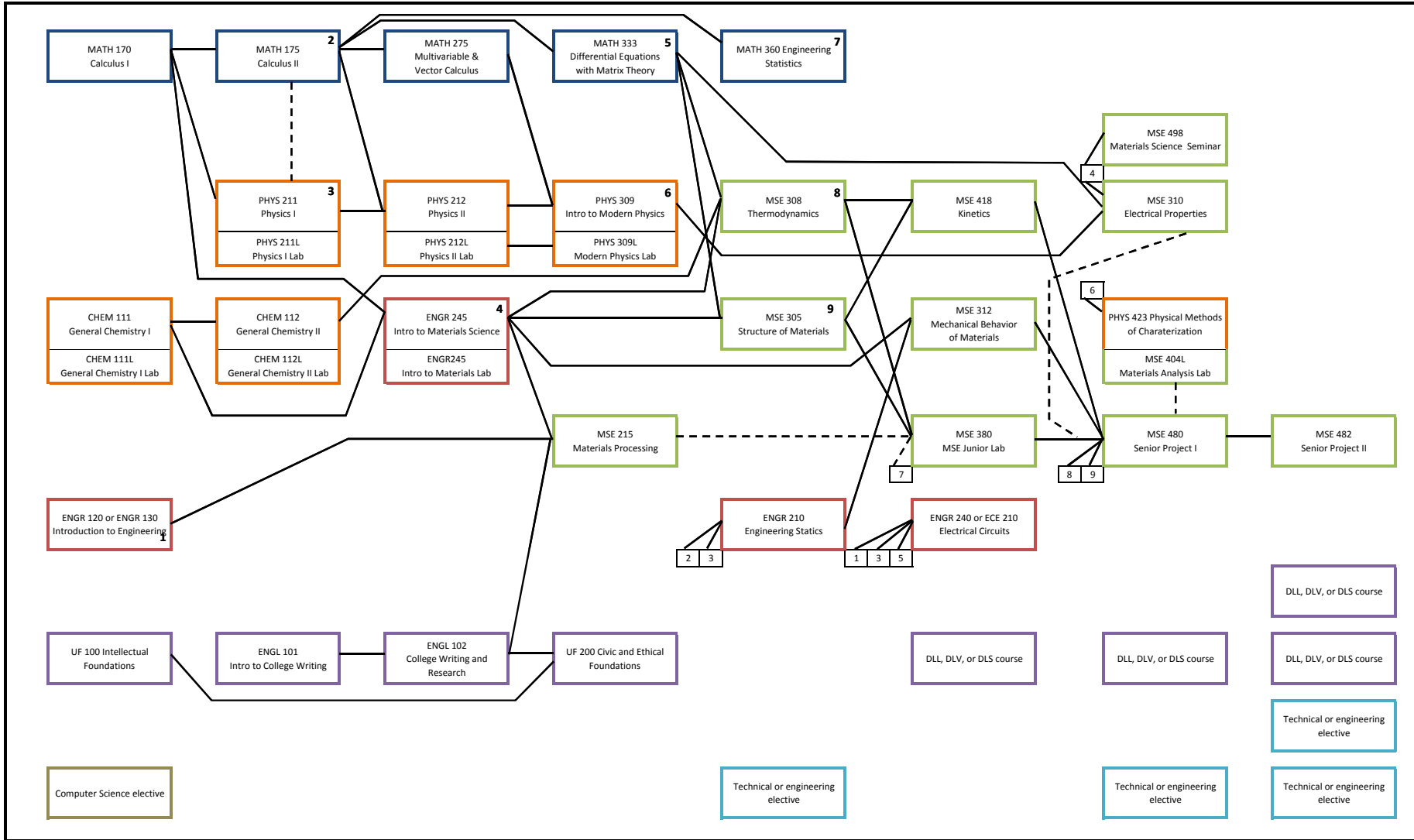
MSE UNDERGRADUATE ADVISORS:

Dr. Megan Frary (meganfrary@boisestate.edu, 208-426-1061)

Chad Watson (chadwatson1@boisestate.edu, 208-426-4897)

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KEY:

1 ENGR 120	4 ENGR 245	7 MATH 360	→ Prerequisite
2 MATH 175	5 MATH 333	8 MSE 308	- - - Corequisite
3 PHYS 211	6 PHYS 309	9 MSE 305	

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FIRST YEAR	FALL SEMESTER		SPRING SEMESTER	
	MATH 143 + MATH 144 College Algebra + Analyt. Trig	5	MATH 170 Calculus I	4
	ENGL 101 Introduction to College Writing	3	CHEM 111, 111L General Chemistry I with Lab	4
	CS 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+

SECOND YEAR	FALL SEMESTER		SPRING SEMESTER	
	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

THIRD YEAR	FALL SEMESTER		SPRING SEMESTER	
	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
	ENGR 210 Statics	3	MSE 312 Mechanical Behavior of Materials	3
	Technical, engineering, or MSE elective	3	MSE 380 Materials Science and Engineering Lab (or computer science elective here)	2
	SEMESTER TOTAL	17	SEMESTER TOTAL	15

FOURTH YEAR	FALL SEMESTER		SPRING SEMESTER	
	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, engineering, or MSE elective	3
	MSE 480 Senior Project	3	Technical, engineering, or MSE elective	3
	DLL, DLV, or DLS course	3	DLL, DLV, or DLS course	3
	Technical, engineering, or MSE elective	3	MSE 498 Materials Science Seminar	1
SEMESTER TOTAL	16	SEMESTER TOTAL	16	

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.

