

# COMPUTER NETWORKING AND SECURITY, ASSOCIATE IN SCIENCE

The Computer Networking and Security program prepares students for employment in the Information Technology (IT) sector, including positions in information security administration, Microsoft system administration, network administration, and technical support.

It also prepares students for the following industry certifications:

- Cisco CCNA v7
- CompTIA Security+
- CompTIA Cybersecurity Analyst (CYSA+)
- CompTIA Linux+
- Microsoft MD-100 - Windows Client
- Microsoft MD-101 - Managing Modern Desktops
- Microsoft AZ-800 - Administering Windows Server Hybrid Core Infrastructure
- Microsoft AZ-801 - Configuring Windows Server Hybrid Advanced Services

## Learning Outcomes

Upon successful completion of the program, students will be able to:

- Implement and configure Cisco routers to perform local and wide area network routing using various routing protocols.
- Implement and configure Cisco switches to perform local area network switching.
- Implement and configure security on local and wide area networks.
- Implement and configure UNIX systems to obtain and provide network services.
- Configure and manage a Microsoft Windows Server and Client, both on premises and in the cloud.
- Install and configure settings in a Windows client operating system including configuring storage and security, managing data access, configuring applications, network connectivity, and recovery options.

## Associate in Science Degree Major Requirements

Code	Title	Units
<b>Certificate of Achievement Requirements</b>		
CSIS 72A	Administering Windows Server Core Infrastructure	3
CSIS 72B	Configuring Windows Server Hybrid Advanced Services	3
CSIS 76A	Cisco Certified Network Associate (CCNA) 1	3
CSIS 76B	Cisco Certified Network Associate (CCNA) 2	3
CSIS 76C	Cisco Certified Network Associate (CCNA) 3	3
CSIS 80	Introduction to UNIX and Linux	3
CSIS 83A	Microsoft Client Operating System	3
CSIS 86	Network Security Fundamentals/Security+ Prep	3
CSIS 89	Preparation for Cybersecurity Analyst Certification (CYSA+)	3

### Required Core

Select one course from the following:		1-4
BUSI 70	Business Communication	
CSIS 9	Programming Fundamentals: Python	
CSIS 51C	Database Processing	
CSIS 75	Introduction to Computer Hardware/A+ Prep	
CSIS 77	Web Design and Publishing	
CSIS 81	ITIL Essentials	
CSIS 87	Computer Forensics	
CSIS 88	Security Practices: Penetration Testing and Discovery	
CSIS 98	Project Development	
<b>TOTAL MAJOR UNITS</b>		<b>28-31</b>
<b>Additional Requirements</b>		<b>32-35</b>
Complete Competency Requirements, general education pattern (MPC General Education, CSU General Education, or IGETC), and electives, if needed, for a total of 60 degree-applicable units.		
<b>Total Units</b>		<b>60</b>

Please refer to the graduation requirements section of the Catalog for information about degree and certificate requirements including Reading and Writing, Mathematics, Information Competency, and General Education requirements.

The model sequence of coursework below is one pathway for students to complete the program. The information below is not an official educational plan. An MPC Counselor can assist you with creating a personalized education plan based on your academic, career, and personal goals. Visit MPC's Counseling website for more information about Counseling and up-to-date program requirements.

## Suggested 2-Year Course Sequence

<b>Year 1</b>		
<b>Fall</b>		<b>Units</b>
ENGL 1A	College Composition	3
or ENGL 1AE	or College Composition: Enhanced	
LIBR 50	Introduction to Library and Research Skills	1
MPC GE Area A2 (MATH 13 or MATH 16 Recommended)		4
CSIS 76A	Cisco Certified Network Associate (CCNA) 1	3
CSIS 76B	Cisco Certified Network Associate (CCNA) 2	3
Elective (COUN 10 Recommended)		1
<b>Units</b>		<b>15</b>
<b>Spring</b>		
CSIS 76C	Cisco Certified Network Associate (CCNA) 3	3
CSIS 86	Network Security Fundamentals/Security+ Prep	3
MPC GE Area B and Lab		4
MPC GE Area C		3
MPC GE Area D		3
<b>Units</b>		<b>16</b>
<b>Year 2</b>		
<b>Fall</b>		
CSIS 80	Introduction to UNIX and Linux	3
CSIS 89	Preparation for Cybersecurity Analyst Certification (CYSA+)	3

CSIS 72A	Administering Windows Server Core Infrastructure	3
Select one course from the following:		1-4
BUSI 70 or CSIS 9 or CSIS 51C or CSIS 75 or CSIS 77 or CSIS 81 or CSIS 87 or CSIS 88 or CSIS 98	Business Communication or Programming Fundamentals: Python or Database Processing or Introduction to Computer Hardware/A + Prep or Web Design and Publishing or ITIL Essentials or Computer Forensics or Security Practices: Penetration Testing and Discovery or Project Development	
Electives (CSIS 87 Recommended)		3
MPC GE Area E		3
<b>Units</b>		<b>16-19</b>
<b>Spring</b>		
CSIS 83A	Microsoft Client Operating System	3
CSIS 72B	Configuring Windows Server Hybrid Advanced Services	3
MPC GE Area F		3
Electives (CSIS 88 Recommended)		3
Electives (ENGL 2, SPCH 1, or SPCH 2 Recommended)		1-4
<b>Units</b>		<b>13-16</b>
<b>Total Units</b>		<b>60-66</b>

MPC "Ready to Work" Career Education programs offer students the opportunity to gain knowledge and skills needed for employment and job advancement.

All students should consult with a Counselor to discuss career pathways, for support with career exploration and planning, and to create a personalized education plan to help them meet their academic, career, and personal goals. Visit MPC's Counseling website for more information about Counseling services provided by MPC and to connect with a Counselor.

Additional resources are available through MPC's Career & Transfer Resource Center (CTRC). The CTRC offers career resources, workshops, guidance and referrals. Visit the CTRC for support finding online career information and other resources to explore majors, occupations, and employment information.