

### 2020-2021 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 0900 \_\_\_\_\_ 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		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		
<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 Sequence I (excluding BIOL)*	4		
COMS 2213- Data Structures	3		Milestone - Prereq: COMS 2203 & 2903
CSEC 2213- Forensics and Incident Responses	3		Prereq: CSEC 1113
CSEC 2223- Virtualization	3		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 <http://acts.adhe.edu/>

# 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 Sequence I &amp; II (excluding BIOL)*</b>
ENGL 2003 Introduction to World Literature (ACTS=ENGL2113)	CHEM 2124/2120 & 2134/2130- Gen Chem I & II (ACTS=CHEM1414/1424)
ENGL 2013 Intro. to American Literature (ACTS=ENGL2653)	GEOL 1014/2024- Physical and Historical Geol (ACTS=GEOL1114/1134)
ENGL 2023 Honors World Literature	PHYS 2014/2000 & 2024/2010- Algebra-Based Physics I & II (ACTS=PHYS2014/2024)
PHIL 2003 Introduction to Philosophy (ACTS=PHIL1103)	PHYS 2114/2000 & 2124/2010- Calculus-Based Physics I & II (ACTS=PHYS2034/2044)
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 Sequence II (excluding BIOL)*	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 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. Co-req: 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 3223
CSEC 4133- Large Scale Distributed Systems	3		Prereq: CSEC 3223
CSEC 4143- Building Secure Software	3		Prereq: COMS 2213
<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 & 2213
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
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>	<b>2.00+ GPA</b>

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

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

**\*May be satisfied by any 1-year science sequence that requires a lab in each course, excluding biological science courses.**

General Electives	Social Sciences
HIST 1503 World History to 1500 (ACTS=HIST1113)	ECON 2013 Principles of Economics II (ACTS=ECON2203)
HIST 1513 World History since 1500 (ACTS=HIST1123)	SOC 1003 Introductory Sociology (ACTS=SOCI1013)
HIST 1543 Honors World History to 1500	PSY 2003 General Psychology (ACTS=PSYC1103)
HIST 2003 U.S. History to 1877 (ACTS=HIST2113)	ANTH 1213 Intro. to Anthropology (ACTS=ANTH1013)
HIST 2013 U.S. History since 1877 (ACTS=HIST2123)	ANTH 2003 Cultural Anthropology (ACTS=ANTH2013)
HIST 2043 Honors U.S. History to 1877	GEOG 2013 Regional Geography of the World (ACTS=GEOG2103)
HIST 1903 Survey of American History	AMST 2003 American Studies
POLS 2003 American Government (ACTS=PLSC2003)	
ECON 2003 Principles of Economics I (ACTS=ECON2103)	
ECON 2103 Honors Principles of Economics I	