

Bachelor of Science in Materials Science & Manufacturing
General Concentration
Freshman Curriculum Planning Guide and Four-Year Plan
Fayetteville State University
(2026-2027)

University College Core Curriculum (39 Credits)	Course	Cr.	Term	Grade
Transitional Studies – University Studies (2 Credits)¹ <i>Select one option from (UNIV 101/102) or UNIV 110 or UNIV 111 or UNIV 112</i>		2		
Transitional Studies – Life Skills (2 Credits) <i>Select two credits from the following: ENTR 100 or FINC 100 or GEOG 110 or HEED 112 or HEED 113 or PEDU 101 or PEDU 107 or PEDU 112 or PEDU 120 or PEDU 122 or PEDU 130 or PEDU 132 or PEDU 140</i>		2		
Communication Skills – Written Communication (3 Credits) – ENGL 110	ENGL 110	3		
Information Literacy (3 Credits) – ENGL 120	ENGL 120	3		
Communication Skills – Oral Communication (3 Credits) <i>Select one from the following: BADM 215 or SPEE 200</i>		3		
Reasoning Skills – Critical Thinking (3 Credits)² <i>Select one from the following: PHIL 110 or PHIL 220</i>		3		
Reasoning Skills – Quantitative Reasoning (3 Credits)³ <i>MATH 131</i>	MATH 131	3		
Scientific Literacy – Natural Sciences (8 Credits)⁴ <i>CHEM 141 and CHEM 141L and CHEM 161 and CHEM 161L</i>	CHEM 141	3		
	CHEM 141L	1		
	CHEM 161	3		
	CHEM 161L	1		
Scientific Literacy – Social Sciences (3 Credits) <i>CRJC 210 or ECON 211 or ECON 212 or ENEC 270 or GEOG 210 or HIST 212 or HIST 271 or POLI 200 or POLI 210 or POLI 220 or PSYC 210 or SOCI 210</i>		3		
Humanities and Creative Arts (3 Credits) <i>Select one from the following: ART 210 or COMM 220 or ENGL 220 or ENGL 223 or ENGL 240 or ENGL 250 or ENGL 253 or HIST 210 or HUMN 211 or HUMN 212 or HUMN 213 or HUMN 215 or MUSI 210 or MUSI 225 or MUSI 260 or PHIL 210 or RELI 215 or THEA 203</i>		3		
Global Literacy (3 Credits)⁵ <i>Select one from the following: ANTH 210 or ART 150 or ART 215 or BADM 210 or CHIN 110 or CHIN 120 or ENGL 211 or ENGL 212 or ENGL 212 or FREN 110 or FREN 120 or GEOG 220 or HIST 110 or HIST 120 or HIST 270 or PHIL 211 or POLI 230 or SOCI 150 or SPAN 110 or SPAN 112 or SPAN 120 or SPAN 122 or SPAN 211 or THEA 242 or YORU 110 or YORU 120</i>		3		
Ethics and Civic Engagement² (3 Credits) <i>Select three credits from the following: BADM 220 or CRJC 203 or EDUC 211 or ENEC 210 or ENGL 232 or ENGL 233 or (ETCE 101/102/103) or ETCE 200 or GEOG 270 or HCM 200 or HIST 211 or PHIL 120 or PHIL 212 or PHIL 250 or PNUR 210 or POLI 150 or SPTM 210 or SWRK 220</i>		3		

Notes

- UNIV 101-UNIV 102 required for all first-time students; UNIV 110 required for transfer students with fewer than 30 transfer credits. Students do not earn credit if requirement is waived. UNIV 111 may be required based on academic performance
- Not required for students with 60+ transfer credits. Students do not earn credit if requirement is waived
- MATH 121 may be required based on profile scores. Some core courses require a one-hour lab.
- At least one natural science class must include its associated lab. Some majors require two lab sciences, increasing requirement to 8 credits
- Not required for students with 30 or more transfer credits from a foreign institution. Students do not earn credit if requirement is waived.

