

LITHAN

EDUCLaaS[®]
digital skilling

ADVANCED CERTIFICATE IN INFRASTRUCTURE SUPPORT

Course Overview

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1. Course Overview

Headings	Details
Course Code	ACIS -EIT
Product Title (Internal)	Advanced Certificate in Infrastructure Support
Course Title (External)	(SCTP) WSQ Advanced Certificate in Infocomm Technology (Infrastructure) (Synchronous and Asynchronous E-Learning)
Learning Mode	Full-time/ Part-time
Delivery Mode	Synchronous & Asynchronous E-learning
Target Persona	<ul style="list-style-type: none"> • Individuals seeking a job as an IT Support Engineer • Individuals looking to transition their career into the IT infrastructure field.
Entry-Prerequisites	<ul style="list-style-type: none"> • Academic: Minimum one credit in N Level or its equivalent • English Proficiency – Minimum IELTS 5.5 or its equivalent • Age – Minimum 21 years • Work Experience – Not mandatory
SSG Course Reference No	TGS-2019503381
Course Validity Date	31 Jan 2025
Course Developer	Lithan Academy
Relevant Job roles after completion of the course	IT Support Engineer Desktop Support Engineer

2. Course Brief

The Advanced Certificate in Infrastructure Support is a comprehensive program designed to prepare learners for rewarding job roles in IT infrastructure support. Upon completion, graduates will have excellent job prospects in roles such as Server administrators, Network technicians, Desktop Support Engineer, IT support executive, and Infrastructure Support Engineer.

This course consists of eight modules covering essential topics for a successful career in infrastructure support. The first module, Server basics, provides learners with a solid foundation in server administration and virtualization. They will learn to manage server hardware, install operating systems, troubleshoot network configurations, and ensure data security.

In the second module, Networking basics, learners will gain skills in designing, configuring, and maintaining networks, while focusing on security and troubleshooting connectivity issues. The third module, WSQ IT Operating Systems deployment, delves into the installation, configuration, and maintenance of operating systems, emphasizing authorization, authentication, integrity, and support.

IT Operating Systems support, the fourth module, covers deployment strategies, user access management, compliance policies, device protection, and application administration. Learners will gain expertise in managing and maintaining operating systems in a professional IT environment.

The fifth module, Cloud fundamentals, introduces learners to cloud concepts, architecture, cost management in Azure, and cloud management and governance. They will develop a comprehensive understanding of cloud technologies and learn to design, implement, and manage cloud solutions.

Linux fundamentals, the sixth module, provides in-depth exploration of Linux, including user administration, file management, software and storage administration, network settings, and security. Learners will develop expertise in Linux administration and shell scripting.

The seventh module, IT Customer service, focuses on developing strong customer service skills in the IT industry. Learners will learn about the support agent role, troubleshooting IT issues, documenting cases, knowledge management, and performance indicators.

Finally, in the Capstone project - IT system support module, learners will apply their knowledge and skills in a practical setting. They will work on a comprehensive project involving network components, system compatibility testing, authorization and authentication configuration, storage services implementation, OS upgrades and migrations planning, and troubleshooting.

Upon completion of the Advanced Certificate in Infrastructure Support, learners will be equipped with the necessary expertise to excel in various IT infrastructure support roles. Whether specializing in server administration, networking, cloud technologies, or Linux systems, graduates will have a solid foundation and practical experience to meet the demands of the IT industry. They will contribute to the efficient functioning of IT infrastructure and provide effective support to organizations in their digital transformation journeys.

3. Course KSA Summary

Knowledge Statements:

- Demonstrate a solid understanding of server administration and virtualization concepts.
- Explain the fundamentals of networking, including implementation, operations, security, and troubleshooting.
- Describe the key components and features of cloud technologies and their role in modern IT infrastructure.
- Identify and analyze different operating systems, their installation, configuration, and support requirements.
- Discuss the essential principles and practices of Linux administration, including user management, file permissions, and shell scripting.

Skills Statements:

- Configure and troubleshoot operating systems, applications, and network configurations.
- Implement and maintain data security measures for servers and operating systems.
- Design and deploy network components, ensuring connectivity and troubleshooting network issues.
- Provide effective customer service and support, including IT issue troubleshooting and documentation.
- Apply critical thinking and problem-solving skills to identify and resolve operating system and network-related issues.

