

# COMPUTER NETWORKING AND CYBERSECURITY, ASSOCIATE OF SCIENCE (AS)

## Overview

The Associate in Science in Computer Networking and Cybersecurity degree (AS in Computer Networking and Cybersecurity) provides students with foundational knowledge to design, configure, manage, troubleshoot, and secure networks, using the latest concepts, technologies, and techniques.

This program is designed to prepare students for careers in computer networking and cybersecurity. Graduates will be qualified for technological roles in network design, network infrastructure, network security, and network installation and maintenance. This program offers several courses that prepare students for achieving the requirements to take the examinations of various industry certifications including: A+, Network+, Security +, Cisco Certified Network Associate (CCNA).

Career opportunities include IT Specialists, Computer Technicians, Network Administrators, and Network Engineers.

## Requirements

### Associate Degree Graduation Requirements

Complete all of the following:

- All Department Requirements listed below with a "C" or better or "P" in each course (at least 20% of the department requirements must be completed through SBCC).
- One of the following three General Education options:
  - OPTION 1: A minimum of 18 units of SBCC General Education Requirements (<https://catalog.sbccc.edu/degrees-certificates-awards/#associatedegreeestext>) (Areas A-D) and Institutional Requirements (Area E) and Information Competency Requirement (Area F) OR
  - OPTION 2: IGETC (<https://catalog.sbccc.edu/transfer-curricula/#igetctext>) Pattern OR
  - OPTION 3: CSU GE Breadth (<https://catalog.sbccc.edu/transfer-curricula/#csugebtext>) Pattern
- A total of 60 degree-applicable units (SBCC courses numbered 100 and higher).
- Maintain a cumulative GPA of 2.0 or better in all units attempted at SBCC.
- Maintain a cumulative GPA of 2.0 or better in all college units attempted.
- A minimum of 12 units through SBCC.

Code	Title	Units
<b>Department Requirements</b>		
CNEE 101	Introduction to Computers and Networks	4
CNEE 102	A+ Computers and Network Support	4
CNEE 110	Networking Essentials	4
CNEE 120	Introduction to Cybersecurity	4

CNEE 125	CCNAI-Introduction to Switching and Routing	5
CNEE 126	CCNA II Advanced Routing and Switching	5
Complete two of the following courses:		7-8
CIS 201	UNIX/LINUX System Administration	
CIS 206	MS Windows Server System Administration	
CIS 218	MS Windows Desktop System Administration	
CNEE 109	Introduction to Internet of Things (IoT)	
CNEE 148	CCNA Cybersecurity Operations	

**Total Units** **33.00-34.00**

## Learning Outcomes

- Apply basic computer hardware and software concepts to install, trouble-shoot and manage computer network systems.
- Monitor computer systems to improve network performance for all systems.
- Identify computer network security threats and vulnerabilities for a given network, choose appropriate network security hardware and software for a given security requirement, and apply necessary security measures to prevent a possible computer network compromise.
- Given a computer network problem, apply critical thinking, problem-solving techniques and effective communications skills to find solutions to the problem.

## Recommended Sequence

Make an appointment with your SBCC academic counselor through Starfish to create a Student Education Plan that reflects a recommended course sequence for this program that is tailored to your individual needs.

How to schedule an Academic Counseling appointment (<https://www.sbccc.edu/counselingcenter/counselingappointments.php>).