

CYBER DEFENSE CERTIFICATE

Division: Business and Computer Information Systems

PROGRAM CODE: 1C37247N

Financial Aid Eligible

The **Cyber Defense Certificate** provides concepts and hands-on skills to identify Cybersecurity threats and implement procedures to protect Cyber assets. It will also enhance students' chances to pursue a professional career in Cybersecurity by giving them various options to prepare for industry-recognized certificates such as CompTIA ITF+, Network+, Security+, CySA+, Project+, Cisco CCNA and CyberOps, and AWS Certified Cloud Practitioner and Certified Solutions Architect – Associate. To earn a certificate, complete the required courses as listed with a grade of C or better. At least 50% of all course work must be completed at Cypress College. This certificate requires a total of 26-28 units.

Code	Title	Units
Complete the required and elective core courses and one area of emphasis (26 to 28 units)		
<i>Required core courses (8 units):</i>		
CIS 190 C	IT and Cybersecurity Funds	4
CIS 230 C	Cisco Networking 1	4
Elective core courses (9 units)		
CIS 195 C	Network Security	3
CIS 196 C	Ethical Hacking	3
CIS 247 C	Python Programming	3
Complete all courses in one emphasis area from the following areas:		9-11
<i>EMPHASIS 1: Cisco Networking Emphasis (9 units):</i>		
CIS 231 C & CIS 232 C	Cisco Networking 2 and Cisco Networking 3	6
<i>Select one emphasis area's secondary courses (3 units)</i>		
CIS 233 C or CIS 239 C or CIS 258 C	Cisco CyberOps CCNA Bootcamp Cisco Security	3
OR		
<i>EMPHASIS 2: System Administration and Technical Support emphasis (9 units):</i>		
CIS 164 C & CIS 185 C	IT Support Services and Administering Windows Server	6
<i>Select one emphasis area's secondary courses (3 units)</i>		
CIS 189 C or CIS 243 C or CIS 110 C	Admintg Wdws Active Dir Svs Linux Server Administration Linux Operating System	3
OR		
<i>EMPHASIS 3: Development, Security, and Operations (DevSecOps) Engineering emphasis (11 units)</i>		
CIS 256 C & CIS 257 C	Appl. Security & Pntrtn Test. and Cloud Implementation and Secur	8

Select one emphasis area's secondary courses (3 units)

CIS 226 C	Java Programming	3
or CIS 259 C	Advanced Cloud Implementation	
or CIS 274 C	IT Project Management	
or CIS 275 C	Data Structures in Python	

OR

EMPHASIS 4: Virtualization and Cloud Computing Emphasis (9 units):

CIS 201 C & CIS 259 C	Microsoft Virtualization and Cloud Deployment and Advanced Cloud Implementation	6
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Select one emphasis area's secondary courses (3 units)

CIS 202 C	VMware Cloud and Virtual Netw	3
or CIS 274 C	IT Project Management	

Total Units **26-28**

Program Student Learning Outcomes:

OUTCOME 1: Acquire the skills, including identifying and analyzing security threats and vulnerabilities, manage local and wide area networks, implement cloud computing and virtualization solutions, and administer Windows and Linux operating systems, necessary for workforce preparation and to pursue a professional career in the field of Cybersecurity Analyst, Network Management, Cloud Architect, and System Administration and Support.

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