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# SECTION HEADING

## CST 1500: Routers and Switches

### Description

Routers and Switches focuses on switching technologies and router operations that support small-to-medium business networks and includes wireless local area networks (WLANs) and security concepts. Students learn key switching and routing concepts. They can perform basic network configuration and troubleshooting, identify and mitigate LAN security threats, and configure and secure a basic WLAN.

### Credits

3

### Prerequisite

CST 1190

### Topics to be Covered

1. Switching Concepts, VLANs and InterVLAN Routing
2. Redundant Networks
3. Available and Reliable Networks
4. L2 Security and WLANs
5. Routing Concepts and Configuration

### Learning Outcomes

1. Configure devices by using security best practices.
2. Explain how Layer 2 switches forward data.
3. Implement VLANs and trunking in a switched network.
4. Troubleshoot inter-VLAN routing on Layer 3 devices.
5. Implement DHCPv4 to operate across multiple LANs.
6. Configure dynamic address allocation in IPv6.
7. Implement switch security to mitigate LAN attacks.
8. Explain how WLANs enable network connectivity.
9. Troubleshoot static and default route configurations.

### Credit Details

Lecture: 2

Lab: 1

OJT: 0