Bachelor of Science in Computer Science
Geospatial Data Analytics Concentration
Freshman Curriculum Planning Guide and Four-Year Plan
Fayetteville State University
(2021-2022)

University College Core Curriculum (39 Credits)	Course	Cr.	Term	Grade
Transitional Studies – University Studies (2 Credits) [1] *Select one option from (UNIV 101/102) or UNIV 110 or UNIV 111 or UNIV 112*		2		
Transitional Studies – Life Skills (2 Credits) *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*		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) *BADM 215 or SPEE 200*	BADM 215 or SPEE 200	3		
Reasoning Skills – Critical Thinking (3 Credits) [2] *Select one from the following: PHIL 110 or PHIL 220*	PHIL 110 or PHIL 220	3		
Reasoning Skills – Quantitative Reasoning (3 Credits) [3] *Select one from the following: MATH 129 and MATH 130 or MATH 131*	MATH 131 (or MATH 129 and MATH 130	3		
Scientific Literacy – Natural Sciences (8 Credits) [4] *Select from the following:* *(BIOL 150 and BIOL 150L and BIOL 160 and BIOL 160L) or (CHEM 141 and CHEM 141L and CHEM 161 and CHEM 161L) or (PHYS 125 and PHYS 125L and PHYS 126 and PHYS 126L)*		4 4		
Scientific Literacy – Social Sciences (3 Credits) *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*		3		
Humanities and Creative Arts (3 Credits) *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*		3		
Global Literacy (3 Credits) [5] *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 FLBL 200 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*		3		
Ethics and Civic Engagement (3 Credits) *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*		3		

Notes

1. 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

2. Not required for students with 60+ transfer credits. Students do not earn credit if requirement is waived

3. MATH 121 may be required based on profile scores. Some core courses require a one-hour lab.

4. At least one natural science class must include its associated lab. Some majors require two lab sciences, increasing requirement to 8 credits

5. Not required for students with 30 or more transfer credits from a foreign institution. Students do not earn credit if requirement is waived.

Computer Science Program Requirements (81 Credits)	Course	Cr.	Term	Grade
Computer Science Courses (47 Credits): *CSC 120 and CSC 130 and CSC 201 and CSC 205 and CSC 207 and CSC 220 and CSC 303 and CSC 305 and CSC 320 and CSC 322 and CSC 351 and CSC 405 and CSC 431 and CSC 470 and CSC 490*	CSC 120	4		
	CSC 130	4		
	CSC 201	3		
	CSC 205	3		
	CSC 207	3		
	CSC 220	3		
	CSC 303	3		
	CSC 305	3		
	CSC 320	3		
	CSC 322	3		
	CSC 351	3		
	CSC 405	3		
	CSC 431	3		
	CSC 470	3		
	CSC 490	3		
Computer Science Requirement (3 Credits) *CSC 202 or CSC 204*	CSC 202 or CSC 204	3		
Geospatial Science Courses (3 credits) *GEOG 320*	GEOG 320	3		
Math and Statistics Requirement (17 credits) *MATH 142 and MATH 150 and MATH 241 and MATH 251 and STAT 270*	MATH 142	4		
	MATH 150	3		
	MATH 241	4		
	MATH 251	3		
	STAT 270	3		
Computer Science Elective Courses (3 Credits) *Select 3 credits from GEOG 325 or MATH 242 or MATH 260 or CSC 300 or higher or MATH 300 or higher or PHYS 200 or higher, or STAT 300 or higher* *Students must enroll in the GEOINT certificate program and complete the program to be eligible to have GEOG 325 counted towards computer science major requirements*		3		
Science Elective (4 Credits) *Select at least four credits in addition to core requirements from the following:* *(BIOL 150 AND BIOL 150L) or (BIOL 160 AND BIOL 160L) or BIOL 200 or (CHEM 141 AND CHEM 141L) or (CHEM 161 AND CHEM 161L) or CHEM 220 or (PHYS 125 AND PHYS 125L) or (PHYS 126 AND PHYS 126L) or PHYS 211 or PHYS 212 or (BIOL 220 and BIOL 220L)*		4		
Free Electives: (4 Credits)		4		
Total Credits		120		
Transfer Credits				

Other Program Requirements

1 Students must earn a grade of C or higher in all major CSC courses and have a minimum.
2 Any student enrolled in a CSC or MATH course who does not meet the prerequisites for that course will be dropped.

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**
University Studies	UNIV 101	1
Life Skills		2
Written Communication	ENGL 110	3
Critical Thinking		3
Quantitative Reasoning		3
Intro to Programming Methodology	CSC 120	4
	Total:	16

Year 1 Spring		
Requirement	**Course**	**Cr**
University Studies	UNIV 102	1
Information Literacy	ENGL 120	3
Program Design & Implementation	CSC 130	4
Calculus with Analytic Geometry I	MATH 142	4
Discrete Mathematics	MATH 150	3
	Total:	15

Year 2 Fall		
Requirement	**Course**	**Cr**
Oral Communication		3
Natural Sciences with lab		4
Computer Organization & Architecture	CSC 201	3
Logic Programming	CSC 207	3
Calculus with Analytic Geometry II	MATH 241	4
	Total:	17

Year 2 Spring		
Requirement	**Course**	**Cr**
Natural Sciences with lab		4
Humanities and Creative Arts or CSC 204		3
Ethics and Civic Engagement		3
Data Structures and Algorithms	CSC 220	3
Probability and Statistics in Computer Sci.	STAT 270	3
	Total:	16

Year 3 Fall		
Requirement	**Course**	**Cr**
Global Literacy		3
Humanities and Creative Arts or CSC 202		3
Linear Algebra	MATH 251	3
Programming for GIS	CSC 205	3
Principles of Operating Systems	CSC 431	3
	Total:	15

Year 3 Spring		
Requirement	**Course**	**Cr**
Social Sciences		3
Computer Organization & Architecture II	CSC 303	3
Design and Analysis of Algorithms	CSC 320	3
Programming Languages	CSC 322	3
Geospatial Databases	CSC 305	3
	Total:	15

Year 4 Fall		
Requirement	**Course**	**Cr**
Computer Ethics & Service Learning	CSC 351	3
Software Engineering	CSC 470	3
Introduction to GIS	GEOG 320	3
Science Elective		4
	Total:	13

Year 4 Spring		
Requirement	**Course**	**Cr**
Senior Project	CSC 490	3
Geospatial Applications of Data Analytics	CSC 405	3
Major Elective		3
Free Elective		4
	Total:	13