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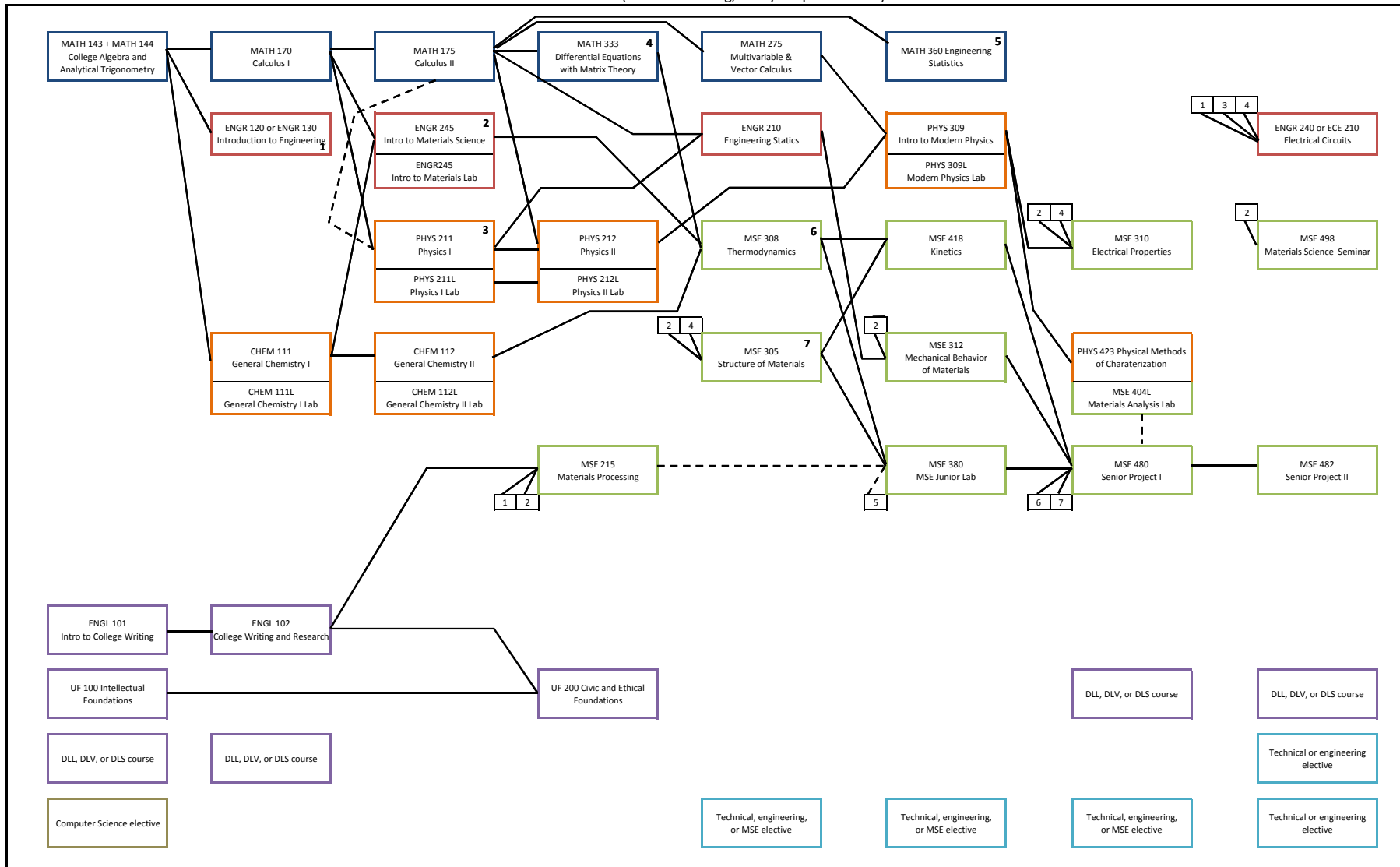
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- KEY:**
- | | | |
|------------|------------|-------------------|
| 1 ENGR 120 | 5 MATH 360 | → Prerequisite |
| 2 ENGR 245 | 6 MSE 308 | - - - Corequisite |
| 3 PHYS 211 | 7 MSE 305 | |
| 4 MATH 333 | | |