

Bachelor of Science in Materials Science & Manufacturing
General Concentration
Transfer Curriculum Planning Guide and Baccalaureate Degree Plan
Fayetteville State University
(2026-2027)

University College Core Curriculum (39 Credits)	Course Number ¹	Cr.	FSU Equivalent
Transitional Studies – University Studies (2 Credits) <i>Select one option from (UNIV 101/102) or UNIV 110 or UNIV 111 or UNIV 112</i>	ACA 122 (1 cr.)	2	Waived with 30 credit hours 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>	HEA 110 or any PED course	2	Waived with AA/AS, NOT with AAS/AGE ^{2,3}
Communication Skills – Written Communication (3 Credits) – ENGL 110	ENG 111	3	ENG 110
Information Literacy (3 Credits) – ENGL 120	ENG 112	3	ENG 120
Communication Skills – Oral Communication (3 Credits) BADM 215 SPEE 200	COM 120 or COM 231	3	BADM 215 or SPEE 200
Reasoning Skills – Critical Thinking (3 Credits) <i>Select one from the following: PHIL 110 or PHIL 220</i>	HUM 115	3	Waived with 60 credit hours ²
Reasoning Skills – Quantitative Reasoning (3 Credits) <i>Select one from the following: MATH 130 or MATH 131</i>	MAT 172	3	MATH 130 or MATH 131
Scientific Literacy – Natural Sciences (8 Credits)⁴ <i>Select from the following: CHEM 141/141L and CHEM 161/161L</i>	CHM 151	4	CHEM 141/141L
	CHM 152	4	CHEM 161/161L
Scientific Literacy – Social Sciences (3 Credits) <i>CRJC 210 or ECON 211 or ECON 212 or GEOG 210 or HIST 212 or HIST 271 or POLI 200 or POLI 210 or POLI 220 or POLI 270 or PSYC 210 or SOCI 210</i>	Social science elective	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 MUSI 210 or MUSI 225 or MUSI 260 or PHIL 210 or RELI 215 or THEA 203</i>	Hum/Fine Arts elective	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 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	Waived with AA/AS, NOT with AAS/AGE ²
Ethics and Civic Engagement (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	Waived with 60 credit hours ²

Notes

- 1 Courses are for the North Carolina Community College (NCCC) system. Other courses may satisfy requirement.
- 2 Students do not earn credit if any requirement is waived. All students must earn at least 120 credits to graduate.
- 3 NCCC Associate in Arts (AA), Associate in Science (AS), Associate in Applied Science (AAS), Associate in General Education (AGE). Per NC Comprehensive Articulation Agreement, NCCC graduates with AA or AS have completed FSU general education requirements. NCCC general education courses not used for core may be applied to free electives or used to reach 120 credits. AAS, AFA, and other specific degrees may be governed by articulation agreements.
- 4 At least one Natural Science class must include a lab.
- 5 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 Number	Cr.	FSU Equivalent
Correlative Requirement Courses (24 Credits)			CSC 105
			NSCI 100
	MAT 271	4	MATH 142
	MAT 272	4	MATH 241
	PHY 251	4	PHYS 125/125L
			PHYS 126/126L
	CHM 251	4	CHEM 223/223L
MS&M Core Courses (33 Credits)			MATS 200
			MATS 202
			MATS 204
			MATS 450
			MNFG 250
			MNFG 300
			MNFG 300L
			MNFG 350
			MNFG 360
			MNFG 400
			MNFG 440
			MNFG 470
			MNFG 490
Concentration: (18 Credits)			MATS 260
			MATS 301
			MATS 311
			MATS 410
			MATS 423
			MNFG 480
Elective Courses (6 Credits)			MATS 214
			MATS 321
			MATS 360
			MATS 460
			MATS 212/PHYS 212
			MATS 312/PHYS 311
			MATS 350/PHYS 350
Waived Core Requirements <i>The credits in this area increase as requirements are waived without credit in the university core – typically 7 credits to equal 120 credits overall; add extra lines as needed.</i>			
Total Credits			
Transfer Credits			

Baccalaureate Degree Plan (A.A.)

This Plan illustrates how students from North Carolina community colleges can meet degree course requirements in four years. Courses and requirements in Year 1 and Year 2 are from the NC community college catalog. Courses and requirements in Year 3 and Year 4 are from the FSU catalog. 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.

Year 1 Fall		
Requirement	Course	Cr
Academic Transition	ACA 122	1
English Composition	ENG 111	3
Humanities/Fine Arts		3
Social/Behavioral Sciences		3
Math	MAT 171	4
Total:		14

Year 1 Spring		
Requirement	Course	Cr
Communications	COM 120 or COM 231	3
English Composition	ENG 112	3
Natural Sciences	CHM 151	4
Social/Behavioral Sciences		3
Additional General Education	MAT 172	4
Total:		17

Year 2 Fall		
Requirement	Course	Cr
Social/Behavioral Sciences		3
Additional General Education	MATH 271	4
Additional General Education	BIO 111	4
Pre-Major/Elective	CHM 152	4
Total:		15

Year 2 Spring		
Requirement	Course	Cr
Humanities/Fine Arts		3
Pre-Major/Elective	MAT 272	4
Pre-Major/Elective	CHM 251	4
Pre-Major/Elective	PHY 251	4
Total:		15

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

Notes

- * Indicates a course recommended by the program. Other courses listed under the requirement may be used.

Baccalaureate Degree Plan (A.S.)

This Plan illustrates how students from North Carolina community colleges can meet degree course requirements in four years. Courses and requirements in Year 1 and Year 2 are from the NC community college catalog. Courses and requirements in Year 3 and Year 4 are from the FSU catalog. 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.

Year 1 Fall		
Requirement	Course	Cr
Academic Transition	ACA 122	1
English Composition	ENG 111	3
Precalculus Algebra	MAT 171	4
Natural Sciences	BIO 111	4
Communication/Humanities/Fine Arts		3
Total:		15

Year 1 Spring		
Requirement	Course	Cr
English Composition	ENG 112	3
Math	MAT 172	4
Natural Sciences	CHM 151	4
Social/Behavioral Sciences		3
Humanities/Fine Arts		3
Total:		17

Year 2 Fall		
Requirement	Course	Cr
Communication/Humanities/Fine Arts		3
Additional General Education	MAT 271	4
Additional General Education		3
Pre-Major/Elective	CHM 152	4
Total:		14

Year 2 Spring		
Requirement	Course	Cr
Social/Behavioral Sciences		3
Additional General Education	MAT 272	4
Pre-Major/Elective	CHM 251	4
Pre-Major/Elective	PHY 251	4
Total:		15

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

Notes

- * Indicates a course recommended by the program. Other courses listed under the requirement may be used.