

2023-2024 Degree Map-Bachelor of Science in Cybersecurity

This map is a term-by-term sample course schedule. The milestones listed to the right of each term are designed to keep you on course to graduate in four years. The Sample Schedule serves as a general guideline to help you build a full schedule each term. See course descriptions and prerequisites at <http://www.atu.edu/catalog/>

Possible careers include: Security Analyst, Security Engineer, Security Administrator, Security Software Developer, Cryptographer, Cryptanalyst, Chief Information Security Officer, Security Specialist, Vulnerability Assessor, Security Manager, Security Auditor, Security Director, Forensic Expert, Penetration Tester, Source Code Auditor

#Prerequisite Courses: ENGL 0303 _____ MATH 0803 _____ MATH 1003 _____ MATH 0903 _____ MATH 1113 _____ MATH 1110 _____

Sample Schedule	Milestones/Notes		
Semester 1	Hrs.	Grade	Semester 1
ENGL 1013- Comp I (ACTS=ENGL 1013)	3	#	
Fine Arts & Humanities	3		
MATH 2243- Calculus for Business & Econ. (ACTS=MATH 2203)	3	#	Prereq: 22 or higher on math ACT or # in MATH 1113 or higher
TECH 1001- Orientation to the University	1		
CSEC 1113- Introduction to Networking	3		Milestone
CSEC 1003- Introduction to Cybersecurity	3		
Total hours	16	GPA	

Semester 2	Hrs.	Grade	Semester 2
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#	
Science with Lab	4		
COMS 1013- Programming Foundations I	3	#	Prereq: MATH 1113 or higher
COMS 1011- Programming Foundations I Lab	1	#	PASS/FAIL - Coreq: COMS 1013
CSEC 1213- Wireless and Cellular Security	3		Prereq: CSEC 1113
Total hours	14	GPA	

Semester 3	Hrs.	Grade	Semester 3
Social Sciences	3		
COMS 2203- Programming Foundations II	3	#	Milestone - Prereq: # COMS 1013 & # MATH 1113 or higher
MATH 2703-Discrete Mathematics	3		Milestone - Prereq: # MATH 1113 or higher
CSEC 2213- Network Forensics and Incident Response	3		Prereq: CSEC 1113
CSEC 2223- Virtualization	3		Fall Only Prereq: CSEC 1113
Total hours	15	GPA	

Semester 4	Hrs.	Grade	Semester 4
COMM 2173- Business and Professional Speaking	3		COMM 2003 Public Speaking may sub
COMS 2213- Data Structures	3		Milestone - Prereq: MATH 2703 and # in COMS 2203
COMS 2323- Programming in Python	3		Prereq: COMS 2203
COMS 2223- Computer Organization and Prog.	3		Prereq: COMS 2203 & MATH 2703
General Elective	3		
Total hours	15	GPA	COMS ADVISOR ASSIGNED

The Arkansas Course Transfer System (ACTS) is designed to assist in planning the academic progress of students. This system contains information about the transferability of courses within Arkansas public colleges and universities. The Arkansas Course Transfer System can be accessed by searching keyword "ACTS" at <https://adhe.edu/>

Shading indicates courses that would directly apply to the AAS-CSEC degree.

indicates a "C" or higher is required

Fine Arts and Humanities ART 2123 Experiencing Art (ACTS=ARTA1003) MUS 2003 Introduction to Music (ACTS=MUSC1003) TH 2273 Introduction to Theatre (ACTS=DRAM 1003) ENGL/IOUR 2173 Introduction to Film ENGL 2003 Introduction to World Literature (ACTS=ENGL2113) ENGL 2013 Intro. to American Literature (ACTS=ENGL2653) PHIL 2003 Introduction to Philosophy (ACTS=PHIL1103) PHIL 2053 Introduction to Critical Thinking (ACTS=PHIL 1003) 1013 from SPAN, FR, GER, JPN, CHIN, or LAT 1023 from SPAN, FR, GER, JPN, CHIN, or LAT LEAD 2003 Ethics in Leadership	U.S. History & Government HIST 1903 Survey of American History HIST 2003 U.S. History to 1877 (ACTS=HIST2113) HIST 2013 U.S. History since 1877 (ACTS=HIST2123) POLS 2003 American Government (ACTS=PLSC2003)
Science with Lab BIOL 1014- Intro. to Biological Science (ACTS= BIOL1004) BIOL/PHSC 1004- Principles of Environmental Science GEOL 1014- Physical Geology (ACTS= GEOL 1114)	