Ability Statement:

Efficiently administer and support IT infrastructure, ensuring optimal performance, security, and customer satisfaction

4. Course Summary

4.1 Module-Session Details

S I N O	Module Names	Learning Activity						Total Hours
		Module Code	E- Learni ng (Async)	Flipped Class (Sync)	Mentori ng Support (Sync)	Mentori ng Support (Async)	Assess ment (Sync)	
1	WSQ Server basics (SF)	SCTP- IS01	4	15	18	23	0.5	60.5
2	WSQ Networking Basics (SF)	SCTP- IS02	3	12	12	33	0.5	60.5
3	WSQ IT Operating Systems deployment (SF)	SCTP- IS03	4	15	18	23	0.5	60.5
4	WSQ IT Operating systems support (SF)	SCTP- IS04	4	15	18	23	0.5	60.5
5	WSQ Cloud fundamentals (SF)	SCTP- IS05	3	6	9	2	0.5	20.5
6	WSQ Linux fundamentals (SF)	SCTP- IS06	12	21	27	40	0.5	100.5
7	WSQ IT Customer Service (SF)	SCTP- IS07	7	12	18	3	0.5	40.5
8	WSQ Capstone Project - IT system support (SF)	SCTP- IS08	0	0	36	44	0.5	80.5
TOTAL			37	96	156	191	4	484

4.2 Learning Mode & Duration

Learning Mode	Course Duration	Guided Learning Hours	Hours/Week	days/Week	Hours/Day
Full-time	3 months	480 hours	40 hours/week	5 days/week	8 hours/day
Part-time	6 months	346 hours	12 hours/week	4 days/week	3 hours/day

5. Module Details – Server Basics

5.1 Module Brief

The “Server basics” module equips learners with the knowledge and skills to understand server administration and virtualization concepts. They will gain expertise in managing physical inventory, assets, and server hardware. Additionally, learners will acquire the ability to install and configure operating systems (OS) and effectively troubleshoot OS, application, and network configurations. The module also focuses on maintaining servers’ post-installation, ensuring data security.

Through practical projects, learners will develop their abilities as IT Support Associate. They will be responsible for tasks such as acquiring and configuring new servers, deploying monitoring servers to track IT infrastructure performance, and ensuring servers meet business needs by recommending appropriate server architecture, storage systems, and networking configurations. The projects also involve managing storage and networks, including creating RAID devices, configuring SMB shares, creating Bash scripts, configuring static addressing, and scanning the network.

Upon completion, learners will have a solid foundation in server fundamentals and the ability to effectively support server administration, storage management, network troubleshooting, and data security. They will be well-prepared to contribute to optimizing server performance, maintaining data integrity, and ensuring the smooth operation of an organization's IT infrastructure..

Instructional Units:

1. Server administration and virtualization concepts.
2. Physical inventory, assets and server hardware.
3. Install, configure operating systems (OS) and storage management.
4. Troubleshoot OS, application, and network configuration.
5. Servers post installation and data security.

Module Project:

Project Objective: Implement and configure servers and devices in line with network blueprint, and manage user network access.

Project Tasks:

1. Task 1: Design and deploy a high-availability web server with advanced security measures.
2. Task 2: Implement efficient storage systems and manage user network access.
3. Task 3: Configure network settings for optimal connectivity and security

5.2 Module Session Plan

Session No#	Session Type	Day no#	Duration Hrs
1	E-Learning on IU 1 & IU 2	1	2
2	Flipped Class on IU 1	1	3
3	Mentoring Support - Assignment on IU 1	2	3
4	Mentoring Support -Additional Practice -1	2	3
5	Flipped Class on IU 2	3	3
6	Mentoring Support - Assignment on IU 2	4	3
7	Mentoring Support -Additional Practice -2	4	3
8	E-Learning on IU 3 & IU 4	5	1
9	Flipped Class on IU 3	5	3
10	Mentoring Support - Assignment on IU 3	6	3
11	Mentoring Support -Additional Practice -3	6	3
12	Flipped Class on IU 4	7	3
13	Mentoring Support - Assignment on IU 4	8	3
14	Mentoring Support -Additional Practice -4	8	3
15	E-Learning on IU 5	9	1
16	Flipped Class on IU 5	9	3
17	Mentoring Support - Assignment on IU 5	10	3
18	Mentoring Support -Additional Practice -5	10	3
19	Mentoring Support – Project Planning-1	11	3
20	Mentoring Support – Project Implementation-1	12	3
21	Mentoring Support -Additional Practice -6	12	5
22	Summative Assessment (per learner)	13	30 min

