

Network Routing & Switching II

CSIS - 1251 501

Course Description

Enterprise Networking, Security, and Automation (ENSA) describes the architecture, components, operations, and security to scale for large, complex networks, including wide area network (WAN) technologies. The course emphasizes network security concepts and introduces network virtualization and automation. It is recommended students complete CSIS 1250 or possess equivalent knowledge prior to taking this course.

Semester: Fall & Spring

Course Student Learning Outcomes

- Deploy and configure network devices.
- Install, configure, and troubleshoot dynamic routing protocols.
- Design enterprise network infrastructure.
- Create secure network environments.
- Understand how application programming interfaces (API) and configuration management tools enable network automation.

Course Prerequisites

This course does not have any prerequisites, but we do recommend CSIS-1200 (Introduction to Networking), CSIS:1250 (Which contains the Cisco "Introduction to Networks" and "Switching, Routing, and Wireless Essentials" courses). CSIS-1250 lays out the foundations which this course builds upon, or prior learning.

Transfer/Certification/Licensure/Employment Information

This course prepares the student for the Cisco CCNA certification.

Engagement Plan

Example language:

- I will respond to email within 24hrs. I will offer feedback on major assignments within one week of the due date of the assignments. The best way to contact me is via the Canvas Inbox, as I will prioritize this email over other modes of communication.
- In this course I will be posting interactive announcements which will offer specific opportunities for class questions and extra credit every other week.
- Additionally, I will be participating in the discussion forums with you to share my perspective within the discipline and to offer some nuances of interpretation that may not be present in your textbook.
- Lastly, we'll be holding small group Q & A sessions, where we can learn from our peers (and faculty) on some of the more difficult units within the course.

Keys for Success (how to succeed in the course)

Stay current with all assignments and exams.

Course Content Advisory

Follow the detailed instructions on how to submit assignments that are contained in the Canvas course.

Brief Description of Assignments/Exams

The descriptions of the assignments and module exams can be found in the Cisco Networking Academy.

Assignment Schedule

Due Date	Assignment Name	Assignment Type	Points
	Beginning of Course Survey	Quiz	0
	Introduce Yourself	Discussion	0
	What Questions Do You Have? (Optional)	Discussion	0
8/26/25	Orientation Quiz	Quiz	5
8/27/25	Introduce Yourself	Discussion	10
9/2/25	1.0.5 Packet Tracer - Logical and Physical Mode Exploration	Assignment	6
9/9/25	2.2.13 Packet Tracer - Point-to-Point Single-Area OSPFv2 Configuration	Assignment	18
9/9/25	2.3.11 Packet Tracer - Determine the DR and BDR	Assignment	30
9/9/25	2.4.11 Packet Tracer- Modify Single-Area OSPFv2	Assignment	25
9/9/25	2.5.3 Packet Tracer - Propagate a Default Route in OSPFv2	Assignment	100
9/9/25	2.6.6 Packet Tracer - Verify Single-Area OSPFv2	Assignment	20

Due Date	Assignment Name	Assignment Type	Points
9/9/25	2.7.1 Packet Tracer - Single-Area OSPFv2	Assignment	103
9/9/25	2.7.2 Lab - Single Area OSPF v2	Assignment	100
9/10/25	Unit 1 OSPF Discussion	Discussion	20
9/12/25	Modules 1-2 OSPF Concepts and Configuration Exam	Assignment	100
9/16/25	3.11.1 Packet Tracer - Network Security Exploration	Assignment	26
9/16/25	3.8.8 Lab - Explore DNS Traffic	Assignment	100
9/23/25	4.1.4 Packet Tracer - ACL Demonstration	Assignment	2
9/30/25	5.1.8 Packet Tracer - Configure Numbered Standard IPv4 ACLs	Assignment	100
9/30/25	5.1.9 Packet Tracer - Configure Named Standard IPv4 ACLs	Assignment	100
9/30/25	5.2.7 Packet Tracer - Configure and Modify Standard IPv4 ACLs	Assignment	40
9/30/25	5.4.12 Packet Tracer - Configure Extended IPv4 ACLs - Scenario 1	Assignment	100

Due Date	Assignment Name	Assignment Type	Points
9/30/25	5.4.13 Packet Tracer - Configure Extended IPv4 ACLs - Scenario 2	Assignment	100
9/30/25	5.5.1 Packet Tracer - IPv4 ACL Implementation Challenge	Assignment	108
9/30/25	5.5.2 Lab - Configure and Verify Extended IPv4 ACLs	Assignment	100
10/2/25	Modules 3-5 Network Security Exam	Assignment	100
10/7/25	6.2.7 Packet Tracer - Investigate NAT Operations	Assignment	100
10/7/25	6.4.5 Packet Tracer - Configure Static NAT	Assignment	100
10/7/25	6.5.6 Packet Tracer - Configure Dynamic NAT	Assignment	100
10/7/25	6.6.7 Packet Tracer - Configure PAT	Assignment	100
10/7/25	6.8.1 Packet Tracer - Configure NAT for IPv4	Assignment	100
10/7/25	6.8.2 Lab - Configure NAT for IPv4	Assignment	100
10/14/25	7.6.1 Packet Tracer - WAN Concepts	Assignment	15