Sample Schedule	Milestones/Notes		
Semester 5	Hrs.	Grade	Semester 5
Science with Lab	4		
STAT 2163- Intro to Statistical Methods	3		Prereq: MATH 1003 or higher
CSEC 3123- Cyber Defense I	3		Prereq: CSEC 2213 & CSEC 2223
CSEC 3243- Computer Architecture	3		Prereq: COMS 2223
CSEC 4133- Large Scale Distributed Systems	3		Prereq: CSEC 2223 and junior standing in CSEC
Total hours	16	GPA	

Semester 6	Hrs.	Grade	Semester 6
Fine Arts & Humanities	3		
COMS 3233- Data Design and Implementation	3		Prereq: COMS 2203
CSEC 3223- Programming Embedded Systems	3		Prereq: COMS 2213 & CSEC 2223
CSEC 3233- Cyber Defense II	3		Prereq: CSEC 3123
COMS 3703- Advanced Operating Systems	3		Prereq: COMS 2213 & COMS 2223
Total hours	15	GPA	APPLY FOR GRADUATION

Semester 7	Hrs.	Grade	Semester 7
Social Sciences	3		
CSEC 4123- Applied Cryptography	3		Prereq: CSEC 3243
CSEC 4143- Building Secure Software	3		Prereq: CSEC 3243
CSEC 4153- Human Factors in Cybersecurity	3		Prereq: CSEC 3223
CSEC 4233- Legal Issues in Cybersecurity	3		Prereq: Jr Standing
Total hours	15	GPA	

Semester 8	Hrs.	Grade	Semester 8
CSEC 4213- Information Systems Risk Management	3		Prereq: CSEC 2113 & 3233
CSEC 4243- Software Security Analysis & Reverse Engineering	3		Graduation Requirements: Min. hours 3000-4000 level courses: 40 No more than 4 PE activity hours Min. hours required:120
CSEC 4293- Cybersecurity Capstone Project	3		
U.S. History/Government	3		
General Elective (3000-4000)	2		2.00+ GPA
Total Hours	14	GPA	

General Electives: 5 hours (2 hours must be 3000-4000 level)

*TECH 1013 Introduction to the University is a sub for TECH 1001 Orientation to University. General Electives would reduce from 3 hours to 1 hour.

Students should consider CP in Computer Programming and CP in Computer Networking. See Catalog.

HIST 1503 World History to 1500 (ACTS=HIST1113) HIST 1513 World History since 1500 (ACTS=HIST1123) HIST 2003 U.S. History to 1877 (ACTS=HIST2113) HIST 2013 U.S. History since 1877 (ACTS=HIST2123) HIST 1903 Survey of American History POLS 2003 American Government (ACTS=PLSC2003) ECON 2003 Principles of Macroeconomics (ACTS=ECON2103) ECON 2013 Principles of Microeconomics (ACTS=ECON2203) SOC 1003 Introductory Sociology (ACTS=SOC11013) PSY 2003 General Psychology (ACTS=PSYC1103)	Social Sciences ANTH 1213 Intro. to Anthropology (ACTS=ANTH1013) ANTH 2003 Cultural Anthropology (ACTS=ANTH2013) GEOG 2013 Regional Geography of the World (ACTS=GEOG2103) AMST 2003 American Studies FIN 2013 Personal Finance LEAD 1003 Introduction to Leadership
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University Honors students should consult Course Catalog for appropriate Fine Arts/Humanities, US History/Government and Social Science options for University Honors Curriculum.