

# MATERIALS SCIENCE & ENGINEERING

Sample Three-Year Schedule

Required prerequisite(s) indicated in parentheses & notes

YEAR ONE			
<b>FALL</b>		<b>SPRING</b>	
<b>MATH 2415 or 2315, Calculus III</b>	3	MATH 3410, Differential Equations (MATH 1720)	3
<b>PHYS 2426 or 2316/2326, University Physics II</b>	4	PHYS 3010, Modern Physics (PHYS 2220, 2240)	3
<b>ENGL 2311, Technical Writing</b>	3	MTSE 3000, Fundamentals I (CHEM 1410, 1430)	3
<b>ENGR 2301, Statics</b>	3	MTSE 3001, Fundamentals II (coreq MTSE 3000)	<u>3</u>
<b>ENGR 1201, Intro. To Engineering</b>	<u>2</u>	Total Hours	12
Total Hours	15		
YEAR TWO			
<b>FALL</b>		<b>SPRING</b>	
MTSE 3010, Bonding & Structure (MTSE 3000)	3	MTSE 3050, Mechanical Properties (MTSE 3000)	3
MTSE 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)	<u>1</u>	MTSE 3100, Laboratory II (MTSE 3090)	<u>1</u>
Total Hours	13	Total Hours	13
YEAR THREE			
<b>FALL</b>		<b>SPRING</b>	
MTSE 4010, Phys. Metallurgy Prin. (MTSE 3010, 3030, 3040)	3	MTSE Advanced Level MTSE Elective (see note 2)	3
MTSE 4030, Ceramic Sci. & Engr. (MTSE 3010, 3020, 3040)	3	MTSE Advanced Level MTSE Elective (see note 2)	3
MTSE 4060, Selection & Perform. (MTSE 3030, 3040, 3050)	3	MTSE 4050, Polymer Science & Engr. (MTSE 3000)	3
MTSE 4090, Senior Design I (see note 1)	<u>3</u>	MTSE 4100, Senior Design II (MTSE 4090)	<u>3</u>
Total Hours	12	Total Hours	12

Notes:

Note 1: MTSE 4090 requires completion of MTSE 3010, 3020, 3030, 3040, 3050, 3070, 3080 as prerequisite.

Note 2: Must complete prerequisite(s) for each Advanced Elective MTSE course. See your advisor for approved course options.

**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.**

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

**Green text is indicative of Community College numbering.**

Credits Which Could Be Earned Prior to Enrollment at  
UNT – AP, IB, CLEP, DC, Transfer:

Communications Core **ENGL 1301**  
HIST 2610 **HIST 1301**  
HIST 2620 **HIST 1302**  
PSCI 2305 **GOVT 2305**  
PSCI 2306 **GOVT 2306**  
Creative Arts Core  
Language Philosophy Culture Core  
Social Behavioral Sciences Core

Credits Which Should Be Earned Prior to Enrollment at  
UNT – AP, IB, CLEP, DC, Transfer:

MATH 1710 **MATH 2313 or 2413**  
MATH 1720 **MATH 2314 or 2414**  
CHEM 1410, 1430 **CHEM 1411**  
CHEM 1420 **CHEM 1412**  
PHYS 1710, 1730 **PHYS 2425 or 2325/2125**

**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.**