

The Cybersecurity program prepares individuals to assess the security needs of computer and network systems, recommend safeguard solutions, and manage the implementation and maintenance of security devices, systems, and procedures. Upon successful completion of the program, students will have the needed background to prepare to take a number of industry certifications in the field of cybersecurity. Examples include but not limited to: CompTIA Network+; CompTIA Security+; CompTIA Linux +, MTA (Microsoft Technology Associate) and/or MCSA (Microsoft Certified Solutions Associate); and CompTIA Advanced Security Practitioner (CASP).

The Cybersecurity Degree will be offered at the Collaboration Campus. ACC has a transfer articulation with CSU Pueblo, under which students are guaranteed a junior standing with no more than 61 credits to meet the graduation requirements for a bachelor degree in Computer Information Systems-Cybersecurity Concentration issued by CSU-Pueblo. In order to achieve this, students must be dually enrolled at ACC and CSU-Pueblo during AAS coursework and work with an advisor for correct course sequencing.

Required Courses	Credits	Pre or Co Reqs Rqd	Course Availability		
			Fall	Spr	Sum
<b>General Education Courses</b>					
• BUS 217 - Business Communication & Report Writing	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• BUS 226 - Business Statistics	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• ENG 121 - English Composition I: GT-CO1*	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• MAT 121 - College Algebra: GT-MA1 or Higher*	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• PHI 113 - Logic: GT-AH3*	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Major Courses</b>					
• BUS 121 - Basic Workplace Skills	1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• CIS 287 - Cooperative Education	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• CNG 124 - Networking I: Network +	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• CNG 125 - Networking II: Network +	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• CNG 132 - Network Security Fundamentals	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• CNG 202 - Unix/Linux Server Admin	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• CNG 253 - Firewalls and How They Work	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• CNG 256 - Vulnerability Assessment I	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• CNG 259 - Enterprise Security	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• CSC 119 - Introduction to Programming	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Additional Required Courses</b>					
• CIS 220 - Fundamentals of UNIX (OR CIS 315 - UNIX Operating System: CSU Course**)	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• CIS 232 - Unix Shell Programming OR CSC 160 - Computer Science I	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• CNG 212 - Configuring Windows Server (OR CIS 401 - Network Systems Administration: CSU Course**)	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• CNG 258 - Digital Forensics (OR CIS 462 - Computer Forensics: CSU Course**)	4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



60 Credits

Catalog Year: 2020/2021

• Restricted Elective (See Notes for specific requirements)***	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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### Pre-Requisites, Co-Requisites, and Recommendations (grade C or better required)

Where requirements are listed as course categories (e.g. Electives, Arts/Humanities) rather than as specific courses, please note that depending upon course choice, pre-requisites may be required.

CNG 125 - Networking II: Network +

- Pre-Requisite: CNG 124 - Networking I: Network +

CNG 132 - Network Security Fundamentals

- Pre-Requisite: CNG 124 - Networking I: Network +

CNG 253 - Firewalls and How They Work

- Pre-Requisite: CNG 132 - Network Security Fundamentals

ENG 121 - English Composition I: GT-CO1\*

- Co-Requisite: CCR 094 - Studio 121

CIS 232 - Unix Shell Programming OR CSC 160 - Computer Science I

- Pre-Requisite: For CSC 160: CSC 119 - Introduction to Programming
- Pre-Requisite: For CSC 160: MAT 055 - Algebraic Literacy or Higher

CNG 256 - Vulnerability Assessment I

- Pre-Requisite: CNG 132 - Network Security Fundamentals

CNG 259 - Enterprise Security

- Pre-Requisite: CNG 132 - Network Security Fundamentals
- Pre-Requisite: CNG 256 - Vulnerability Assessment I

### Program Outcomes

- Evaluate the computer network and information security needs of an organization.
- Implement security measures for the protection of computer networks and the information of an organization.
- Develop and design a security infrastructure based on the business requirements of an organization.
- Troubleshoot, maintain and update an enterprise-level information security system.