6. Module Details – Networking Basics

6.1 Module Brief

The module "Networking basics" provides learners with essential knowledge and skills in various areas of networking. In the Networking Fundamentals unit, learners will compare OSI Model Network Functions, deploy Ethernet cabling, and troubleshoot Ethernet networks. The Network Implementations unit focuses on supporting IPv4 and IPv6 networks, configuring and troubleshooting routers, and explaining network topologies and types. In the Network Operations unit, learners will gain an understanding of transport layer protocols, network services, network applications, and ensuring network availability. The Network Security unit covers common security concepts, supporting and troubleshooting secure networks, deploying and troubleshooting wireless networks, and comparing WAN links and remote access methods. Lastly, the Network Troubleshooting unit involves explaining organizational and physical security concepts, disaster recovery and high availability concepts, applying network hardening techniques, and summarizing cloud and datacenter architecture.

Through the module's projects, learners will develop practical skills and abilities. In the project, learners will troubleshoot service and security issues. Tasks include configuring server and client IPsec policies, updating, and testing policies, backing up configuration baselines, scanning the server segment, and documenting static DNS records and reserved DHCP clients. By successfully completing these tasks, learners will demonstrate their expertise in maintaining the integrity, availability, and recoverability of network and server environments. Their attention to detail and proficiency in these tasks will contribute to the overall stability and efficiency of an organization's IT infrastructure.

Instructional Units:

1. Networking Fundamentals
2. Networking Implementation
3. Network Operations
4. Network Security
5. Network Troubleshooting

Module Project:

Project Objective: Implement and configure servers and devices in line with network blueprint and manage user network access.

Project Tasks:

1. Task 1: Design a secure and efficient network topology for a small business.
2. Task 2: Configure IPsec policies, back up configurations, and document server information.
3. Task 3: Troubleshoot service and security issues, including scanning server segments.

6.2 Module Session Plan

Session No#	Session Type	Day no#	Duration Hrs
1	E-Learning on IU 1 & IU 2	1	1
2	Flipped Class on IU 1 & 2	1	3
3	Mentoring Support - Assignment on IU 1& IU 2	2	3
4	Mentoring Support -Additional Practice -1	2	6
5	E-Learning on IU 3 & IU 4	3	1
6	Flipped Class on IU 3	3	3
7	Mentoring Support - Assignment on IU 3	4	3
8	Mentoring Support -Additional Practice -2	4	6
9	Flipped Class on IU 4	5	3
10	Mentoring Support - Assignment on IU 4	6	3
11	Mentoring Support -Additional Practice -3	6	6
12	E-Learning on IU 5	7	1
13	Flipped Class on IU 5	7	3
14	Mentoring Support -Additional Practice -4	7	6
15	Mentoring Support – Project Planning -1	8	3
16	Mentoring Support – Projects Implementation 1	9	3
17	Mentoring Support -Additional Practice -6	9	6
18	Summative Assessment (per learner)	10	30 min

7. Module Details – IT Operating Systems Deployment

7.1 Module Brief

The "IT Operating Systems Deployment" module equips learners with the necessary knowledge and skills to deploy and manage operating systems, specifically Windows, within an organizational context.

Learners will begin by mastering the installation of the Windows client operating system, as well as configuring authorization, authentication, networking, storage, and data access. They will also learn essential tasks such as managing applications, Windows updates, and configuring threat protection to ensure the security of the operating system. Additionally, learners will develop the skills needed to support and troubleshoot the Windows client environment, including hardware, drivers, and resolving operating system issues.

The module incorporates practical projects that enable learners to apply their knowledge to real-world scenarios. One of these projects centers around upgrading computers to Windows 10 as part of a hardware refresh cycle. It also emphasizes the significance of efficient file management and sharing within an organization. Learners will gain hands-on experience in creating and managing folder structures, configuring permissions for different departments, and conducting tests to ensure seamless file and folder-sharing capabilities.

By engaging in these projects, learners will develop practical skills and insights into deploying operating systems and managing file systems in a professional setting. They will acquire a comprehensive understanding of the upgrade process and the essential steps required for effective file management and sharing within an organizational context. Overall, the module provides learners with the practical experience necessary to excel in real-world IT scenarios.

Instructional Units:

1. Install an operating system on a client.
2. Configure authorization and authentication.
3. Protect the operating system.
4. Maintain the operating system.
5. Support and troubleshoot operating system issues

Module Project:

Project Objective: Detail an infrastructure installation and testing plan for suitable site locations, resolving infrastructure malfunctions where required.