Due Date	Assignment Name	Assignment Type	Points
10/23/25	Modules 6-8 WAN Concepts Exam	Assignment	100
11/4/25	10.1.5 Packet Tracer - Use CDP to Map a Network	Assignment	10
11/4/25	10.2.6 Packet Tracer - Use LLDP to Map a Network	Assignment	42
11/4/25	10.3.4 Packet Tracer - Configure and Verify NTP	Assignment	20
11/4/25	10.6.10 Packet Tracer - Back Up Configuration Files	Assignment	98
11/4/25	10.6.13 Lab - Research Password Recovery Procedures	Assignment	100
11/4/25	10.7.6 Packet Tracer - Use a TFTP Server to Upgrade a Cisco IOS Image	Assignment	75
11/4/25	10.8.1 Packet Tracer - Configure CDP, LLDP, and NTP	Assignment	105
11/4/25	10.8.2 Lab - Configure CDP, LLDP, and NTP	Assignment	100
11/11/25	11.5.1 Packet Tracer - Compare Layer 2 and Layer 3 Devices	Assignment	17

Due Date	Assignment Name	Assignment Type	Points
11/18/25	12.5.13 Packet Tracer - Troubleshoot Enterprise Networks	Assignment	93
11/18/25	12.6.1 Packet Tracer - Troubleshooting Challenge: Document the Network	Assignment	100
11/18/25	12.6.2 Packet Tracer - Troubleshooting Challenge: Use Documentation to Solve Issues	Assignment	100
11/20/25	Modules 9-12 Optimize, Monitor and Troubleshoot Networks Exam	Assignment	100
11/25/25	13.6.1 Lab - Install Linux in a Virtual Machine and Explore the GUI	Assignment	100
12/2/25	Configuration Management Tools	Discussion	20
12/4/25	Modules 13-14 Emerging Network Technologies Exam	Assignment	100
12/11/25	Final Exam	Assignment	100

Grading Scale

A 94-100%; A- 90-93.99%

B+ 87-89.99%; B 84-86.99%; B- 80-83.99%

C+ 77-79.99%; C 74-76.99%; C- 70-73.99%

D+ 67-69.99%; D 64-66.99%; D- 60-63.99%

How to Navigate to Canvas

Online Tutoring

Students at SLCC have access to online tutoring through Canvas. From your Canvas course click Online Tutoring in the course navigation and follow the steps to set up an appointment. If this is your first time using the Online Tutoring we recommend you click "Take a Tour" to familiarize yourself with the service.

Note that students only receive 480 minutes of tutoring time each semester. After that we encourage you to use the resources found through this link:

<https://www.slcc.edu/tutoring/index.aspx>

If you have any additional questions reach out to elarningsupport@slcc.edu.

Institutional Policies

As members of our academic community, we would like to invite you to review the Institutional Syllabus which covers important policies and procedures. This document contains important links for students on the code of student rights and responsibilities, academic integrity, and grading policies, Title IX and other important acknowledgements. By familiarizing yourself with this information, you can help us create a safe and respectful environment for everyone.

For more information, navigate to the Institutional Policies tab on the [Institutional Syllabus](#) page.

Learning Support and Tutoring Services

We are pleased to offer a range of tutoring and learning support services to help you achieve your academic goals. Whether you need assistance with a specific subject or want to improve your study skills, you have many options for tutoring or other support.

To learn more about the services we offer and how to access them, visit the [Institutional Syllabus](#) page under the Tutoring and Learning Support tab. We encourage you to take advantage of these resources to help you succeed in your studies. If you have any questions or would like to schedule a tutoring session, please don't hesitate to reach out to us. We are here to support you in any way we can.

[Advising and Counseling Support Services](#)

At our institution, we are committed to supporting your academic and personal growth. That's why we offer a range of advising and counseling services to help you navigate the challenges of college life. To learn more about the resources available to you and how to access them, visit the [Institutional Syllabus](#) page under the Advising and Counseling Support Services tab. Our advising team and the support centers across campus are here to support you in achieving your goals and overcoming any obstacles you may face.

[Student Academic Calendar](#)

As students you should be aware of all important dates in the semester, such as the day that courses begin and end, as well as the drop date and the last day to withdraw. To learn more about those dates, navigate to the Student Academic Calendar below:

[SLCC Student Academic Calendar](#)

[Additional Policies](#)

None