

Name: _____

WORKSHEET
MATERIALS SCIENCE AND ENGINEERING UNDERGRADUATE CURRICULUM
 Effective: Fall, 2008

FRESHMAN YEAR – FALL						Semester Hours	General Ed. Social Sciences (6 hours) <input type="checkbox"/> Econ 201 <hr/> Cult. & Civ. (6 hours) <hr/> Art & Humanities (6 hours) <hr/>
Eng.101 (3) English Composition	Chem. 120 (4) General Chemistry	Math 141 (4) Calculus I	EF 151 (4) Engineering Approaches	EF 105 (1) EF Laboratory		16	
SPRING							
Eng.102 (3) English Composition	Math 142 (4) Calculus II	EF 152 (4) Fund. of Engr. Mechanics	Chem 130 (4) General Chemistry II	MSE 101 (1) Advances in MSE		16	
SOPHOMORE YEAR - FALL							
MSE 290 (0) Materials Seminar	MSE 201 (3) Intro. to MSE	Math 241 (4) Calculus III	Physics 231 (3) Electricity & Magnetism	MSE 260 (3) Materials Thermo.	Gen. Ed. (3) ¹ Elective	17	
SPRING							
MSE 291 (1) Materials Seminar	Math 200 (1) Matrix Computations	Math 231 (3) Differential Equations	Physics 232 (4) Waves, Optics, & Mod. Phys.	MSE 250 (4) Kinetics and Transport	Gen. Ed. (3) ¹ Elective	15	
JUNIOR YEAR - FALL							
MSE 300 (1) Materials Lab Procedures	Stats 251 (3) Stats for Sci & Eng.	MSE 320 (3) Diffusion and Phase Trans.	MSE 340 (3) Prin. of Polymeric Mat	MSE 360 (3) Prin. of Ceramic Mat	Gen. Ed. (3) ¹ Elective	16	
SPRING							
MSE 304 (1) Prin. of Materials Lab	MSE 390 (3) Prin. Of Metallic Mat	MSE 370 (3) Materials Processing	MSE 302 (3) Mech. Beh. Of Materials	MSE 350 (3) Prin. Elec & Opt Mat. (3)	Technical Elective (3) ^{2,3}	16	
SENIOR YEAR - FALL							
MSE 4XX (3)	MSE 405 (4) ⁴ Structural Char. of Materials	MSE 480 (3) Mat. Selection in Design	Gen. Ed. (3) ¹ Elective	EE 301 (3) Circuits		16	
SPRING							
ME 402 (1) Fundamentals of Engineering	MSE 4XX (3)	Technical Elective (3) ³	MSE 489 (3) ⁵ Mat. Design	Gen. Ed. (3) ¹ Elective	Gen. Ed. (3) ¹ Elective	16	

Total 128

1. General Education courses must include Economics 201
2. Chem. 350, Organic Chemistry, is strongly recommended for those students primarily interested in Polymer Engineering.
3. ME 321 is strongly recommended to help prepare students for the FE exam.
4. Approved "writing intensive" (WC) course for General Education requirement.
5. Approved "oral communication" (OC) course for General Education requirement.

MSE 4XX Electives

410 Electronic Devices (3)	445 Polym. Eng. & Sci. Laboratory (3)	484 Intro. Maintenance Eng. (3)
421 Mech. Behavior II (3)	470 Environmental Degrad. of Mats (3)	485 Advanced Biomaterials (3)
425 Welding Metallurgy (3)	472 Fund. Prin. Composite Mats (3)	486 Cell and Tissue-Biomaterials (3)
429 Intro. Ceramic Mtr. Composites (3)	474 Biomaterials (3)	494 Special Projects Lab (3)
432 Defects in Crystals (3)	476 Intermetallics & and Composites (3)	495 Thesis (3)