MATERIALS SCIENCE & ENGINEERING

Sample Four-Year Schedule

Required prerequisite(s) indicated in parentheses & notes

Must earn at least a grade of "C" in each course except for most University Core courses.

FRESHMAN YEAR

FALL		SPRING	
MATH 1710, Calculus I (see note 1)	4	MATH 1720, Calculus II (MATH 1710)	3
CHEM 1410, General Chemistry I (see note 2)	3	CHEM 1420, General Chemistry II (CHEM 1410, 1430)	3
CHEM 1430, General Chemistry I Lab (see note 2)	1	PHYS 1710, Mechanics (MATH 1710)	3
Communication Core course	3	PHYS 1730, Mechanics Lab (MATH 1710)	1
MTSE 1100, Discover How & Why Materials Matter	3	TECM 2700, Tech. Writing (Communication Core)	3
Total Hours	14	University Core course	3
		Total Hours	16

SOPHOMORE YEAR

FALL		SPRING	
MATH 2730, Multivariable Calculus (MATH 1720)	3	MATH 3410, Differential Equations (MATH 1720)	3
PHYS 2220, E. & M. (MATH 1720, PHYS 1710, 1730)	3	PHYS 3010, Modern Physics (PHYS 2220, 2240)	3
PHYS 2240, E. & M. Lab (MATH 1720, PHYS 1710, 1730)	1	MTSE 3001, Fundamentals II (prereq/coreq MTSE 3000)	3
ENGR 2301, Statics (MATH 1710, PHYS 1710, 1730)	3	University Core course	3
MTSE 3000, Fundamentals I (CHEM 1410, 1430)	3	University Core course	3
University Core course	3	Total Hours	15
Total Hours	16		

JUNIOR YEAR

FALL		SPRING	
MTSE 3010, Bonding & Structure (MTSE 3000)	3	MTSE 3050, Mechanical Properties (MTSE 3000)	3
MSTE 3020, Micro & Characterization (MTSE 3000)	3	MTSE 3060, Phase Transform. (MTSE 3010, 3030, 3040)	3
MTSE 3030, Thermo & Phase Diagrams (MTSE 3000)	3	MTSE 3070, Elect., Opt,, & Mag, Properties (MTSE 3000)	3
MTSE 3040, Transport Phen. (MTSE 3000, MATH 3410)	3	MTSE 3080, Materials Processing (MTSE 3040)	3
MTSE 3090, Laboratory I (MTSE 3000)	1	MTSE 3100, Laboratory II (MTSE 3090)	1
University Core course	3	University Core course	3
Total Hours	16	Total Hours	16

SENIOR YEAR

FALL		SPRING	
MTSE 4010, Phys. Metallurgy Prin. (MTSE 3010, 3030, 3040)	3	MTSE Advanced Level MTSE Elective (see note 4)	3
MTSE 4030, Ceramic Sci. & Engr. (MTSE 3010, 3020, 3040)	3	MTSE Advanced Level MTSE Elective (see note 4)	3
MTSE 4050, Polymer Sci. & Engr. (MTSE 3000)	3	MTSE 4060, Selection & Perform. (MTSE 3030, 3040, 3050)	3
MTSE 4090, Senior Design I (see note 3)	3	MTSE 4100, Senior Design II (MTSE 4090)	3
University Core course	3	Total Hours	12
Total Hours	15		

Notes:

Note 1: MATH 1710 requires one of the following as prerequisite: completion of MATH 1650 with a grade of "C" or higher; or Freshman Math Group Level 3; or approval authorized by score via mathematics testing; or earned credit for a math course at or above the MATH 1710 level.

Note 2: CHEM 1410 & 1430 requires MATH 1100, College Algebra, or placement into a higher level math course as prerequisite.

Note 3: MTSE 4090 requires completion of MTSE 3010, 3020, 3030, 3040, 3050, 3070, 3080 as prerequisite.

Note 4: Must complete prerequisite(s) for each Advanced Elective MTSE course. Graduate Track option available.

Must earn at least a grade of "C" and a minimum 2.5 GPA in Communications Core, TECM 2700, MATH 1710, MATH 1720, CHEM 1410, CHEM 1430, CHEM 1420, PHYS 1710, PHYS 1730, MTSE 1100, & MTSE 3000 as foundations to enroll in advanced courses.

This is an unofficial sample schedule. Requirements, prerequisites, etc. may change. Students should meet with an advisor each semester for individual scheduling, program decisions, etc. Engineering admissions requirements must be met & a degree audit must be created in order to progress in the program to a timely graduation.