

# Learning Outcomes: Computer Engineering Technology

---

## ❖ Cisco Specialization

- Demonstrate proficiency in troubleshooting personal computers.
- Examine the roles and functions of network infrastructure.
- Build inter-networked environments, incorporating routers, bridges, and switches.
- Apply mathematical foundations in designing scalable TCP/IP networks.
- Troubleshoot various static and dynamic routing protocols.
- Test and solder IC components associated with basic digital electronic systems.
- Apply a working knowledge of group dynamics, team-building, and time-management skills to computer networking projects.
- Accept professional and ethical responsibilities of the computer engineering technology profession.
- Engage effectively in interpersonal, oral, visual, and written communication.

## ❖ Microsoft Specialization

- Demonstrate proficiency in troubleshooting personal computers.
- Demonstrate proficiency in Microsoft operating systems and use of diagnostics.
- Examine the roles and functions of the networking infrastructure.
- Develop a Microsoft network.
- Apply mathematical Functions in designing scalable TCP/IP networks.
- Test and solder IC components associated with basic digital electronic systems.
- Apply group dynamics and team building for Microsoft projects.
- Accept professional and ethical responsibilities of the computer engineering technology profession.
- Engage effectively in interpersonal, oral, visual, and written communication.

## ❖ Cisco Network Associate (CCNA), College Credit Certificate

- Demonstrate proficiency in troubleshooting personal computers.
- Examine the roles and functions of network infrastructure.
- Troubleshoot various static and dynamic routing protocols such as Enhanced Gateway Routing Protocols (EIGRP), and Open Shortest Path First (OSPF).
- Plan campus-wide switched networks related technologies such as Virtual LANs, Spanning Tree Protocols, and Virtual Trunking Protocol.

❖ **Microcomputer Repairer/Installer, College Credit Certificate**

- Demonstrate proficiency in troubleshooting personal computers.
- Identify procedures for installing, upgrading, diagnosing, and optimizing operating systems.
- Examine the functions of network infrastructure.

❖ **Microsoft Systems Administrator (MCSA), College Credit Certificate**

- Demonstrate proficiency in Microsoft operating systems and use of diagnostics.
- Assess the roles and functions of the networking infrastructure.
- Develop a Microsoft network.
- Identify procedures for installing, upgrading, diagnosing, and optimizing operating systems.

❖ **Microsoft Systems Engineer (MCSE), College Credit Certificate**

- Demonstrate proficiency in Microsoft operating systems and use of diagnostics.
- Assess the roles and functions of the networking infrastructure.
- Develop a Microsoft network.
- Use mathematical functions as they apply to the network.
- Evaluate the network with digital electronic test equipment.