

INFORMATION SECURITY AND ASSURANCE CERTIFICATE (CAREER)

Program website (<https://www.frederick.edu/programs/information-technology/cybersecurity.aspx>)

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Program Description

Designed for students seeking to build skills in specialty areas (e.g., information security), upgrade current skills, or broaden their general knowledge base in information technology. All CIS courses completed in these certificates apply directly to an A.A.S. degree in information technology. The Information Security and Assurance Certificate is specifically designed to meet the need for workers in this rapidly growing area of information technology.

Program Learning Outcomes

- Follow a structured model in Security Systems Development Life Cycle (SDLC).
- Detect attack methodology, intrusion, and suspicious attempts to gain unauthorized access to systems and/or resources.
- Utilize digital and/or physical measures to protect data, hardware, and resources.
- Design and implement risk analyses, security policies, and damage assessments.
- Plan, evaluate, and implement operating system security-hardening procedures across multiple environments.
- Describe a variety of policies and procedures available to identify, protect from, detect, respond to, and recover from a given information security incident.

Program Requirements

Code	Title	Credits
Departmental Requirements		
CMIS 106	Object Design and Programming	3
CMIS 120	PC Operating Systems	3
CMIS 121	PC Repair & Diagnostics	3
CMIS 280	Networking Fundamentals	3
or CMIS 290	Cisco 1 Introduction to Networks	
Electives		
Select three of the following courses:		9
CMIS 179	Cybersecurity Fundamentals	
CMIS 217	Cybercrime and Digital Forensics	
CMIS 218	Information Security	
CMIS 219	Ethical Hacking	
CMIS 281	Security Fundamentals	
CMIS 295	Cloud Security	
Total Credits		21

Transfer Note

For more information on careers and transfer, contact the Career and Academic Planning Services office at 301.846.2471 or visit Transfer

Services (<https://www.frederick.edu/student-resources/counseling-advising/transfer-services.aspx>).

Guided Pathway to Success (GPS)

Suggested schedules map your path to degree completion.

Students should meet with an advisor each semester to carefully select and sequence courses based on their specific academic goals and interests. Visit Jefferson Hall or call 301.846.2471 for advising.

Recommended First Semester		Credits
CMIS 106	Object Design and Programming	3
CMIS 120	PC Operating Systems	3
CMIS 121	PC Repair & Diagnostics	3
Choose a CMIS elective (p. 1)		3
Credits		12
Recommended Second Semester		Credits
Select one of the following:		3
CMIS 218	Information Security	
CMIS 290	Cisco 1 Introduction to Networks	
Choose a CMIS elective (p. 1)		3
Choose a CMIS elective (p. 1)		3
Credits		9
Total Credits		21

CMIS Electives

Code	Title	Credits
Select three of the following courses:		
CMIS 179	Cybersecurity Fundamentals (recommended)	3
CMIS 217	Cybercrime and Digital Forensics	3
CMIS 218	Information Security	3
CMIS 219	Ethical Hacking	3
CMIS 281	Security Fundamentals	3
CMIS 295	Cloud Security	3

Part-time Students

Part-time students should complete courses in the order listed on the pathway. Please contact program manager for questions about part-time status.

Students who take fewer than 15 credits each semester or who require developmental English or Math coursework will need additional semesters to complete their degrees. Summer term and January session classes may help students to make faster progress.

Pathway Legend

Milestone - courses with the Milestone notation should be taken within the recommend credit range to stay on track for program completion.

Fall, Spring, Summer - courses with a Fall, Spring, or Summer notation indicate the course is offered in the specified semester only.