Project Tasks:

1. Task 1: Select the most suitable Windows 10 edition and device for upgrade.
2. Task 2: Describe minimum hardware requirements and options for deploying Windows 10
3. Task 3: Create, manage, and configure permissions for a folder structure.

7.2 Module Session Plan

Session No#	Session Type	Day no#	Duration Hrs
1	E-Learning on IU 1 & IU 2	1	2
2	Flipped Class on IU 1	1	3
3	Mentoring Support - Assignment on IU 1	2	3
4	Mentoring Support -Additional Practice -1	2	3
5	Flipped Class on IU 2	3	3
6	Mentoring Support - Assignment on IU 2	4	3
7	Mentoring Support -Additional Practice -2	4	3
8	E-Learning on IU 3 & IU 4	5	1
9	Flipped Class on IU 3	5	3
10	Mentoring Support - Assignment on IU 3	6	3
11	Mentoring Support -Additional Practice -3	6	3
12	Flipped Class on IU 4	7	3
13	Mentoring Support - Assignment on IU 4	8	3
14	Mentoring Support -Additional Practice -4	8	3
15	E-Learning on IU 5	9	1
16	Flipped Class on IU 5	9	3
17	Mentoring Support - Assignment on IU 5	10	3
18	Mentoring Support -Additional Practice -5	10	3
19	Mentoring Support – Project Planning-1	11	3
20	Mentoring Support – Project Implementation-1	12	3
21	Mentoring Support -Additional Practice -6	12	5
22	Summative Assessment (per learner)	13	30 min

8. Module Details – IT Operating Systems Support

8.1 Module Brief

The "IT Operating Systems Support" module equips learners with essential knowledge and skills to provide efficient support for operating systems in an IT environment. It encompasses learning units that cover key topics critical to understanding the subject matter.

Learners will gain expertise in planning operating system deployment strategies, considering factors such as compatibility, scalability, and security. They will also learn to manage user identity, access, and applications, ensuring effective user management and secure access control. Additionally, learners will develop skills in managing compliance policies and configuration profiles, maintaining regulatory standards, and enforcing desired system configurations. They will also acquire the ability to manage, maintain, and protect devices within an operating system environment, implementing security measures, monitoring device health, and resolving issues.

Practical projects within the module provide learners with hands-on experience, allowing them to apply their knowledge in real-world scenarios. These projects focus on managing applications, troubleshooting common issues, and providing user support. Through these projects, learners develop practical skills in application management and efficient resolution of operating system-related problems.

By completing the module, learners will possess the necessary knowledge and skills to provide comprehensive operating system support. They will be able to plan deployment strategies, manage user access and applications, enforce compliance policies, maintain device security, and troubleshoot common operating system issues. The module prepares learners to excel in supporting and maintaining operating systems within diverse IT environments

Instructional Units:

1. Plan operating system deployment strategy
2. Manage identify, access and application.
3. Manage compliance policies and configuration profiles.
4. Manage, maintain, and protect device.
5. Manage applications.

Module Project:

Project Objective: Diagnose, trouble shoot, and provide end-to-end management of infrastructure disruptions or technical issues encountered by users, and plan infrastructure upgrade activities.

1. Task 1 Develop a plan for resolving user-reported problems in the enterprise desktop life cycle.
2. Task 2: Configure endpoint security using Intune, including Microsoft Defender settings.
3. Task 3: Sync and verify the configuration of managed devices for endpoint security.

8.2 Module Session Plan

Session No#	Session Type	Day no#	Duration Hrs
1	E-Learning on IU 1 & IU 2	1	2
2	Flipped Class on IU 1	1	3
3	Mentoring Support - Assignment on IU 1	2	3
4	Mentoring Support -Additional Practice -1	2	3
5	Flipped Class on IU 2	3	3
6	Mentoring Support - Assignment on IU 2	4	3
7	Mentoring Support -Additional Practice -2	4	3
8	E-Learning on IU 3 & IU 4	5	1
9	Flipped Class on IU 3	5	3
10	Mentoring Support - Assignment on IU 3	6	3
11	Mentoring Support -Additional Practice -3	6	3
12	Flipped Class on IU 4	7	3
13	Mentoring Support - Assignment on IU 4	8	3
14	Mentoring Support -Additional Practice -4	8	3
15	E-Learning on IU 5	9	1
16	Flipped Class on IU 5	9	3
17	Mentoring Support - Assignment on IU 5	10	3
18	Mentoring Support -Additional Practice -5	10	3
19	Mentoring Support – Project Planning-1	11	3
20	Mentoring Support – Project Implementation-1	12	3
21	Mentoring Support -Additional Practice -6	12	5
22	Summative Assessment (per learner)	13	30 min

9. Module Details – Cloud Fundamentals

9.1 Module Brief

The "Cloud Fundamentals" module equips learners with essential knowledge and skills in cloud computing. The module covers a range of instructional units that delve into various aspects of cloud technology.

