Course Information

Semester & Year:	**Spring 2025**
Course Title:	**Switching, Routing, and Wireless Essentials**
Course Prefix & Number:	**CNT150AB**
Section Number:	**30685**
Credit Hours:	**4**
Start Date:	**1/29/25**
End Date:	**5/9/25**
Room Number:	**CM448**
Meeting Days:	**Wednesday**
Meeting Times:	**6:00pm - 8:30pm**

Course Format

The course format for this course is Hybrid. There will be in-person meetings on Wednesday from 6:00 – 8:30 pm in CM448. These sessions are mandatory. There are additional activities for the student to complete online (on your time and to be completed by the due dates listed in Canvas or NetAcad). Students should spend at least 10 hours per week outside of class on the material to ensure success on course exams.

Instructor Information

Instructor:	**Jeff Hardee**
Email:	**jeffrey.hardee@scottsdalecc.edu**
Phone:	**By appointment**
Office Location:	**CM448, Virtual Office: Cisco WebEx**
Office Hours:	**Wed: 5-5:30pm; Virtual Office as requested**

Course Description

Focus on configuring switches and routers for use in small and medium size networks. Including Virtual Local Area Networks (VLANs), VLAN trunking, Inter-VLAN routing, Spanning Tree Protocol (STP), EtherChannel, Dynamic Host Configuration Protocol (DHCP), First Hop Redundancy, Local area Network (LAN) and Switch security, and Static routing. Knowledge and skills needed to implement a Wireless Local Area Network (WLAN) is also covered. Preparation for Cisco certification examination.

Prerequisites

CNT140AB or Permission of the Instructor.

Course Competencies

1. Configure basic switch and router settings using Command Line Interface. (I)

2. Configure VLANs to create logically separate networks and describe how routing occurs between them. (II, III)

3. Configure and troubleshoot enhanced switching technologies such as VLANs, VLAN trunking, inter-VLAN routing, and Dynamic Trunking Protocol (DTP). (II, III)

4. Explain (STP) and Rapid Per VLAN Spanning Tree Plus Protocol (RPVST+). (IV)

5. Configure and troubleshoot EtherChannel. (V)

6. Configure and troubleshoot (DHCP) for IPv4 and IPv6 networks. (VI)

7. Explain the purpose of first-hop redundancy protocols in a switched network. (VII)

8. Evaluate LAN vulnerabilities and possible security implementations. (VII)

9. Configure and troubleshoot switch security. (VII)

10. Assess Wireless routing concepts and components. (VIII)

11. Configure and troubleshoot wireless routers, access points, and wireless clients. (VIII)

12. Evaluate the purpose, nature, and operations of a router, routing tables, and the route lookup process. (IX)

13. Configure and troubleshoot static routing and default routing. (X)

Texts and Course Materials

Your instruction content will be accessed on the Cisco Networking Academy website. The URL is www.netacad.com. Additional material will be posted in Canvas as needed.

Course Technologies

View the [Accessibility Statements & Privacy Policies](#) of technologies used in this course.

Maricopa Systems

This course uses key Maricopa systems for course management and communication.

- Canvas Learning Management System
- Student Maricopa Gmail Account

Synchronous Communication Tools

This course implements the use of web conferencing and/or other synchronous course tools.

- Cisco WebEx, as needed for additional office hours and scheduled in advance, Virtual Office URL: https://meet197.webex.com/meet/pr25542757631

Streaming Media/Audio/Video Tools

This course uses webcasting, lecture capture systems, YouTube, and/or other streaming media services.

- Cisco Networking Academy

Student Assignment Tools

This course requires students to participate in or submit assignments using desktop or cloud-based applications.

- Google Products
- Microsoft Office 365
- Cisco Packet Tracer

Course Policies

The following are policies specific to this course. Students are also responsible for the college policies included on the [Student Regulations](#) page of the Maricopa Community College District website.

Generative Artificial Intelligence (AI) Policy

Opening Statement Regarding Generative Artificial Intelligence (AI)

The World Economic Forum defines generative AI as "a category of artificial intelligence (AI) algorithms that generate new outputs based on the data they have been trained on. Unlike traditional AI systems that are designed to recognize patterns and make predictions, generative AI creates new content in the form of images, text, audio, and more."

