

CURRICULA FOR A BACHELOR OF SCIENCE IN CYBERSECURITY

The required curriculum for the degree of bachelor of science in cybersecurity is given below in a recommended four-year sequence. Your academic advisor must approve all electives. A total of 124 credit hours are required to complete the program.

1st Semester Freshman	HRS	2nd Semester Freshman	HRS
CS 110 Intro to Computer Science	4	CS 111 Intro to Data Structures	4
MATH 155 Calculus I (GEF 3)	4	MATH 156 Calculus II (GEF 8)	4
ENGR 199 Orientation to Engineering	1	ENGL 101 Composition Rhetoric (GEF1)	3
Lab Science 1 (GEF 2)	4	Lab Science 2: Sequence 1 (GEF 8)	4
COMM 112 (GEF 4)	3		
ENGR 101 Freshman Engr Design`	2		
	18		15

1st Semester Sophomore	HRS	2nd Semester Sophomore	HRS
CS 210 File Structures	4	CpE 271 / 272 Intro. to Digital Logic Design	4
CS 220 Discrete Mathematics	3	STAT 215 Intro to Probability & Statistics	3
CYBE 266 Foundation of Cybersecurity	3	CS 350 Computer systems concepts	3
Lab Science 2: sequence 2 (GEF 8)	4	SOCA 101 (GEF4)	3
ENGL 102 Composition Rhetoric II (GEF 1)	3	MATH 373 Cryptography	3
	17		16

1st Semester Junior	HRS	2nd Semester Junior	HRS
CS 230 Intro to Software Engineering	4	CS 450 Operating System Structure	3
CPE 310/311 Microprocessors	4	CS 465 Cybersecurity Principles and Practice	3
CS 453 Data computer communications	3	MIST 357 Information Ethics	3
SOCA 431 Cybercrime	3	CYBE 366 Secure Software Development	3
		GEF 6	3
	14		15

1st Semester Senior	HRS	2nd Semester Senior	HRS
CYBE Capstone Project - Design	2	CYBE 481 Capstone Project - Implementation	3
Tech Elective 1	3	CYBE 467 Practicing Cybersecurity: Attacks and Countermeasures	3
Tech Elective 2	3	CpE 435 Computer Incidence Response	3
CYBE 466 Host Based Cyber Defense Tech	3	Tech Elective 3	3
GEF 7	3	GEF 5	3
	14		15

Total Hours = 124

Technical Electives: The students choose 9 hours of technical electives from the following pool:
CS 422, CS 430, CS 440, CS 470, CS 472, CpE 484 and FIS 450.

Science electives: The students are required to complete 12 credit hours of science electives as per the following two rules:

- a. Students must choose one eight-hour, two-semester sequence of science courses from the following pool:
BIOL 115 and 117
CHEM 115 and 116
CHEM 117 and 118
GEOL 101/102 and 103/104
GEOL 110/111 and 103/104
PHYS 111 and 112
- b. Students must choose an additional four credit hour science course from the following pool such that it is from a different area than the eight hour sequence. For example, students who have taken the PHYS 111 and 112 courses will have to choose a course from BIOL, CHEM or GEOL. Likewise students who have taken GEOL 101/102 and 103/104 or GEOL 110/111 and 103/104 will have to choose a course from BIOL, CHEM or PHY.
 - BIOL 115
 - CHEM 115
 - CHEM 117
 - GEOL 101/102
 - GEOL 110/111
 - PHYS 111