Learners will first gain a solid understanding of cloud concepts, including the definition, benefits, and characteristics of cloud computing. They will also explore cloud architecture and the different components that make up a cloud infrastructure. Additionally, learners will examine various cloud services and their use cases, enabling them to assess which services are most suitable for different scenarios. The module also covers cost management in Azure, providing learners with the skills to optimize cloud costs and utilize budgeting and monitoring tools effectively. Lastly, learners will explore cloud management and governance, including best practices for maintaining security, compliance, and performance in a cloud environment.

In this module, learners will engage in a project that involves describing a possible cloud computing project. This project allows learners to apply their knowledge by conceptualizing and articulating a cloud-based solution for a given scenario. Through this project, learners will develop the ability to analyze requirements, assess available cloud services, and propose an effective and efficient cloud implementation.

By the end of the module, learners will have a comprehensive understanding of cloud fundamentals, enabling them to effectively describe cloud concepts, architecture, services, cost management, and cloud management and governance. They will be equipped with the skills to analyze cloud requirements and propose appropriate cloud solutions. This module lays a strong foundation for further exploration and specialization in cloud computing.

Instructional Units:

1. Describe cloud concepts.
2. Describe cloud architecture.
3. Describe cloud services.
4. Describe cost management, cloud management, and governance in Azure.

Module Project:

Project Objective: Administer, configure, and troubleshoot security programs and mechanisms, and analyse the impact of patches and updates on system and networks.

Project Tasks

1. Task 1: Evaluate and select appropriate cloud services based on security requirements.

9.2 Module Session Plan

Session No#	Session Type	Day no#	Duration Hrs
1	E-Learning on IU 1 & IU 2	1	1.5
2	Flipped Class on IU 1 & IU 2	1	3
3	Mentoring Support - Assignment on IU 1 & IU 2	2	3
4	E-Learning on IU 3 & IU 4	3	1.5
5	Flipped Class on IU 3 & IU 4	3	3
6	Mentoring Support - Assignment on IU 3 & IU 4	4	3
7	Mentoring Support - Project Planning -1	5	3
8	Mentoring Support -Project Implementation -1	6	2
9	Summative Assessment (per learner)	7	30 min

10. Module Details – Linux Fundamentals

10.1 Module Brief

The "Linux Fundamentals" module equips learners with essential knowledge and skills to effectively work with Linux operating systems. They will gain expertise in various areas of Linux administration and management.

Learners will be introduced to Linux and user administration, understanding the Linux operating system and its user management features. They will explore permissions and file management, mastering access control and file permissions. Additionally, they will develop skills in authoring text files and managing software, ensuring efficient text editing and software installation.

The module covers storage and device administration, enabling learners to manage resources and devices within a Linux environment. They will also learn to handle system services and network settings for seamless operations. Furthermore, network and Linux security will be emphasized to protect systems and networks effectively.

Learners will acquire proficiency in Bash and Shell scripting, automating tasks, and streamlining system administration processes. Through practical projects, learners will administer and troubleshoot security programs, analyze the impact of patches and updates, and manage access control permissions for IT facilities.

After completing the module, learners will possess a comprehensive understanding of Linux operating systems. They will be proficient in user administration, file permissions, software management, storage administration, system services, network settings, security, and Bash and Shell scripting. These skills will empower them to work efficiently with Linux systems and contribute effectively to IT infrastructure management and support.

Instructional Units:

1. Introduction to Linux and user administration
2. Permissions and File Management
3. Authoring Text Files and Managing Software
4. Administer Storage and manage devices.
5. Manage System Services and Network Settings
6. Network and Linux Security
7. Bash and Shell Scripting

Module Project:

Project Objective: Administer, configure and troubleshoot security programs and mechanisms, and analyze impact of patches and updates on system and networks.

1. Task 1: Implement user administration policies and access controls for Linux systems.
2. Task 2: Set up and manage file permissions to ensure proper data security.
3. Task 3: Create and configure text files and manage software installations efficiently.