Some examples of generative AI tools include but are not limited to: ChatGPT, Google Gemini, Microsoft Copilot, Stable Diffusion, GrammarlyGo, and Adobe Firefly.

No Generative Artificial Intelligence (AI) Allowed

In this class, all work submitted must be your own. The use of generative AI tools will be considered academic misconduct (see Administrative Regulation 2.3.11 1.B(b)) and will be treated as such. If you are unsure if the tool or website you are using is a generative AI tool, please contact the instructor for further clarification before using the tool or website.

Late Work Policy

Students will be most successful when they submit their coursework on time. The majority of the assignment deadlines allow for ample time for students to work at a reasonable independent pace yet also stay in sync with the weekly knowledge goals of the course. Students are also encouraged to work together on all assignments except quizzes and tests, which are to be independently completed by the listed due dates. **Therefore, no late work will be accepted on assignments.** When assignment due dates are listed in Canvas, students will have up until 11:59pm that day to turn it in for it to be accepted for grading.

Grading Standards & Practices

Grade Scale

Letter Grade	Points Range
A	90 – 100%
B	80 – 89%
C	70 – 79%
D	60 – 69%
F	0 – 59%

Assignments

Assignment Name	Points	Percent of Grade
Module Checkpoint Exams	300	30%
Mid-Term Exam	200	20%
Course Case Study	300	30%
Final Exam	200	20%
(Extra Credit - Optional	100	10%)
TOTAL:	**1000**	**100%**

Student/Instructor Interaction

In this course, you can expect regular and substantive interaction (RSI) that aligns with Scottsdale Community College's mission to provide challenging and supportive learning experiences and the US Department of Education's requirement for regular and substantive interaction (RSI) for online courses. My commitment to your success includes the following:

- Being available during regularly scheduled student support hours before class or as stated in the syllabus.

- Sharing weekly information about the course materials, including key information, explanations, examples, and resources via in-person, recorded, and/or text-based lectures.
- Engaging in weekly discussions about course content within discussion boards in Canvas.
- Providing group or individual feedback regularly on assignments.
- Promptly responding to student questions about the course sent via email or the Canvas inbox within 72 business hours..
- Regularly posting announcements about the course content and activities.
- Monitoring your academic progress and communicating concerns, as needed.

Addressing Incidents of Title IX Sexual Harassment

In accordance with Title IX of the Education Amendments of 1972, the MCCCD prohibits unlawful sexual harassment against any participant in its education programs or activities. Sexual harassment includes quid pro quo (this for that) harassment, hostile environment, sexual assault, dating/domestic violence, and stalking. This prohibition against sexual harassment - including sexual violence - applies to students, MCCCD employees, and visitors to campus.

The policy of the MCCCD is to provide an educational, employment, and business environment free of sexual violence, unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communications constituting sexual harassment as prohibited by state and federal law. Incidents of Sexual Misconduct should be reported to the college Title IX Coordinator, as outlined in policy. MCCCD will provide on its Title IX and Preventing Sexual Harassment webpage a link to all Title IX Coordinators at the MCCCD. Reports may be filed anonymously at: https://district.maricopa.edu/consumer-information/reporting. Discrimination against pregnant and parenting students is also prohibited under Title IX. For more information regarding pregnancy and parenting status, please visit the webpage Working with Pregnant and Parenting Students.

Classroom Accommodations for Students with Disabilities

In accordance with the Americans with Disabilities Act (ADA), the Maricopa County Community College District (MCCCD) and its associated colleges are committed to providing equitable access to learning opportunities to students with documented disabilities (e.g. mental health, attentional, learning, chronic health, sensory, or physical). Each class/term/semester that a student needs academic adjustments/accommodations, the qualified student is required to work with the Disability Resources and Services Office (DRS) at their individual college(s). College DRS offices may only offer accommodations/academic adjustments for their own college. Contact with the DRS should be made as soon as possible to ensure academic needs are met in a reasonable time. New and returning students must request accommodations each semester through DRS Connect online services. To learn more about this online service process, please contact your local DRS office.

 If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations, you are welcome to contact DRS by using the information listed on the following webpage: https://district.maricopa.edu/consumer-information/disability-resources/contacts. The DRS office offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions qualifying for accommodations/academic adjustments. Reasonable accommodations are established through an interactive process between you, your faculty, and DRS; and only those academic adjustments/reasonable accommodations granted by the DRS are recognized by the college and MCCCD. It is the policy and practice of the MCCCD to create inclusive and accessible learning environments consistent with federal and state law.

