



**2023 – 2024**  
**Computer Science –**  
**Concentration in Computer Programming**  
**Bachelor of Science Degree**  
**Academic Plan**

<b>Fall Year 1</b>	<b>Courses</b>	<b>Prerequisite(s)</b>	<b>Credits</b>	
CIS 1110A	Computer Operating Systems and Maintenance		3	<b>15</b>
COM 1010	Composition and Critical Thinking I		3	
CS 1110A	Programming in Python	Co-requisite(s): MTH 1010	3	
MTH 1010	Quantitative Literacy		3	
MTH 1110	College Algebra I		3	
<b>Spring Year 1</b>	<b>Courses</b>	<b>Prerequisite(s)</b>	<b>Credits</b>	
CIS 2210	Database Management and Design	CS 1110A or CIS 1110A	3	<b>15</b>
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	
<b>Fall Year 2</b>	<b>Courses</b>	<b>Prerequisite(s)</b>	<b>Credits</b>	
CIS 2510	Systems Development Methods		3	<b>15</b>
CS 2410	Java Programming	CS 1110A	3	
ELECTIVE	General Education Elective		3	
NET 1010	Networking Essentials	Co-requisite: CIS 1110A	3	
PSY 2050	Self and Society	COM 1010, MTH 1010; Co-requisite: COM 1020	3	
<b>Spring Year 2</b>	<b>Courses</b>	<b>Prerequisite(s)</b>	<b>Credits</b>	
CS 2010	Net-Centric Computing	CS 1110A	3	<b>15</b>
CS 2150	C++ Programming	EGR 2710 or CS 1110A, MTH 1110	3	
CS 2420	Advanced Java Programming	CS 2410	3	
ELECTIVE	Program Elective	As needed per choice	3	
MTH 2410	Discrete Mathematics	MTH 1120 or MTH 1310	3	
<b>Fall Year 3</b>	<b>Courses</b>	<b>Prerequisite(s)</b>	<b>Credits</b>	
CIS 3010	Computer Architecture	CIS 1110A, CS 1110A, MTH 2410	3	<b>15</b>
CS 3110	C# Programming	CS 2150	3	
CS 3210	Data Structures and Algorithms I	CS 2150	3	
ELECTIVE	Program Elective	As needed per choice	3	
SOC 3050	Personal, Civic, and Global Perspectives	COM 1010, MTH 1010, PSY 2050	3	

<b>Spring Year 3</b>		<b>Courses</b>	<b>Prerequisite(s)</b>	<b>Credits</b>	
CIS 4010	Advanced Computer Architecture	CIS 3010	3	<b>15</b>	
CS 3220	Data Structures and Algorithms II	CS 3210	3		
ELECTIVE	Program 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	CIS 1110A or NET 1010	3		
<b>Fall Year 4</b>		<b>Courses</b>	<b>Prerequisite(s)</b>	<b>Credits</b>	
CS 3310	Application Security Practices	CS 2150	3	<b>15</b>	
CS 4110	Artificial Intelligence	CS 3110, CS 3210	3		
CS 4510A	Software Testing	CIS 2510, CS 2410, CS 3210	3		
CS 4810	Trends in Computer Science	CS 1110A, NET 1010	3		
ELECTIVE	Program Elective	As needed per choice	3		
<b>Spring Year 4</b>		<b>Courses</b>	<b>Prerequisite(s)</b>	<b>Credits</b>	
CS 3910	Emerging Programming Languages	CS 3210	3	<b>15</b>	
CS 4910A	Senior Project	CS 3220, CS 4510A	3		
ELECTIVE	Scientific Inquiry Elective	As needed per choice	3		
ELECTIVE	Program Elective	As needed per choice	3		
WRK 4850	CoIT Work Experience	Senior status	3		
<b>Program Total</b>				<b>120</b>	

### **Program Electives:**

Select any 5 courses, with any of the following prefixes, to fulfill 15 Program Electives hours: CIS, CS, CSC, GSD, ITS, MNP, NET, PPM, WEB. Prerequisites need to be fulfilled for any elective courses.