

## Materials Science and Engineering Courses Prerequisites - Spring 2015

FRESHMAN YEAR - 1st semester		
Course	cr hrs	prerequisite
◆ Math 171 Calc I [QUAN]	4	C or better in Math 107 or 108, or placement test
◆ Chem 105 Chem I [PSCI]	4	Math 107 or 108c//, HS chem or 101
MSE 110 Intro Materials Sci	2	none
History 105 [ROOT]	3	none
Creative & Professional Arts [ARTS]	3	See catalog

FRESHMAN YEAR - 2nd semester		
Course	cr hrs	prerequisite
◆ Math 172 Calc II	4	C or better in Math 171
◆ Chem 106 Chem II	4	Chem 105; C or better in Math 107 or 108, or Math 171 placement
◆ Phys 201 Engr Physics I	4	C or better in Math 171 or Math 172 placement
Engl 101 Comp [WRTG]	3	placement test or Engl 100
Biological Sciences Elective [BSCI]	3	See catalog

SOPHOMORE YEAR - 1st semester		
Math 220 Linear Algebra	2	Math 171 or c//
Math 273 Calculus III	2	C or better in Math 172
Phys 202 Engr Physics II	4	C or better in Phys 201; C or better in Math 172 or placement in Math 273
CE 211 Statics	3	Math 172 or c//, Phys 201 or c//
MSE 201 Materials Science	3	Chem 106, Phys 201 or c//
Humanities [HUM]	3	See Catalog

SOPHOMORE YEAR - 2nd semester		
Math 315 Differential Equations	3	C or better in Math 273; Math 220 with C or better or c//
ME 220 Materials Laboratory	1	CE 215 or c//
CE 215 Mechanics of Materials	3	CE 211 with C or better
EE 221 or CptS 121	2/4	See catalog
EconS 102 Macroecon [SSCI]	3	none
Diversity [DIVR]	3	See catalog

*Must complete Writing Portfolio by the end of the Sophomore year.*

JUNIOR YEAR - 1st semester		
ME 310 Manufacturing Proc.	2	MSE 201
MSE 302 Electronic Materials	3	Chem 105, Phys 202 or c//
MSE 316 Chem&Phys Reactions	3	MSE 201
MSE 320 Matls struct prop. Lab [M]	3	MSE 201 or c//
MSE 402 Polymeric Materials	3	MSE 201
Stat/Math 360 or 370 Statistics	3	Math 172

JUNIOR YEAR - 2nd semester		
<b><i>apply for graduation by the end of this semester</i></b>		
EE 304 Circuits	2	Math 315 or c//
MSE 321 Matls Characterization	3	MSE 201
MSE 323 Matls Character Lab	2	MSE 321 or c//
MSE 401 Metallic Materials	3	MSE 201
MSE 403 Ceramic Materials	3	MSE 201

SENIOR YEAR - 1st semester		
MSE 413 Mechanics of Solids	3	CE 215, MSE 201
MSE 425 Senior Thesis I [M]	3	MSE 320, 323, certified senior in MSE
ME 416 Senior Design [CAPS]	3	ME 348, 404, 414 or c//, certified in Engr.
Engr & Science Elective*	3	See catalog

SENIOR YEAR - 2nd semester		
Engl 402 Tech Writing [WRTG]	3	Engl 101, Junior standing
MSE Elective***	3	See catalog
Technical Elect **	3	See catalog
Engr & Science Elective*	3	See catalog

◆ Courses for certification (grade of "C" or better in each course)

\* Six credits from BIOLOGY 301, BIO ENG 481, CE 341, EE 214, ME 116 and ME 216 combined, ME 212, 301, 303, 304, 313, 316, 348, 414, 449, 461, 472, CHEM 331, 332, 336, 345, 346, 347, PHYSICS 303, 304, 463, MBIOS 303, any 400 or 500-level MSE, or any 500-level ME (except Integrated Capstone course in MSE)

\*\* Upper-division CE, CH E, CHEM, CPT S, E E, MATH, MSE, ME, PHYSICS, or STAT course (except ME 416).

\*\*\* Any 400 or 500-level MSE course