



2024 – 2025
Computer Science Concentration
in Computer Programming
Bachelor of Science
Academic Plan

Fall Year 1	Courses	Prerequisite(s)	Credits	
CIS 1110A	Computer Operating Systems and Maintenance		3	15
COM 1010	Composition and Critical Thinking I		3	
CS 1110A	Programming in Python		3	
MTH 1010	Quantitative Literacy		3	
MTH 1110	College Algebra I		3	
Spring Year 1	Courses	Prerequisite(s)	Credits	
CIS 2210	Database Management and Design		3	15
COM 1020	Composition and Critical Thinking II	COM 1010, MTH 1010	3	
ELECTIVE	General Education Elective	As needed per choice	3	
MTH 1120	College Algebra II	MTH 1110	3	
MTH 2750	Statistical Methods	MTH 1010 or MTH 1110	3	
Fall Year 2	Courses	Prerequisite(s)	Credits	
CIS 2510	Systems Development Methods		3	15
CS 2410	Java Programming		3	
ELECTIVE	General Education Elective		3	
NET 1010	Networking Essentials		3	
PSY 2050	Self and Society	COM 1010, MTH 1010; Co-requisite: COM 1020	3	
Spring Year 2	Courses	Prerequisite(s)	Credits	
CS 2050	Introduction to Artificial Intelligence	CS 1110A, or CS 2150, or CS 2410, or CS 3110, and corequisite MTH 2410	3	15
CS 2150	C++ Programming		3	
CS 2420	Advanced Java Programming	CS 2410	3	
ELECTIVE	Open Elective	As needed per choice	3	
MTH 2410	Discrete Mathematics	MTH 1120 or MTH 1310	3	
Fall Year 3	Courses	Prerequisite(s)	Credits	
CIS 3010	Computer Architecture	CIS 1110A	3	15
CS 3110	C# Programming		3	
CS 3210	Data Structures and Algorithms I	CS 1110A, or CS 2150, or CS 2410, or CS 3110, and corequisite MTH 2410	3	
ELECTIVE	Open 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)	Credits	
CIS 4010	Advanced Computer Architecture	CIS 3010	3	15	
CS 3220	Data Structures and Algorithms II	CS 3210	3		
ELECTIVE	Open Elective	As needed per choice	3		
HUM 3910	Integrated Seminar	COM 1010, MTH 1010, PSY 2050, SOC 3050	3		
ITS 3210	Legal and Ethical Issues in Information Technology	Junior status	3		
Fall Year 4		Courses	Prerequisite(s)	Credits	
CS 3310	Application Security Practices	CS 1110A, or CS 2150, or CS 2410, or CS 3110	3	15	
Choose one course below:					
CS 2250 or	AI Problem Solving and Robotics	CS 2050	3		
CS 3250 or	Perceptive AI	CS 2050			
CS 2350	Knowledge Representation and Reasoning	CS 2050			
CS 4510A	Software Testing	CIS 2510, or CS 2410, or CS 3210	3		
CS 4810	Trends in Computer Science	Senior status	3		
ELECTIVE	Open Elective	As needed per choice	3		
Spring Year 4		Courses	Prerequisite(s)	Credits	
CS 3910	Emerging Programming Languages	CS 1110A, or CS 2150, or CS 2410, or CS 3110, or CS 3210	3	15	
CS 4910A	Senior Project	CS Major and Senior status	3		
ELECTIVE	Scientific Inquiry Elective	As needed per choice	3		
ELECTIVE	Open Elective	As needed per choice	3		
WRK 4850	CoIT Work Experience	Senior status	3		
Program Total				120	

Open Electives:

Open Electives may be from any prefix. Prerequisites need to be fulfilled for any elective courses.