



ELIZABETH CITY STATE UNIVERSITY

Curriculum Guide
for
Bachelor of Science Degree: Computer Science (Data Science)

ASSOCIATE OF SCIENCE DEGREE: Universal General Education Transfer Component (UGETC)

First two years (Freshman and Sophomore) to be completed at community college.

<u>Community College Course #</u>	<u>Hours</u>	<u>Community College Course Title</u>	<u>Elizabeth City State University Equivalency</u>	<u>Hours</u>	<u>Comments</u>
<u>English Composition</u>	<u>6 SHC</u>	<i>The following two English composition courses are required.</i>			
ENG 111	3 SHC	Writing and Inquiry	ENGL 102 Eng. Comp & Grammar	3 SHC	Required by Univ. Studies.
ENG 112	3 SHC	Writing/Research in the Disciplines	ENGL 103 Eng. Comp & Vocab.	3 SHC	Required by Univ. Studies.
<u>Social/ Behavioral Science</u>	<u>6 SHC</u>	<i>Select three courses from at least two different disciplines.</i>			
HIS 111	3 SHC	World Civilization I	HIST 140 World Civ. I	3 SHC	Must complete HIST 111 or 112 for Univ. Studies SBS Section A requirement. Remaining 3 Hours will be used for
HIS 112	3 SHC	World Civilization II	HIST 141 World Civ. II	3 SHC	
HIS 131	3 SHC	American History I	HIST 255 American History to 1877	3 SHC	

HIS 132	3 SHC	American History II	HIST 256 American History Since 1877	3 SHC	Univ. Studies SBS Section B requirement.
ECO 251	3 SHC	Principles of Microeconomics Principles of Macroeconomics American Government	ECON 201 Prin. of Econ. I	3 SHC	
ECO 252	3 SHC		ECON 202 Prin. of Econ. II	3 SHC	
POL 120	3 SHC		POLS 298 American National Government	3 SHC	
PSY 150	3 SHC	General Psychology Intro to Sociology	PSY 212 General Psychology	3 SHC	
SOC 210	3 SHC			SOC 201 Intro to Sociology	3 SHC
Humanities/Fine Arts	6 SHC	<i>Select two courses from at least two different disciplines.</i>			
<u>Communications</u> COM 231	3 SHC	Public Speaking	SPCH 314 Public Speaking	3 SHC	Will be used as HFA Section B Univ. Studies requirement One option required by Univ. Studies 1 semester hour used as an elective.
<u>Humanities/Fine Arts</u> ART 111	3 SHC	Art Appreciation	ART 130 Art Appreciation	2 SHC	
ART 114	3 SHC	Art History Survey I			
ART 115	3 SHC	Art History Survey II			
ENG 231	3 SHC	American Literature I American Literature II	ENGL 201 World Literature I	3 SHC	Must complete ENG 231 or 232 for Uni. Studies HFA Section A requirement One option required by Univ. Studies 1 semester hour used as an elective.
ENG 232	3 SHC			ENGL 202 World Literature II	
MUS 110	3 SHC	Music Appreciation	MUS 135 Intro to Music	2 SHC	
MUS 112	3 SHC	Introduction to Jazz			
PHI 215	3 SHC	Philosophical Issues	Social/Behavioral Science Elective	3 SHC	
PHI 240	3 SHC	Introduction to Ethics	BUAD 240 Ethics	3 SHC	
Mathematics	8 SHC	<i>Select two courses from the following.</i>			
MAT 171	4 SHC	Pre-calculus Algebra	MATH 115 College Algebra	3 SHC	
MAT 172	4 SHC	Pre-calculus Trigonometry	MATH 118 Pre-calculus	3 SHC	Will be used as Univ. Studies Math requirement.

MAT 263	4 SHC	Brief Calculus	MATH 153 Applied Calculus	3 SHC	
MAT 271	4 SHC	Calculus I	MATH 165 Calculus in Single Variable	4 SHC	Required by Major.
<u>Nat. Sciences</u>	<u>8 SHC</u>	<i>Select 8 SHC from the following courses.</i>			Any Science/Lab will be used as Univ. Studies Science requirement Only listed Science/Lab options below will be used as concentration Elective. Other remaining Science/Lab will be used as Free Elective.
AST 151/151A	4 SHC	General Astronomy I/Lab	Natural Science Elective	4 SHC	
BIO 110	4 SHC	Principles of Biology	BIOL 100/100L Principles of Biological Science/Lab	4 SHC	
BIO 111	4 SHC	General Biology I	BIOL 101/101L General Biology for Majors I/Lab	4 SHC	One option required by Concentration Elective.
BIO 112	4 SHC	General Biology II	BIOL 102/102L General Biology for Majors II/Lab	4 SHC	One option required by Concentration Elective.
CHM 151	4 SHC	General Chemistry I	CHEM 101/101L General Chemistry I/Lab	4 SHC	One option required by Concentration Elective.
CHM 152	4 SHC	General Chemistry II	CHEM 102/102L General Chemistry II/Lab	4 SHC	One option required by Concentration Elective.
GEL 111	4 SHC	Introduction to Geology	Natural Science Elective	4 SHC	
PHY 110/110A	4 SHC	Conceptual Physics and Lab	Natural Science Elective	4 SHC	
PHY 151	4 SHC	College Physics I	PHYS 191 University Physics I	3 SHC	One option required by Concentration Elective.
PHY 152	4 SHC	College Physics II	PHYS 192 University Physics II	3 SHC	One option required by Concentration Elective.
RePHY 251	4 SHC	General Physics I	PHYS 181/181L General Physics I/Lab	4 SHC	
PHY 252	4 SHC	General Physics II	PHYS 182/182L General Physics II/Lab	4 SHC	

