

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

## Catalog Addendum - New Program 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.

## Curriculum

Course	Title	Hours
<b>First Semester</b>		
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
<b>Hours</b>		<b>16</b>
<b>Second Semester</b>		
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
<b>Hours</b>		<b>16-17</b>

<b>Third Semester</b>		
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
<b>Hours</b>		<b>14-15</b>
<b>Fourth Semester</b>		
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
<b>Hours</b>		<b>15</b>
<b>Total Hours</b>		<b>61-63</b>