

### 2021-2022 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 \_\_\_\_\_ MATH 1203 \_\_\_\_\_ MATH 1914 \_\_\_\_\_

Sample Schedule	Milestones/Notes		
Semester 1	Hrs.	Grade	Semester 1
ENGL 1013-Comp I (ACTS=ENGL 1013)	3	#	
MATH 2914- Calculus I (ACTS= MATH 2405)	4	#	(Prereq: MATH ACT >26, or # in MATH 1203 or MATH 1914) Milestone
U.S. History/Government	3		
TECH 1001-Orientation to the University	1		
CSEC 1113- Introduction to Networking	3		Milestone
Fine Arts & Humanities	3		
<b>Total hours</b>	<b>17</b>	<b>GPA</b>	

Semester 2	Hrs.	Grade	Semester 2
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#	
Social Sciences	3		
CSEC 1213- Wireless Security and Cellular Technologies	3		Spring Only Prereq: CSEC 1113
COMS 2104- Foundations of Computer Prog. I	4	#	Milestone (Do not need COMS 1403/1411)
<b>Total hours</b>	<b>13</b>	<b>GPA</b>	

Semester 3	Hrs.	Grade	Semester 3
ELEG 2134/2130- Digital Logic Design/Lab	4		Prereq: COMS 2104
COMS 2203- Foundations of Computer Prog II	3		Milestone - Prereq: # COMS 2104 & # MATH 1113 or higher
COMS 2733- Intro to Computer Forensics and Security	3		Prereq: CSEC 1113 for CSEC majors only (see note below)**
COMS 2903-Discrete Structures	3		Milestone - Prereq: # COMS 2104 & # MATH 1113 or higher
CSEC 2113- Introduction to Information Systems	3		Fall Only Prereq: CSEC 1113
<b>Total hours</b>	<b>16</b>	<b>GPA</b>	

Semester 4	Hrs.	Grade	Semester 4
COMM 2173- Business and Professional Speaking	3		No substitutions allowed
Science with Lab	4		
COMS 2213- Data Structures	3		Milestone - Prereq: COMS 2203 & 2903
CSEC 2213- Forensics and Incident Responses	3		Spring Only Prereq: CSEC 1113
CSEC 2223- Virtualization	3		Spring Only Prereq: CSEC 1113
<b>Total hours</b>	<b>16</b>	<b>GPA</b>	<b>COMS ADVISOR ASSIGNED</b>

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 at <https://www.adhe.edu/students-parents/colleges-universities/transfer-info.-for-students/>

# indicates a "C" or higher is required

Fine Arts and Humanities	U.S. History & Government
ART 2123 Experiencing Art (ACTS=ARTA1003)	HIST 1903 Survey of American History
MUS 2003 Introduction to Music (ACTS=MUSC1003)	HIST 2003 U.S. History to 1877 (ACTS=HIST2113)
TH 2273 Introduction to Theatre (ACTS=DRAM 1003)	HIST 2043 Honors United States History to 1877
ENGL 2173 Introduction to Film	HIST 2013 U.S. History since 1877 (ACTS=HIST2123)
JOUR 2173 Introduction to Film	POLS 2003 American Government (ACTS=PLSC2003)
ENGL 2183 Honors Introduction to Film	<b>Science with Lab</b>
ENGL 2003 Introduction to World Literature (ACTS=ENGL2113)	BIOL 1014- Intro. to Biological Science (ACTS= BIOL1004)
ENGL 2013 Intro. to American Literature (ACTS=ENGL2653)	BIOL/PHSC 1004- Principles of Environmental Science
ENGL 2023 Honors World Literature	GEOL 1014- Physical Geology (ACTS= GEOL 1114)
PHIL 2003 Introduction to Philosophy (ACTS=PHIL1103)	PHSC 1013/1021- Physical Sci/Lab (ACTS= PHSC 1004)
PHIL 2043 Honors Introduction to Philosophy	
PHIL 2053 Introduction to Critical Thinking (ACTS=PHIL 1003)	

\*\*CSEC majors use CSEC 1113 as prereq and are not required to take COMS 2703/2701 or COMS 2713.

Sample Schedule	Milestones/Notes		
Semester 5	Hrs.	Grade	Semester 5
Science with Lab	4		
STAT 3153- Applied Statistics	3		STAT 2163 can substitute
COMS 3213- Adv. Data Structures and Algorithm Design	3		Prereq: COMS 2213
CSEC 3113- Assembly Programming	3		Prereq: COMS 2104 & 2903
CSEC 3123- Cyber Defense I	3		Prereq: CSEC 2213 & CSEC 2223
<b>Total hours</b>	<b>16</b>	<b>GPA</b>	

Semester 6	Hrs.	Grade	Semester 6
Fine Arts & Humanities	3		
COMS 3703- Operating Systems	3		Prereq: COMS 2213 and COMS 2223 or CSEC 3113
CSEC 3223- Programming Embedded Systems	3		Prereq: COMS 2213 & CSEC 3113
CSEC 3233- Cyber Defense II	3		Prereq: CSEC 3123
CSEC 3243- Computer Architecture	3		Prereq: ELEG 2130/2134 and COMS 3703
<b>Total hours</b>	<b>15</b>	<b>GPA</b>	<b>APPLY FOR GRADUATION</b>

Semester 7	Hrs.	Grade	Semester 7
Social Sciences	3		
CSEC 4123- Cryptography	3		Prereq: CSEC 3243
CSEC 4133- Large Scale Distributed Systems	3		Prereq: CSEC 2223 and junior standing in CSEC
CSEC 4143- Building Secure Software	3		Prereq: CSEC 3243
<b>Total hours</b>	<b>12</b>	<b>GPA</b>	

Semester 8	Hrs.	Grade	Semester 8
CSEC 4213- Information Systems Risk Management	3		Prereq: CSEC 2113 & 3233
CSEC 4233- Legal Issues in Cybersecurity	3		<b>Graduation Requirements:</b> Min. hours 3000-4000 level courses: 40 No more than 4 PE activity hours Min. hours required: 120 2.00+ GPA
CSEC 4243/4240- Software Sec Analysis and Rev Eng/LAB	3		
CSEC 4293- Cybersecurity Capstone Project/Internship	3		
General Elective (3000-4000)	3		
<b>Total Hours</b>	<b>15</b>	<b>GPA</b>	

**General Electives: 3 hrs. (3000-4000 level)**

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

Social Sciences
ECON 2013 Principles of Economics II (ACTS=ECON2203)
SOC 1003 Introductory Sociology (ACTS=SOC11013)
PSY 2003 General Psychology (ACTS=PSYC1103)
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