

Cybersecurity

Associate of Applied Science (A.A.S.)

The Associate of Applied Science Degree in Cybersecurity prepares entry-level computer technicians with cybersecurity skills to help fulfil the gap of expertise needed within the IT profession. The program emphasizes on computer security and information assurance concepts augmented with current industry standard techniques. Students will gain knowledge in the topics of the latest security technologies and will also examine the issues of information security awareness, as well as legal and ethical issues associated with cybersecurity. Courses offered under this major also covers topics related to threats and vulnerabilities, prevention at the technical (hardware and software) and human levels, detection, response, and management aspects of security.

Successful students can either opt to apply for entry level cybersecurity jobs or transfer to four-year institution leading to bachelor's degree in cybersecurity or related field. Students completing this degree program will be able to use the curriculum fundamentals learned to prepare for various industry certification examinations related to this domain.

Program Goals

1. Provide students with the technical knowledge and skills required to protect and defend computer systems and networks in the field of Information Technology.
2. Provide students with the knowledge to identify, analyze, and remediate computer security breaches at an organizational level.

Program Learning Outcomes (PLOs)

- PLO 1. Demonstrate the knowledge to analyze and evaluate emerging Cybersecurity risks and solutions with creative and critical thinking.
- PLO 2. Demonstrate adequate knowledge about Cybersecurity, Information Assurance, and Computer Forensics tools and software.
- PLO 3. Demonstrate a basic understanding of programming languages to successfully implement the methodologies in the Cybersecurity domain.
- PLO 4. Demonstrate the ability to apply security principles and practices to the environment, hardware, software, and human aspects of a system.
- PLO 5. Demonstrate the ability to analyze and evaluate systems for maintaining operations in the presence of risks and threats in Information Technology.



DEGREE PLAN
2021-2022

Developmental Coursework

Course Number	Course Title
ENGL 0121	Composition I Lab
MATH 0121	College Algebra Lab

Semester I (16 hours)

Course Number	ACTS#	Course Title
CS 1404	N/A	Programming I
ENGL 1113	ENGL 1013	Composition I [P1]
MATH 1045	MATH 1305	Pre-Calculus Math [P1]
GSTD 1021	N/A	Student Success I
Choose three (3) hours from below:		
HIST 2013	HIST 2113	U.S. History I
HIST 2023	HIST 2123	U.S. History II
PSCI 2003	PLSC 2003	American Government National

Semester II (16 hours)

Course Number	ACTS#	Course Title
CS 2124	N/A	Programming II [P2]
ENGL 1123	ENGL 1023	Composition II [P3]
MATH 1525	MATH 2405	Calculus & Analytic Geometry [P1]
GSTD 1031	N/A	Student Success II
Choose three (3) hours from below:		
HIST 1003	HIST 1113	World History I
HIST 1013	HIST 1123	World History II

Semester III (13 hours)

Course Number	ACTS#	Course Title
CS 2363	N/A	Data Structures and Algorithms [P4]
CS 2193	N/A	Computer Networking [C1]
CS 2313	N/A	Linux/Unix Operating System
MATH 2013	N/A	Probability & Statistics
GSTD 1041	N/A	Student Success III

Semester IV (15 hours)

Course Number	ACTS#	Course Title
CS 2003	N/A	Virtualization
CS 2343	N/A	Cybersecurity Essentials
CS 2353	N/A	Computer Forensics [C2]
CS 2453	N/A	Ethical Hacking
Choose three (3) hours from below:		
ENGL 2213	ENGL 2113	World Literature I
ENGL 2223	ENGL 2123	World Literature II

Total Credit Hours: 60

PREREQUISITES

P1	Refer to SAU Tech Placement Plan.
P2	CS 1404 - Programming I.
P3	ENGL 1113 - Composition I.
P4	CS 2124 - Programming II.

CO-REQUISITES

C1	CS 2363 - Data Structures and Algorithms.
C2	CS 2343 - Cybersecurity Essentials.

General Information

- Developmental coursework may be required in addition to the courses required for this degree and/or certificate(s).
- A [P] indicates that a prerequisite is required before the course can be taken. Refer to the prerequisites table listed below the degree plan or the course description in the College Catalog to determine the prerequisite.

General Requirements

- This degree requires successful completion of **60** credit hours.
- All degree-seeking students are required to take Student Success.
- A minimum 2.00 cumulative grade point average is required for graduation.
- Satisfaction of all financial obligations due to the college is required for graduation.

Residency Requirement

The student is required to complete a minimum of 15 semester hours in residence at SAU Tech for associate degrees and technical certificates and half of the credit hours required for certificates of proficiency as well as complete all other graduation requirements. Students who wish to pursue additional degrees must complete a minimum of 15 credit hours of difference between the degrees.

ACTS Course Numbers

The Arkansas Course Transfer System (ACTS) contains information about the transferability of courses within Arkansas public colleges and universities. Students are guaranteed the transfer of applicable credits and equitable treatment in the application of credits for admissions and degree requirements. Go to <http://acts.adhe.edu> for more information.