Bachelor of Science in Materials Science and Manufacturing General Concentration Program Requirements (81 Credits)				
	Course	Cr.	Term	Grade
Correlative Requirement Courses (24 Credits)	CSC 105	3		
	NSCI 100	1		
	MATH 142	4		
	MATH 241	4		
	PHYS 125	3		
	PHYS 125L	1		
	PHYS 126	3		
	PHYS 126L	1		
	CHEM 223	3		
	CHEM 223L	1		
MS&M Core Courses (33 Credits)	MATS 200	1		
	MATS 202	3		
	MATS 204	3		
	MATS 450	3		
	MNFG 250	3		
	MNFG 300	3		
	MNFG 300L	1		
	MNFG 350	3		
	MNFG 360	3		
	MNFG 400	3		
	MNFG 440	1		
	MNFG 470	3		
	MNFG 490	3		
Concentration Courses (18 Credits)	MATS 260	3		
	MATS 301	3		
	MATS 311	3		
	MATS 410	3		
	MATS 423	3		
	MNFG 480	3		
Elective Courses (6 Credits)	MATS 214	3		
	MATS 321	3		
	MATS 360	3		
	MATS 460	3		
	MATS 212/PHYS 212	4		
	MATS 312/PHYS 311	4		
	MATS 350/PHYS 350	3		
Total Credits		120		

Other Program Requirements

- Any first-year student interested in graduating with a B.S. in Materials Science & Manufacturing degree can enter Fayetteville State University as a pre-materials major. Students with a grade of "C" or higher in CHEM 161 and with cumulative GPA of 2.0 or better may be admitted into the Bachelor of Science in Materials Science & Manufacturing program.
- Students must have a grade of "C" or higher in all courses and a cumulative GPA of 2.0 or higher in order to graduate.

Four-Year Plan

This Plan illustrates how students can meet degree course requirements in four years. Some courses listed below may be taken in an alternate order. Courses fulfilling requirements are listed on the previous pages. For information about prerequisites and other program requirements, consult the appropriate Catalog Program of Study and an advisor. Students should work with advisor to create and update an individual plan in Degree Works.

Year 1 Fall		
Requirement	Course	Cr
Core – Written Communication	ENGL 110	3
Core – Quantitative Reasoning	MATH 131	3
Program – Correlative Requirement	NSCI 100	1
Core – University Studies	UNIV 101	1
Core – Critical Thinking		3
Core – Humanities and Creative Arts		3
Core – Transitional Studies – Life Skills		2
Total:		16

Year 1 Spring		
Requirement	Course	Cr
Program – Correlative Requirement	CSC 105	3
Core – Scientific Literacy	CHEM 141	3
Core – Scientific Literacy	CHEM 141L	1
Core – Information Literacy	ENGL 120	3
Core – University Studies	UNIV 102	1
Core – Global Literacy		3
Total:		14

Year 2 Fall		
Requirement	Course	Cr
Core – Scientific Literacy	CHEM 161	3
Core – Scientific Literacy	CHEM 161L	1
Program – Correlative Requirement	MATH 142	4
Program – MS&M Core Course	MATS 200	1
Program – MS&M Core Course	MATS 202	3
Core – Social Sciences		3
Total:		15

Year 2 Spring		
Requirement	Course	Cr
Program – Correlative Requirement	MATH 241	4
Program – MS&M Core Course	MATS 204	3
Program – MS&M Core Course	MNFG 250	3
Program – Correlative Requirement	PHYS 125	3
Program – Correlative Requirement	PHYS 125L	1
Core – Ethics & Civic Engagement		3
Total:		17

Year 3 Fall		
Requirement	Course	Cr
Program – Correlative Requirement	PHYS 126	3
Program – Correlative Requirement	PHYS 126L	1
Program – Correlative Requirement	CHEM 223	3
Program – Correlative Requirement	CHEM 223L	1
Program – Concentration	MATS 260	3
Program – MS&M Core Course	MNFG 300	3
Program – MS&M Core Course	MNFG 300L	1
Total:		15

Year 3 Spring		
Requirement	Course	Cr
Program – Concentration	MATS 301	3
Program – Concentration	MATS 311	3
Program – MS&M Core Course	MNFG 350	3
Program – MS&M Core Course	MNFG 360	3
Core – Oral Communication		3
Total:		15

Year 4 Fall		
Requirement	Course	Cr
Program – MS&M Core Course	MNFG 400	3
Program – Concentration	MATS 410	3
Program – Concentration	MATS 423	3
Program – MS&M Core Course	MNFG 440	1
Program – MS&M Core Course	MATS 450	3
Elective		3
Total:		16

Year 4 Spring		
Requirement	Course	Cr
Program – MS&M Core Course	MNFG 470	3
Program – Concentration	MNFG 480	3
Program – MS&M Core Course	MNFG 490	3
Elective		3
Total:		12