

Graduation requirements for Information Assurance and Cyber Defense Concentration

In addition to 39 credit hours of courses in general education, a student in Information Assurance and Cyber Defense concentration will take 41 credit hours of computer science major courses required by BS in Computer Science major, and 15 hours of cognate courses in math and sciences, and 18 credit hours required by the concentration. In addition, 7 semester hours of major elective courses are required to reach the 120 hours minimum total credit hours.

Required courses in General education (39 Hours)

- ENGL 111 English Communication I
- ENGL 112 English Communication II
- ENGL 205 Human Literary Heritage
- FRSM 101 Freshman Year Experience I (2 Hours)
- FRSM102 Freshman Year Experience II (2 Hours)
- HIST 221 Intro. to African American History
- HLFW 129 - Lifetime Fitness (1 Hour)
- HLFW Activity Course (1 Hour)
- HUMN 211 Human Heritage I
- SPCH 101 Speech Communication
- MATH 130 College Algebra
- MATH 145 Pre-Calculus
- Nat Sci 1
- Nat Sci 2
- SOSI 111 Intro to Power, Society

Required courses for Computer Science major (41 hours)

- COSI 120 Introduction to Technology
- COSI 200 Introduction to Cybersecurity
- COSI 223 Introduction to Programming + Lab (4 hours)
- COSI 225 Advanced Programming + Lab (4 hours)
- COSI 240 Discrete Mathematics
- COSI 320 Computer Organization and Assembly Language
- COSI 330 Data Structures
- COSI 335 Algorithms
- COSI 345 Database Management
- COSI 350 Programming Languages
- COSI 410 Operating System
- COSI 455 Computer Science Project
- COSI 460 Capstone

Required cognate courses (15 hours)

- MATH 201 Analytical Geometry and Calculus I
- MATH 310 Statistical Methods
- 8 hours of lab science, choose from the following courses:
 - PHYS 201 + Lab / PHYS 202 + Lab
 - CHEM 101 + Lab /CHEM 102 + Lab
 - BIOL 101 + Lab /BIOL 102 + Lab

Required courses for Information Assurance and Cyber Defense Concentration (18 Credit Hours)

- COSI/ITEC 310 Introduction to UNIX
- COSI 355 Digital Forensics
- ITEC 440 Advanced Networking (3)
- ITEC 435 Network Security (3)
- CRJS 355 Cyber Ethics and Cyber Law (3)
- CRJS 465 Forensic Evidence (3)

Eventually, the student need **7 credit hours** of selected major courses from the following list.

- COSI 425 Artificial Intelligence (3)
- COSI 314 Data Visualization (3)
- COSI 450 Special Topics (3)
- COSI 499 Computer Science Co-Op (3)
- ITEC 305 Web Page Development (3)
- ITEC 315 Client-Side Web Programming (3)
- ITEC 415 Server-Side Web Programming (3)
- ITEC 350 Database Programming (3)
- ITEC 445 Database Administration (3)

Division of Computer Science - Program of Study (2022-2023 Catalog)

Major: Computer Science

Note:

1. Please write transfer course numbers in front of LOC course numbers
2. Students are required to successfully **complete 120 semester hours** to graduate from LOC;
3. which **45 credit hours** must be from **300 –400 level courses**.

