

INFORMATION TECHNOLOGY, CYBER SECURITY, ASSOCIATE IN APPLIED SCIENCE (CYBS)

Effective: Fall 2024

The Cyber Security degree program will prepare students for employment as one of the many Cyber, Network, or Computer information security specialists needed in the information technology industry. Students will learn the knowledge and skills necessary to successfully install, manage, and secure current Microsoft and Linux network operating systems. Additionally, students will learn how to evaluate network and data security risks, implement computer and network device security controls, utilize common ethical hacking tools and programs, perform security and data analysis, implement proper risk assessment procedures, and perform penetration testing. Students will also learn how to properly implement and manage a digital forensics audit of computer components, network devices, and data.

Courses taken in this degree program specifically relate to and will help prepare students for the following industry certifications exams; CompTIA A+, CompTIA Network+, CompTIA Security+, CompTIA CySA+, CompTIA Linux+, Microsoft Windows, Microsoft Server, and the Certified Ethical Hacker (CEH).

Program Outcomes

Upon successful completion of this program, students should be able to:

- Install and administer current Windows client and server operating systems.
- Install and administer current Linux operating systems.
- Analyze network and data security risks and implement solutions.
- Apply cyber defense mechanisms to prepare a system to repel attacks.
- Demonstrate proper ethical hacking techniques.
- Identify policies, procedures, and tools used in digital forensics.
- Troubleshoot common personal computer hardware and software problems.

Full-Time Academic Plan

First Semester	Hours
ENG 100 English Composition I	3
CS 100 Introduction to Information Technology	3
NET 110 Network Communications	3
NET 115 Microsoft Windows	4
Social Science Elective: (choose any Diversity and Social Justice AND Global Understanding designated Social Science course)	3
Hours	16
Second Semester	Hours
CS 101 Introduction to Computer Science	3
CS 127 Introduction to PC Support	3
CS 128 PC Repair and Maintenance	3
NET 116 Microsoft Hybrid Server: Core Infrastructure	4
Mathematics Elective: (choose a first course from Mathematics Elective Sequence)	3-4
Hours	16-17
Third Semester	Hours
NET 125 Ethical Hacking	4
NET 142 Cyber and Network Security Concepts	4

Communications Elective: (choose any Oral Communication designated course)	3
Mathematics Elective: (choose a second course from Mathematics Elective Sequence)	3-4
Hours	14-15
Fourth Semester	Hours
NET 200 Digital Forensics	3
NET 230 Linux Operating Systems I	4
NET 236 Cyber Security Defense and Analysis	4
Lab Science: (choose from any Scientific Inquiry designated course)	4
Hours	15
Total Hours	61-63

Notes:

Diversity and Social Justice(DJ) AND Global Understanding (GU) designated courses. (https://catalog.dccc.edu/academic-programs/college-academic-learning-goals/#Dual_DJ_GU_CourseList)

- Select one from *Social Science* offerings.

Scientific Inquiry (SI) designated courses (https://catalog.dccc.edu/academic-programs/college-academic-learning-goals/#SR_Course_List).

- Select from Science offerings.

Mathematics Elective Sequence:

Code	Title	Hours
Complete a sequence of two math courses:		
MAT 120 & MAT 121	Modern College Mathematics and Introduction to Probability and Statistics	6
MAT 135 & MAT 136	Business Precalculus and Business Calculus	6
MAT 151 & MAT 152	College Algebra and Precalculus	8
MAT 160 & MAT 161	Calculus I and Calculus II	8

Part-Time Academic Plan

Course	Title	Hours
First Semester	Hours	
ENG 100 English Composition I	3	
CS 100 Introduction to Information Technology	3	
NET 110 Network Communications	3	
Hours	9	
Second Semester	Hours	
NET 115 Microsoft Windows	4	
Social Science Elective: (choose any Diversity and Social Justice AND Global Understanding designated Social Science course)	3	
Hours	7	
Third Semester	Hours	
CS 101 Introduction to Computer Science	3	
CS 127 Introduction to PC Support	3	
CS 128 PC Repair and Maintenance	3	
Hours	9	
Fourth Semester	Hours	
NET 116 Microsoft Hybrid Server: Core Infrastructure	4	
Mathematics Elective: (choose a first course from Mathematics Elective Sequence)	3-4	
Hours	7-8	
Fifth Semester	Hours	
NET 125 Ethical Hacking	4	

Communications Elective: (choose any Oral Communication designated course)		3
Hours		7
Sixth Semester		
NET 142	Cyber and Network Security Concepts	4
Mathematics Elective: (choose a second course from Mathematics Elective Sequence)		3-4
Hours		7-8
Seventh Semester		
NET 200	Digital Forensics	3
NET 230	Linux Operating Systems I	4
Hours		7
Eighth Semester		
NET 236	Cyber Security Defense and Analysis	4
Lab Science: (choose from any Scientific Inquiry designated course)		4
Hours		8
Total Hours		61-63

NEW CONTENT HERE

Career

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