CYBERSECURITY, ASSOCIATE IN APPLIED SCIENCE

COMPUTER AND INFORMATION TECHNOLOGY

Associate in Applied Science : AAS 3197
62-77 Credits
Program Contact
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Program Description

The Associate in Applied Science (AAS) in Cybersecurity is designed to focus on the necessary skills required to secure, protect and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to meet the training needs of government and industry employees. The program covers a variety of information security technologies and structured languages. The Cybersecurity program also focuses on the skills needed for internationally recognized IT certifications and high demands in business, industry, and government. Certificates of Completion (CCLs) are also available in the following areas: Cybersecurity Fundamentals, Cyber Operations, Linux System Administration, Microsoft, Cisco Networking CCNA Security, Cyber Engineering, and Critical Infrastructure.

Program Notes

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Code	Title	Credits	Semester
Required Courses			_____
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	_____
or MST150EI	Configuring Windows 8		_____
or MST150SV	Microsoft Windows 7 Configuration		_____
or MST150WT	Installing and Configuring Microsoft Windows 10		_____
MST150++ required for Cloud System Administration specialization and Critical Infrastructure specialization			_____
CIS105	Survey of Computer Information Systems	3	_____
CIS111	Ethics in Information Technology	3	_____
or ITS120	Legal, Ethical and Regulatory Issues		_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
CIS156	Python Programming: Level I	3	_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CNT140AB required for Cisco Network Administration and Security specialization and Critical Infrastructure specialization			_____
CIS270	Essentials of Network and Information Security	3	_____
or ITS110	Information Security Fundamentals		_____
ITS110 required for Cyber Operations specialization; CIS270 required for Critical Infrastructure specialization			_____
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____
ITS240	Ethical Hacking and Network Defense	3	_____
Restricted Electives			_____
Students must complete 12-18 credits from the following list of courses.		12-18	_____
Courses that are required for a specialization in Cyber Operations, Linux System Administration, Cloud System Administration, Cisco Network Administration and Security, Cyber Engineering, and/or Critical Infrastructure are noted. Courses cannot be repeated for credit.			_____
Specialization I: Cyber Operations (17 Credits)			_____

BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	_____
CIS238DL	Linux System Administration	_____
or CIS238RH	Red Hat System Administration II	_____
CIS290AC	Computer Information Systems Internship	_____
or CIS298AC	Special Projects	_____
ITS291	Computer Forensics Foundations	_____
ITS292	Advanced Computer Forensics	_____
Specialization II: Linux System Administration (15 Credits)		_____
CIS238DL	Linux System Administration	_____
or CIS238RH	Red Hat System Administration II	_____
CIS239DL	Linux Shell Scripting	_____
CIS240DL	Linux Network Administration	_____
or CIS240RH	Red Hat System Administration III	_____
CIS271DL	Linux Security	_____
or CIS271RH	Red Hat System Administration IV	_____
CIS275DL	Linux Capstone	_____
Specialization III: Cloud System Administration (15-16 Credits)		_____
BPC274	Advanced Server Computer Maintenance: Server+ Prep	_____
CIS121AH	Microsoft PowerShell/ Command Line Operations	_____
CIS239DL	Linux Shell Scripting	_____
MST160	Azure Administrator	_____
or CLD110	Amazon Web Services Cloud Foundations	_____
MST260	Microsoft Azure Cloud Development and Operations	_____
or CLD120	Amazon Web Services Cloud Architect Associate	_____
Specialization IV: Cisco Network Administration and Security (12 Credits)		_____
CNT150AB	Switching, Routing, and Wireless Essentials	_____
CNT160AB	Enterprise Networking, Security, and Automation	_____
CNT202	Cisco Secure Firewall Appliance Configuration	_____
or CNT205	Cisco Certified Network Associate Security	_____
Specialization V: Cyber Engineering (18 Credits)		_____
CIS162	C Programming I	_____
or CIS162AB	C++: Level I	_____
or CIS162AC	Visual C++: Level I	_____
or CIS162AD	C#: Level I	_____
or CIS162RS	Rust Programming	_____
Students intending to transfer to U of A South should take CIS162 C Programming		_____
CIS227	Assembly Language	_____
CIS238DL	Linux System Administration	_____
or CIS238RH	Red Hat System Administration II	_____
CIS250	Management of Information Systems	_____
CIS262AB	C++: Level II	_____
or CIS262AD	C# Level II	_____
Specialization VI: Critical Infrastructure (16 Credits)		_____
CIS143	Introduction to Critical Infrastructure Protection	_____
CIS201	Introduction to Operational Technology	_____
CIS202	Introduction to Smart Grid Security	_____
CIS203	Principles of the Risk Management Framework	_____
CNT150AB	Switching, Routing, and Wireless Essentials	_____
General Electives		_____

See https://www.cgc.edu/CourseDescriptions for current course description information.

Select additional courses 100-level or higher to complete the minimum total program credits required for this degree. It is recommended to select from the Restricted Elective options. Consult with a faculty advisor, program director, and/ or academic advisor to identify coursework that best aligns with academic and professional goals.		0-3	_____
General Education			_____
Core			_____
First-Year Composition			_____
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL		_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL		_____
Oral Communication			_____
Select one of the following:		3	_____
COM100	Introduction to Human Communication [7]		_____
COM110	Interpersonal Communication		_____
COM225	Public Speaking		_____
COM230	Small Group Communication		_____
COM100 required for students intending to transfer to ASU West to earn a Bachelor of Science in Applied Computing Cybersecurity.			_____
Critical Reading			_____
Select one of the following:		0-3	_____
CRE101	College Critical Reading and Critical Thinking		_____
Or equivalent as indicated by assessment			_____
Mathematics			_____
Any approved general education course(s) in the Mathematics area		3-6	_____
Distribution			_____
Humanities, Arts and Design			_____
Any approved general education course(s) from the Humanities, Arts and Design area		3	_____
Social and Behavioral Sciences			_____
Any approved general education course(s) in the Social and Behavioral Sciences area		3	_____
Natural Sciences			_____
Any approved general education course(s) in the Natural Sciences area		4	_____
Total Credits		62-77	_____