Name: _____

Home Address: _____

Student ID#: _____

Phone Number: _____

Date Entered in Program: _____

Advisor: _____

Core Curriculum 33 Cr. Hrs.	Hrs.	Grd.	Yr.	Course	Hrs.	Grd.	Yr.
COSI 118 - Introduction to Microcomputers	Satisfied by ITEC120			Choose one of the following Concentration Areas			
ENGL 111 - English Communication I	3			Data Visualization and Analytics (18 Cr. Hrs.)			
ENGL 112 - English Communication II	3			ITEC 310 –Introduction to UNIX	3		
ENGL 205 - Human Literary Heritage	3			ITEC 340 – Human Computer Interaction	3		
FRSM 101+ 102 - Freshman Year Experience	2+2			COSI 315 – Data Visualization	3		
HIST 221 – Intro. to African American History	3			ITEC 435 –Network Security	3		
HLFW 129 - Lifetime Fitness	1			COSI 440 – Computer Graphics	3		
HLFW Activity - Activity Course	1			COSI 425 – Artificial Intelligence	3		
HUMN 211 - Human Heritage I	3			OR			
SPCH 101 – Speech Communication	3			Information Assurance and Cyber Defense (18 Cr. Hrs.)			
MATH 130 - College Algebra	3			ITEC 310 –Introduction to UNIX	3		
MATH 145 - Pre-Calculus	3			COSI 355 – Digital Forensics	3		
Nat Sci 1	Satisfied by _____			ITEC 440 – Advance Networking	3		
Nat Sci 2	Satisfied by _____			ITEC 435 –Network Security	3		
SOSI 111 - Intro to Power, Society	3			CRJS 355 – Cyber Ethics and Cyber Law	3		
Major Req. Courses 41 Cr. Hrs.	Hrs.	Grd.	Yr.	CRJS 465 – Forensic Evidence	3		
ITEC 120– Intro to Technology	3			OR			
COSI 200– Intro. to Cyber Security	3			Network Administration and Design (15 Cr. Hrs.)			
COSI 223/223L– Introduction to Prog. /lab	4			ITEC 310 –Introduction to UNIX	3		
COSI 225/225L– Advanced Prog. and Lab	4			ITEC 335 – Network Administration	3		
COSI 240– Discrete Mathematics	3			ITEC 440 – Advance Networking	3		
COSI 320– Computer Organization	3			ITEC 435 –Network Security	3		
COSI 330– Data Structures	3			CRJS 355 – Cyber Ethics and Cyber Law	3		
COSI 335 – Algorithms	3			OR			
COSI 345 – Database Management	3			Criminal Justice (18 Cr. Hrs.)			
COSI 350 – Programming Languages	3			CRJS 200 – Intro. To Criminal Justice	3		
COSI 410 – Operating System	3			CRJS 204 – American Legal System	3		
COSI 455 – Computer Science Project	3			CRJS 321 – Constitutional Law	3		
COSI 460- Capstone	3			CRJS 325 – Civil / Crim. Court Procedures	3		
Cognate Courses: 22 Cr. Hrs.	Hrs.	Grd.	Yr.	CRJS 328 – Intro. To the Study of Law	3		
MATH 201 - Calculus I	4			CRJS 355 – Cyber Ethics and Cyber Law	3		
MATH 202 – Calculus II	4			OR			
MATH 310 – Statistics	3			Computer Science (15 Cr. Hrs.) choose any 5 classes			
MATH 306 – Linear Algebra	3			ITEC 310 –Introduction to UNIX	3		
8 credit hours of science courses below				ITEC 330 –Computer Networks	3		
PHYS 201 + Lab - General Physics I	3+1			COSI 425–Artificial Intelligence	3		
PHYS 202 + Lab - General Physics II	3+1			ITEC 435 –Network Security	3		
CHEM 101 + Lab - General Chemistry I	3+1			COSI 314 - Data Visualization	3		
CHEM 102 + Lab - General Chemistry II	3+1			COSI 450 –Special Topics	3		
BIOL 101 + Lab - General Biology I	3+1			COSI 499 –Computer Science Co-Op	3		
BIOL 102 + Lab - General Biology II	3+1			ITEC 305 –Web Page Development	3		
General Electives: _____ Cr. Hrs. (enough total 120 hrs.)				ITEC 315 –Client-Side Web Programming	3		
				ITEC 415–Server-Side Web Programming	3		
				ITEC 350–Database Programming	3		
				ITEC 445–Database Administration	3		

Record Check: _____ Sem. Hours _____ Cumulative GPA _____

Major Advisor : _____ Date: _____

Chair: _____ Date _____ Registrar: _____ Date: _____