### Notes

- \* This course requires college level readiness as measured by Accuplacer, ACT, or SAT scores; approved high school course work that is less than five years old; or successful completion of appropriate college-readiness course.
- \*\* These courses are required for students who intend to transfer to CSU to earn a baccalaureate degree in Computer Information Systems - Cybersecurity Concentration.
- \*\*\*Restricted Electives - choose one of the following courses: CNG 142, CNG 243, CSC 160, CNG 121, OR CIS 461 (CSU Course\*\*).
- AAA 101 – College 101: Student Experience is required for all new college students seeking degrees or transfer.

### Graduation Requirements

- All courses required for this degree must be completed with a “C” or better to be considered for transfer to another institution.
- Apply for graduation online at [www.arapahoe.edu/graduation](http://www.arapahoe.edu/graduation).
- As a graduate of a Career and Technical Education program you will be contacted by an ACC employee in approximately six months to verify your employment information.
- This information gathering mentioned above is a federal requirement to ensure that ACC receives certain federal funding.



60 Credits

RECOMMENDED COURSE SEQUENCE FULL-TIME TRACK

Year 1: Fall	Credits	Course
	3	CNG 124 - Networking I: Network +
	3	CSC 119 - Introduction to Programming
	3	ENG 121 - English Composition I: GT-CO1
	3	PHI 113 - Logic: GT-AH3
Year 1: Spring	Credits	Course
	1	BUS 121 - Basic Workplace Skills
	3	CIS 220 - Fundamentals of UNIX (OR CIS 315 - UNIX Operating System: CSU Course**)
	3	CIS 232 - Unix Shell Programming OR CSC 160 - Computer Science I
	3	CNG 125 - Networking II: Network +
	3	CNG 132 - Network Security Fundamentals
	4	MAT 121 - College Algebra: GT-MA1 or Higher
Year 2: Fall	Credits	Course
	3	BUS 226 - Business Statistics
	3	CNG 202 - Unix/Linux Server Admin
	4	CNG 212 - Configuring Windows Server (OR CIS 401 - Network Systems Administration: CSU Course**)
	3	CNG 253 - Firewalls and How They Work
	3	CNG 256 - Vulnerability Assessment I
Year 2: Spring	Credits	Course
	3	BUS 217 - Business Communication & Report Writing
	3	CIS 287 - Cooperative Education
	4	CNG 258 - Digital Forensics (OR CIS 462 - Computer Forensics: CSU Course**)
	4	CNG 259 - Enterprise Security
	4	Restricted Elective
		~Recommended Restricted Elective(s)~
		CIS 461 - Management of IT Security Risk (CSU Course**)
		CSC 160 - Computer Science I*

RECOMMENDED COURSE SEQUENCE PART-TIME TRACK

Year 1: Fall	Credits	Course
	3	CNG 124 - Networking I: Network +
	3	CSC 119 - Introduction to Programming
	3	ENG 121 - English Composition I: GT-CO1
Year 1: Spring	Credits	Course
	3	CIS 220 - Fundamentals of UNIX (OR CIS 315 - UNIX Operating System: CSU Course**)
	3	CIS 232 - Unix Shell Programming OR CSC 160 - Computer Science I
	4	MAT 121 - College Algebra: GT-MA1 or Higher
Year 1: Summer	Credits	Course
	3	BUS 217 - Business Communication & Report Writing
Year 2: Fall	Credits	Course
	3	CNG 202 - Unix/Linux Server Admin
	4	CNG 212 - Configuring Windows Server (OR CIS 401 - Network Systems Administration: CSU Course**)
	4	Restricted Elective*** ~Recommended Restricted Elective(s)~ CIS 461 - Management of IT Security Risk (CSU Course**) CSC 160 - Computer Science I*
Year 2: Spring	Credits	Course
	3	BUS 226 - Business Statistics
	3	CNG 125 - Networking II: Network +
	3	CNG 132 - Network Security Fundamentals
Year 2: Summer	Credits	Course
	3	PHI 113 - Logic: GT-AH3
Year 3: Fall	Credits	Course
	1	BUS 121 - Basic Workplace Skills
	3	CNG 253 - Firewalls and How They Work
	3	CNG 256 - Vulnerability Assessment I
Year 3: Spring	Credits	Course
	3	CIS 287 - Cooperative Education
	4	CNG 258 - Digital Forensics (OR CIS 462 - Computer Forensics: CSU Course**)
	4	CNG 259 - Enterprise Security