

Materials Science and Engineering

2020-2021 Catalog: Sample Four-Year Schedule

	Fall Semester	Course Title	Credit Hours	Term(s) Offered	Spring Semester	Course Title	Credit Hours	Term(s) Offered
Year One	*MATH 1710	Calculus I <i>Pre-req: MATH 1650 or Test Placement</i>	4	F., Sp., Su.	*MATH 1720	Calculus II <i>Pre-req: MATH 1710</i>	3	F., Sp., Su.
	*CHEM 1410	General Chemistry I <i>Pre-req: MATH 1100 or higher</i>	3	F., Sp., Su.	*PHYS 1710	Mechanics <i>Pre-req: MATH 1710</i>	3	F., Sp., Su.
	*CHEM 1430	General Chemistry I Lab <i>Co/Pre-req: CHEM 1410</i>	1	F., Sp., Su.	*PHYS 1730	Mechanics Lab <i>Co/Pre-req: PHYS 1710</i>	1	F., Sp., Su.
	*MTSE 1100	Discover How and Why Materials Matter	3	F.	*CHEM 1420	General Chemistry II <i>Pre-req: CHEM 1410, 1430</i>	3	F., Sp.
	Comm. Core	Options on Page 29 in Academic Guide or mydegreeaudit.unt.edu	3	F., Sp., Su.	*TECM 2700	Technical Writing <i>Pre-req: Communication Core</i>	3	F., Sp., Su.
	Total Hours		14		University Core	Options on Page 29 in Academic Guide or mydegreeaudit.unt.edu	3	F., Sp., Su.
					Total Hours		16	

Year Two	MATH 2730	Multivariable Calculus <i>Pre-req: MATH 1720</i>	3	F., Sp., Su.	MATH 3410	Differential Equations <i>Pre-req: MATH 1720</i>	3	F., Sp., Su.
	PHYS 2220	Electricity & Magnetism <i>Pre-reqs: MATH 1720 & PHYS 1710/1730</i>	3	F., Sp., Su.	PHYS 3010	Modern Physics <i>Pre-reqs: PHYS 2220, 2240</i>	3	F., Sp.
	PHYS 2240	Electricity & Magnetism Lab <i>Co/Pre-req: PHYS 2220</i>	1	F., Sp., Su.	MTSE 3001	Fundamentals II <i>Co/Pre-req: MTSE 3000</i>	3	Sp.
	*MTSE 3000	Fundamentals I <i>Pre-req: CHEM 1410, 1430</i>	3	F., Sp.	University Core	Options on Page 29 in Academic Guide or mydegreeaudit.unt.edu	3	F., Sp., Su.
	ENGR 2301	Statics <i>Pre-reqs: MATH 1710, PHYS 1710, 1730</i>	3	F., Sp., Su.	University Core	Options on Page 29 in Academic Guide or mydegreeaudit.unt.edu	3	F., Sp., Su.
	University Core	Options on Page 29 in Academic Guide or mydegreeaudit.unt.edu	3	F., Sp., Su.	Total Hours		15	
	Total Hours		16					

Year Three	MTSE 3010	Bonding and Structure <i>Pre-req: MTSE 3000</i>	3	F.	MTSE 3050	Mechanical Properties <i>Pre-req: MTSE 3000</i>	3	Sp.
	MTSE 3020	Microstructure and Characterization <i>Pre-req: MTSE 3000</i>	3	F.	MTSE 3060	Phase Transformations <i>Pre-req: MTSE 3010, 3030, 3040</i>	3	Sp.
	MTSE 3030	Thermodynamics and Phase Diagrams <i>Pre-req: MTSE 3000</i>	3	F.	MTSE 3070	Elect., Optical, Magnetic Properties <i>Pre-req: MTSE 3000</i>	3	Sp.
	MTSE 3040	Transport Phenomena <i>Pre-req: MTSE 3000, MATH 3410</i>	3	F.	MTSE 3080	Materials Processing <i>Pre-req: MTSE 3040</i>	3	Sp.
	MTSE 3090	Laboratory I <i>Pre-req: MTSE 3000</i>	1	F.	MTSE 3100	Laboratory II <i>Pre-req: MTSE 3090</i>	1	Sp.
	University Core	Options on Page 29 in Academic Guide or mydegreeaudit.unt.edu	3	F., Sp., Su.	University Core	Options on Page 29 in Academic Guide or mydegreeaudit.unt.edu	3	F., Sp., Su.
	Total Hours		16		Total Hours		16	

Year Four	MTSE 4010	Physical Metallurgy Principles <i>Pre-reqs: MTSE 3010, 3030, 3040</i>	3	F.	MTSE 4050	Polymer Science and Engineering <i>Pre-req: MTSE 3000</i>	3	Sp.
	MTSE 4030	Ceramic Science and Engineering <i>Pre-reqs: MTSE 3010, 3020, 3040</i>	3	F.	MTSE 4100	Senior Design II <i>Pre-req: MTSE 4090</i>	3	Sp.
	MTSE 4060	Selection and Performance <i>Pre-reqs: MTSE 3030, 3040, 3050</i>	3	F.	MTSE Elective	MTSE 4020 or MTSE 4040 or MTSE 4070. Must complete pre-reqs.	3	Sp.
	MTSE 4090	Senior Design I <i>Pre-reqs: MTSE 3010, 3020, 3030, 3040, 3050, 3070, 3080</i>	3	F.	MTSE Elective	MTSE 4020 or MTSE 4040 or MTSE 4070. Must complete pre-reqs.	3	Sp.
	University Core	Options on Page 29 in Academic Guide or mydegreeaudit.unt.edu	3	F., Sp., Su.	Total Hours		12	
	Total Hours		15					

Courses in **Bold** = Destination courses required to transition to a full-major. Minimum grade of "C" and 2.5 GPA required for completion.
 Courses with * = Foundations courses required to progress to advanced level courses. Minimum grade of "C" required for completion.
 Courses with subject abbreviations of ENGL, TECM, MATH, CHEM, PHYS, ENGR, and MTSE require minimum grade of "C" for completion and/or prerequisite.

This is an unofficial sample schedule. Requirements, prerequisites, corequisites, and term offerings may change. You should check your degree audit at mydegreeaudit.unt.edu each term. You should meet with your advisor each term to discuss individual scheduling, program decisions, etc.