



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

Fall Year 1		Courses	Prerequisite(s)	Credit Hours	
CIS 1110A	Computer Operating Systems and Maintenance			3	15
COM 1010	Composition and Critical Thinking I			3	
CS 1110	Introduction to Programming	Co-requisite(s): MTH 1010		3	
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	14
COM 1020	Composition and Critical Thinking II	COM 1010, MTH 1010		3	
MTH 1310	Pre-Calculus	MTH 1110		5	
MTH 2750	Statistical Methods	MTH 1010 or MTH 1110		3	
Fall Year 2		Courses	Prerequisite(s)	Credit Hours	
CIS 2510	Systems Development Methods			3	16
CS 2410	Java Programming	CS 1110		3	
MTH 1510	Calculus I	MTH 1210 or MTH 1310		4	
NET 1010	Networking Essentials	Co-requisite(s): CIS 1110A		3	
PSY 2050	Self and Society	COM 1010, MTH 1010; Co-requisite(s): COM 1020		3	
Spring Year 2		Courses	Prerequisite(s)	Credit Hours	
CS 2010	Net-centric Computing	CS 1110		3	15
CS 2150	C++ Programming	EGR 2710 or CS 1110, MTH 1110		3	
ELECTIVE	Program Elective	As needed per choice		3	
ITS 3210	Legal and Ethical Issues in Information Technology	CIS 1110A, NET 1010		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	15
CIS 4210	Database Administration I		CIS 2210	3	
ELECTIVE	Program Elective		As needed per choice	3	
CS 3210	Data Structures and Algorithms I		CS 2150	3	
SOC 3050	Personal, Civic, and Global Perspectives		COM 1010, MTH 1010, PSY 2050	3	
Spring Year 3		Courses	Prerequisite(s)	Credit Hours	
CIS 4220	Database Administration II		CIS 4210	3	15
CS 3220	Data Structures and Algorithms II		CS 3210	3	
ELECTIVE	Program Elective		As needed per choice	3	
ELECTIVE	Scientific Inquiry			3	
HUM 3910	Integrated Seminar		COM 1010, MTH 1010, PSY 2050, SOC 3050	3	
Fall Year 4		Courses	Prerequisite(s)	Credit Hours	
CS 3310	Application Security Practices		CS 2150	3	15
CS 4210	Database Programming I		CIS 2210, CS 1110	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	
ELECTIVE	Program Elective		As needed per choice	3	
Spring Year 4		Courses	Prerequisite(s)	Credit Hours	
CS 4220	Database Programming II		CS 4210	3	15
CS 4650	Advanced Database Topics		CIS 4220; Co-requisite(s): CS 4220	3	
CS 4920	Senior Project II		CS 4910	3	
ELECTIVE	Program Elective		As needed per choice	3	
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 2420	Advanced Java Programming	CS 2410	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