2021 - 2022
Computer Science –
Concentration in Computer Programming
Bachelor of Science Degree
Academic Plan

Fall Year 1	Courses	Prerequisite(s)	Credit Hours	
CIS 1110A	Computer Operating Systems and Maintenance		3	
COM 1010	Composition and Critical Thinking I		3	
CS 1110	Introduction to Programming	Co-requisite(s): MTH 1010	3	**15**
MTH 1010	Quantitative Literacy		3	
MTH 1110	College Algebra I		3	

Spring Year 1	Courses	Prerequisite(s)	Credit Hours	
CIS 2210	Database Management and Design	CS 1110 or CIS 1110A	3	
COM 1020	Composition and Critical Thinking II	COM 1010, MTH 1010	3	
MTH 1310	Pre-Calculus	MTH 1110	5	**14**
MTH 2750	Statistical Methods	MTH 1010 or MTH 1110	3	

Fall Year 2	Courses	Prerequisite(s)	Credit Hours	
CIS 2510	Systems Development Methods		3	
CS 2410	Java Programming	CS 1110	3	
MTH 1510	Calculus I	MTH 1210 or MTH 1310	4	**16**
NET 1010	Networking Essentials	Co-requisite: CIS 1110A	3	
PSY 2050	Self and Society	COM 1010, MTH 1010; Co-requisite: COM 1020	3	

Spring Year 2	Courses	Prerequisite(s)	Credit Hours	
CS 2010	Net-Centric Computing	CS 1110	3	
CS 2150	C++ Programming	EGR 2710 or CS 1110, MTH 1110	3	
CS 2420	Advanced Java Programming	CS 2410	3	**15**
ELECTIVE	Program Elective	As needed per choice	3	
MTH 2410	Discrete Mathematics	MTH 1120 or MTH 1310	3	

Fall Year 3	Courses	Prerequisite(s)	Credit Hours	
CIS 3010	Computer Architecture	CIS 1110A, CS 1110, MTH 2410	3	
CS 3110	C# Programming	CS 2150	3	
CS 3210	Data Structures and Algorithms I	CS 2150	3	**15**
ELECTIVE	Program Elective	As needed per choice	3	
SOC 3050	Personal, Civic, and Global Perspectives	COM 1010, MTH 1010, PSY 2050	3	

Spring Year 3	Courses	Prerequisite(s)	Credit Hours	
CIS 4010	Advanced Computer Architecture	CIS 3010	3	
CS 3220	Data Structures and Algorithms II	CS 3210	3	
ELECTIVE	Program Elective	As needed per choice	3	**15**
HUM 3910	Integrated Seminar	COM 1010, MTH 1010, PSY 2050, SOC 3050	3	
ITS 3210	Legal and Ethical Issues in Information Technology	CIS 1110A, NET 1010	3	

Fall Year 4	Courses	Prerequisite(s)	Credit Hours	
CS 3310	Application Security Practices	CS 2150	3	
CS 4110	Artificial Intelligence	CS 3110 or CS 3850	3	
CS 4510	Unit Testing And Interfaces	CIS 2510, CS 3220	3	
CS 4910	Senior Project I	CS 3220, HUM 3910; Co-requisite(s): CS 4510	3	**15**
ELECTIVE	Program Elective	As needed per choice	3	

Spring Year 4	Courses	Prerequisite(s)	Credit Hours	
CS 3910	Emerging Programming Languages	CS 3210	3	
CS 4920	Senior Project II	CS 4910	3	
ELECTIVE	Scientific Inquiry Elective	As needed per choice	3	
ELECTIVE	Program Elective	As needed per choice	3	**15**
WRKIT4010	Work Experience	Senior status	3	

Program Total			120

Suggested Program Electives	Courses	Prerequisite(s)	Credit Hours
CIS 3310	Cloud Computing and Security	CIS 2210	3
CS 3410	Programming for Mobile Devices	CS 3110 or CS 2420	3
CS 3950	Big Data Analytics	MTH 2750, CS 1110	3
CS 4410	IoT Devices	NET 1010	3
ITS 2210	VPN/Firewall	NET 1010	3
ITS 2310	Linux I		3
ELECTIVE	Any CIS / CS / ITS / PPM / WEB course	As needed per choice	3

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