Computer Science B.S. with Cybersecurity Concentration

B.S. in Computer Science With Cybersecurity Concentration
Eight-Semester Degree Program

The following sections contain the list of courses required for the Bachelor of Science in Computer Science: Cybersecurity Concentration (CSCEBS-CYBR) degree with a suggested sequence below.

Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see the Eight-Semester Degree Policy (http://catalog.uark.edu/undergraduatecatalog/academicregulations/eightsemesterdegreecompletionpolicy/) in the Academic Regulations chapter for university requirements of the program.

First Year	Units	
	Fall	Spring
GNEG 11101 Introduction to Engineering I	1	
ENGL 10103 Composition I (ACTS Equivalency = ENGL 1013) (Satisfies General Education Outcome 1.1)	3	
CHEM 14103 University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture)	3	
MATH 24004 Calculus I (ACTS Equivalency = MATH 2405) (Satisfies General Education Outcome 2.1)[1]	4	
History Elective (Satisfies General Education Outcomes 3.2 and 4.2). Choose from one of the following courses:	3	
HIST 20003 History of the American People to 1877 (ACTS Equivalency = HIST 2113)		
HIST 20103 History of the American People, 1877 to Present (ACTS Equivalency = HIST 2123)		
GNEG 11201 Introduction to Engineering II		1
MATH 25004 Calculus II		4
PHYS 20304 University Physics I (ACTS Equivalency = PHYS 2034)		4
Freshman Science Elective (Satisfies General Education Outcome 3.4) Choose one of the following science and corresponding lab options:		4
BIOL 10103 Principles of Biology (ACTS Equivalency = BIOL 1014 Lecture)		
BIOL 10101 Principles of Biology Laboratory (ACTS Equivalency = BIOL 1014 Lab)		
CHEM 14203 University Chemistry II (ACTS Equivalency = CHEM 1424 Lecture)		
CHEM 14201 University Chemistry II Laboratory (ACTS Equivalency = CHEM 1424 Lab)		
GEOL 11103 Physical Geology (ACTS Equivalency = GEOL 1114 Lecture)		
GEOL 11101 Physical Geology Laboratory (ACTS Equivalency = GEOL 1114 Lab)		
PHYS 20404 University Physics II (ACTS Equivalency = PHYS 2044 Lecture) (For students who already have credit for PHYS 2054, they may wish to select PHYS 2074 for their Freshman Science Elective.)		
ENGL 10303 Technical Composition II (ACTS Equivalency = ENGL 1023) (Satisfies General Education Outcome 1.2)		3
Year Total:	14	16

Second Year	Units	
	Fall	Spring
CSCE 20004 Programming Foundations I	4	
CSCE 21104 Digital Design	4	
MATH 26103 Discrete Mathematics	3	
Fine Arts Elective (Satisfies General Education Outcome 3.1)[2]	3	
Social Sciences Elective (Satisfies General Education Outcomes 3.3 and 4.1)[3]	3	
CSCE 20104 Programming Foundations II		4
CSCE 22104 Computer Organization		4
MATH 30803 Linear Algebra		3
Social Sciences Elective (Satisfies General Education Outcome 3.3)[4]		3
Year Total:	17	14

Third Year	Units	
	Fall	Spring
CSCE 31903 Programming Paradigms	3	
CSCE 36103 Operating Systems	3	
INEG 33103 Engineering Probability and Statistics[5]	3	
PHIL 31003 Ethics and the Professions (Satisfies General Education Outcome 5.1)	3	
General Elective	3	
CSCE 35103 Software Engineering (Satisfies General Education Outcome 6.1)		3
CSCE 45203 Database Management Systems		3
CSCE Cybersecurity Elective (4000 level)		3
MATH 31003 Combinatorics		3
SPCH 10003 Public Speaking (ACTS Equivalency = SPCH 1003) (Satisfies General Education Outcome 1.2)		3
Year Total:	15	15

Fourth Year	Units	
	Fall	Spring
CSCE 45601 Capstone I	1	
CSCE 41303 Algorithms	3	
CSCE 47503 Computer Networks	3	
CSCE Cybersecurity Elective (4000 level)	3	

General Elective	3	
General Elective	3	
CSCE 49603 Capstone II		3
CSCE 43203 Formal Languages and Computability		3
CSCE Cybersecurity Elective (4000 level)		3
General Elective		3
Social Sciences Elective (Satisfies General Education Outcome 3.3)[4]		3
Year Total:	16	15

Total Units in Sequence:	**122**

[1] Students have demonstrated successful completion of the learning indicators identified for learning outcome 2.1, by meeting the prerequisites for MATH 24004.

[2] The Fine Arts Elective courses which satisfy General Education Outcome 3.1 include: ARCH 10003, ARHS 10003, COMM 10003, DANC 10003, LARC 10003, MUSC 10003, MUSC 100H3, MUSC 10103, MUSC 101H3, MUSC 13303, THTR 10003, THTR 10103, or THTR 101H3.

[3] The Social Sciences Elective courses which satisfy General Education Outcomes 3.3 and 4.1 include: ANTH 10203, COMM 10203, HDFS 14003, HDFS 24103, HIST 11193, HIST 111H3, HIST 11293, HIST 112H3, HIST 20903, HUMN 111H4, HUMN 211H4, INST 28103, INST 281H3, PLSC 20103, PLSC 28103, PLSC 281H3, RESM 28503, SOCI 10103, SOCI 101H3, or SOCI 20103.

[4] The Social Sciences Elective courses which satisfy General Education Outcome 3.3 include: AGEC 11003, AGEC 21003, ANTH 10203, COMM 10203, ECON 21003, ECON 22003, ECON 21403, EDST 20003, HDFS 14003, HDFS 24103, HDFS 26003, HIST 11193, HIST 111H3, HIST 11293, HIST 112H3, HIST 20003, HIST 20103, HIST 20903, HUMN 111H4, HUMN 211H4, INST 2013, INST 28103, INST 281H3, PLSC 20003, PLSC 20103, PLSC 21003, PLSC 28103, PLSC 281H3, PSYC 20003, RESM 28503, SOCI 10103, SOCI 101H3, SOCI 20103. Note, courses cannot be counted twice in degree requirements.

[5] Student may petition to take the two-course sequence, STAT 30133 and STAT 31133, instead of INEG 33103.