Response Time

Students can expect a response time of **72 business hours** for the instructor to respond to messages sent via the Canvas Learning Management System or email. Students can expect assignments to be graded within **5 business days** of the assignment's due date.

Attendance Policy

You are required to attend all class meetings. You cannot be successful in a CIS class if you miss 25% or more of the meetings, even if the absences are excused.

Therefore, once a student has missed 25% of the class meetings (4 sessions) – whether they are excused absences or unexcused – you will be automatically dropped from the course.

If you miss, are late for class, or leave early you are responsible for ALL material covered during that class meeting.

In order to successfully learn the course material, the student will need to invest significant time and effort in reading, working labs, and completing all of the class assignments.

Important points to remember for this class are:

• All information for this class is available through Netacad.com and Canvas.

• All assignments MUST be submitted by the published DUE DATES in Netacad or Canvas.

• If you decide to drop this class, you must submit a Withdrawal form to officially withdraw.

Withdrawal Policy

In addition to the general college Withdrawal policy, the following additional withdrawal policies apply to this course:

- After **four (4) absences**, excused or unexcused, you will be withdrawn from the class. Religious holidays and athletic events (with documentation) will be taken into consideration. Extreme personal or medical crises will be evaluated on a case-by-case basis and written proof is required.
- If you start the class and then decide it is not what you expected, you must do one of the following:
  - o Go to campus and drop the course if it is still in the drop/add period
  - o Go to campus and withdraw from the course
  - o Email me and request a withdrawal

The official date to request a withdrawal from your instructor in this course is: **Friday, April 25th, 2025.**

Instructional Contact Hours (Seat Time)

This is a three (4) credit-hour course. Plan to spend at least four hours on course content or seat time (direct instruction) and eight hours on homework weekly. Accelerated courses will require additional time per week.

Online Tutoring

SCC's tutors are available online to help with your courses. You may work with an SCC tutor remotely using Google Meet, your phone, or email. Visit the [Tutoring & Learning Centers](#) page for detailed information on the five learning center's hours and procedures.

As much as possible, it is highly recommended that you utilize SCC tutors since they are more familiar with SCC coursework, instructor expectations, and assignments; however, if you need to work with a tutor outside regular hours, online and hybrid students now have access to a 24/7 online tutoring service called Brainfuse. Brainfuse provides online tutoring in a variety of academic subjects. Each student may utilize up to 6 hours of online tutoring through Brainfuse per semester, and has the option of requesting additional time if needed.

To access Brainfuse and begin working with a tutor:

1. Visit the [SCC Online Tutoring Services Through Brainfuse](#) page (https://www.scottsdalecc.edu/students/tutoring/online-tutoring)
2. Click the **Visit a tutor online** button
3. Enter your MEID and password
4. Choose your topic and subject
5. Click the **Connect** button

Please use your time effectively and be prepared with your questions before you connect to a tutor. Tutors and students communicate in real-time so whatever you type, draw, or share on the screen, the tutor sees, and vice versa. You may also want to have screenshots ready if applicable. All Brainfuse sessions are recorded for review later.

Learning Tools and Your Privacy and Security

SCC utilizes a variety of software applications and web-based tools operated by third party vendors to support student learning. To allow student access to the application, site or tool, certain identifiable information may be required to establish a user name or password, and submit work and/or download information from these tools. Inherent with all internet-based tools, there is a risk that individuals assume when electing to use these tools, as they may place information at risk of disclosure.

To use learning tools responsibly, please observe all laws and the Maricopa Community College District [Student Conduct Code](#), such as copyright infringement, plagiarism, harassment or interference with the underlying technical code of the software. As a student using a learning tool, you have certain rights. Any original work that you produce belongs to you as a matter of copyright law. You also have a right to the privacy of your educational records. Your contributions to learning tools constitute an educational record. By using the tool, and not taking other options available to you in this course equivalent to this assignment that would not be posted publicly on the internet, you consent to the collaborative use of this material as well as to the disclosure of it in this course and potentially for the use of future courses.

Students are responsible for the information contained in this syllabus, the Syllabus page in your Canvas course and the **College Policies & Student Services** page found in the First Steps module of your Canvas course. Students will be notified by the instructor of any changes in course requirements or policies.