

The University of Dodoma

**Office of the Deputy Vice Chancellor Academic,
Research and Consultancy**



**College of Informatics and Virtual Education
Department of Electronics and Telecommunications
Engineering (ETE)**

Enterprise Networking, Security, and Automation – (CCNA-3)

12th to 23rd August 2024

1. Introduction

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. Students learn how to configure, troubleshoot, and secure enterprise network devices and understand how application programming interfaces (API) and configuration management tools enable network automation.

2. Learning Outcomes

By the end of the ENSA course series, students will gain practical, hands-on experience preparing on the following items:

- Configure single-area OSPFv2 in both point-to-point and multi-access networks.
- Explain how to mitigate threats and enhance network security using access control lists and security best practices.
- Implement standard IPv4 ACLs to filter traffic and secure administrative access.
- Configure NAT services on the edge router to provide IPv4 address scalability.
- Explain techniques to provide address scalability and secure remote access for WANs.
- Explain how to optimize, monitor, and troubleshoot scalable network architectures.
- Explain how networking devices implement QoS.
- Implement protocols to manage the network.
- Explain how technologies such as virtualization, software defined networking, and automation affect evolving networks.

3. Course content

S/N	Course outline	S/N	Course outline
i.	Single Area OSPFv2 concepts	ii.	Single-Area OSPFv2 Configuration
iii.	Network Security Concepts	iv.	ACL Concepts
v.	ACLs for IPv4 Configuration	vi.	NAT for IPv4
vii.	WAN Concepts	viii.	VPN and IPsec Concepts
ix.	QoS Concepts	x.	Network Management
xi.	Network Design	xii.	Network Troubleshooting
xiii.	Network Virtualization	xiv.	Network Automation

4. Target Group

This course is intended for professionals and/or students in the field of ICT.

Pre-requisite: Introduction to Networks - (CCNA 1) and Switching, Routing, and Wireless Essentials – (CCNA 2) or equivalent experience.

5. Method of Delivery

The mode of delivery is instructor led program and will take 70 hours of theory and practical sessions to complete.

6. Duration

The course will run from 12th to 23rd August 2024.

7. Course fees and mode of payment

The program fee is TZS 700,000 for non-students and TZS 300,000 for students payable to the University of Dodoma.

Account details.

Bank Name: CRDB

Name: UDOM CONSULTANCY AND SPECIAL PROGRAMME

Account Number: 01J1082491700

Payment for: Enterprise Networking, Security, and Automation (CCNA-3)

8. Mode of Application

Interested applicants are invited to submit their details before 20th August, 2024 using an online form by clicking this link: [Apply to CCNA-3](#)

9. Venue

The training will be conducted at the University of Dodoma, College of Informatics and Virtual Education.

10. Award

Certificates will be awarded to participants who will participate the training program successfully.

11. Inquires

For any query, please do not hesitate to contact the program coordinator; Dr. Alex F. Mongi, Mobile 0755 498 126; Email: alex.mongi@udom.ac.tz