Total UGETC Hours	<u>26</u> SHC				26 Univ. Studies Credits 4 Conc. Elective 4 Major.
Additional GE Courses	<u>10</u> SHC				
HEA 110	3 SHC	Personal Health & Wellness	HLTH 185 Health Concepts	2 SHC	Required by Univ. Studies HPE 1 hr. used as an elective.
	3 SHC	Social/Behavioral Science Elective	Social/Behavioral Science Elective	3 SHC	Required by Univ. Studies SBS Section B Requirement.
	1 SHC	Physical Education	Physical Education	1 SHC	Required by Univ. Studies for HPE Requirement.
	3 SHC	ART 111 Art Appreciation Or MUS 110 Music Appreciation	ART 135 Art Appreciation Or MUS 130 Music Literature	2 SHC	Required by Univ. Studies HFA Section C Requirement 1 hr. used as an elective.
Total Hours Required	<u>36</u> SHC				34 US Credits 4 Conc. Elective 4 Major/ 2 Free Elective
Other Required Hours	<u>23</u> SHC				
CIS 115	3 SHC	Introduction to Programming Logic	Introduction to Computer Science	3 SHC	Required by Major.
CSC 134	3 SHC	C++ Programming	CSC 115 Programming I	3 SHC	Required by Major.
CSC 234	3 SHC	Adv. C++ Programming	CSC 215 Programming II	3 SHC	Required by Major.
	3 SHC	Java Programming	CSC 230 Object Oriented Programming	3 SHC	Required by Major.
	11 SHC	Free Elective	Free Elective	11 SHC	

<u>Academic Transition</u>	<u>1 SHC</u>				
ACA 122	1 SHC	College Transfer Course	UNIV 110 Freshman Seminar	1 SHC	Required by CAA.
<i>Total Semester Hours in Program</i>	<u>60 SHC</u>				

The Junior and Senior years will be completed at Elizabeth City State University.

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			<i>Semester 5: (15-16 credit hours)</i>		
			CSC 218 Data Structures	3 SHC	Major Requirement.
			MATH 351 Linear Algebra	3 SHC	Related Area Requirement.
			CSC 335 Introduction to Web Design	3 SHC	Major Requirement.
			CSC 318 Algorithms	3 SHC	Concentration Core Requirement.
			Concentration Elective 1	3-4 SHC	Concentration Elective.
			<i>Semester 6: (14 credit hours)</i>		
			CSC 305 Bioinformatics	3 SHC	Concentration Core Requirement.
			CSC 325 Database Systems	3 SHC	Major Requirement.
			CSC 314 Comp. Architecture and Org.	3 SHC	Major Requirement.
			MATH 262 Discrete Mathematics	3 SHC	Related Area Requirement.
			CSC 260 Sophomore Seminar in CS	1 SHC	Major Requirement.
			CSC 160 Major Orientation	1 SHC	Major Requirement.
			<i>Semester 7: (15-16 credit hours)</i>		
			CSC 410 Net-Centric Comp.	3 SHC	Major Requirement.
			CSC Core Elective 1	3 SHC	Major Requirement.

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			Concentration Elective 2	3-4 SHC	Concentration Elective.
			Free Elective	3 SHC	Free Elective.
			Free Elective	3 SHC	Free Elective.
			<i>Semester 8: (15 credit hours)</i>		
			CSC 414 Python Programming & Visualization	3 SHC	Concentration Core Requirement..
			CSC 401 Data Mining & Machine Learning	3 SHC	Major Requirement.
			CSC 460 Senior Seminar in CS	2 SHC	Major Requirement.
			CSC Core Elective 2	3 SHC	Major Requirement.
			CSC 451 Numerical & Symbolic Computing	3 SHC	Concentration Core Requirement.
			Free Elective	1 SHC	Free Elective.
			<u>Total Semester Credit Hours Completed for Degree</u>	<u>120 SHC</u>	
			Reviewed by: Prof. Antonio Rook Dr. Kenneth L. Jones		Reviewed 2/4/2018