10.2 Module Session Plan

Session No#	Session Type	Day no#	Duration Hrs
1	E-Learning on IU 1	1	2
2	Flipped Class on IU 1	1	3
3	Mentoring Support - Assignment on IU 1	2	3
4	Mentoring Support -Additional Practice -1	2	2
5	E-Learning on IU 2	3	2
6	Flipped Class on IU 2	3	3
7	Mentoring Support - Assignment on IU 2	4	3
8	Mentoring Support -Additional Practice -2	4	2
9	E-Learning on IU 3	5	2
10	Flipped Class on IU 3	5	3
11	Mentoring Support - Assignment on IU 3	6	3
12	Mentoring Support -Additional Practice -3	6	2
13	E-Learning on IU 4	7	2
14	Flipped Class on IU 4	7	3
15	Mentoring Support - Assignment on IU 4	8	3
16	Mentoring Support -Additional Practice -4	8	2
17	E-Learning on IU 5	9	2
18	Flipped Class on IU 5	9	3
19	Mentoring Support - Assignment on IU 5	10	3
20	Mentoring Support -Additional Practice -5	10	2
21	E-Learning on IU 6	11	2
22	Flipped Class on IU 6	11	3
23	Mentoring Support - Assignment on IU 6	12	3
24	Mentoring Support -Additional Practice -6	12	2
25	Flipped Class on IU 7	13	3
26	Mentoring Support - Assignment on IU 7	14	3
27	Mentoring Support -Additional Practice - 7	14	2
28	Mentoring Support – Project Planning -1	15	3
29	Mentoring Support – Projects Implementation 1	16	3
30	Mentoring Support – Projects Implementation 2	17	3
31	Mentoring Support -Additional Practice -8	18	7
32	Mentoring Support – Project Planning -2	19	3
33	Mentoring Support – Projects Implementation 3	20	3
34	Mentoring Support – Projects Implementation 4	21	3
35	Mentoring Support -Additional Practice -9	22	7
36	Summative Assessment (per learner)	23	30 min

11. Module Details – IT Customer Service

11.1 Module Brief

The "IT Customer Service" module equips learners with essential knowledge and skills for excelling in customer service roles within the IT industry.

Participants will gain a deep understanding of the support agent role and effective customer management strategies. They will develop skills in troubleshooting IT issues, diagnosing problems, and implementing appropriate solutions. Emphasis will be placed on documenting cases and knowledge management to facilitate efficient information sharing and problem-solving.

The module also covers performance measures and indicators, enabling learners to evaluate service quality and identify areas for improvement. They will learn to assess customer satisfaction and implement frameworks to enhance customer service effectiveness.

Through practical projects, learners will apply their knowledge to handle specific customer problems. They will demonstrate their ability to diagnose issues, prioritize tasks, and implement solutions, ensuring customer satisfaction and successful issue resolution.

Upon completion of the module, learners will possess the skills to handle a variety of customer issues effectively. They will excel in managing customers, troubleshooting IT problems, documenting cases, and utilizing knowledge management practices. Additionally, they will have a solid understanding of performance measurement and its role in improving customer service quality. These skills will enable learners to provide exceptional IT customer service and contribute to the success of organizations in meeting customer needs and satisfaction.

Instructional Units:

1. Support Agent Role
2. Managing Customers
3. IT Support Troubleshooting
4. Documenting Cases and Knowledge Management
5. Performance Measures and Indicators

Module Project:

Project Objective: Handle specific problems from diagnosis and prioritization to the identification and implementation of solutions.

Project Tasks

1. Task 1: Develop customer management strategies and establish effective communication channels.
2. Task 2: Conduct thorough troubleshooting processes to identify and resolve IT support issues.

11.2 Module Session Plan

Session No#	Session Type	Day no#	Duration Hrs
1	E-Learning on IU 1	1	2
2	Flipped Class on IU 1	1	3
3	Mentoring Support - Assignment on IU 1	2	3
4	E-Learning on IU 2	3	2
5	Flipped Class on IU 2	3	3
6	Mentoring Support - Assignment on IU 2	4	3
7	E-Learning on IU 3	5	2
8	Flipped Class on IU 3	5	3
9	Mentoring Support - Assignment on IU 3	6	3
10	E-Learning on IU 4	7	1
11	Flipped Class on IU 4	7	3
12	Mentoring Support - Assignment on IU 4	8	3
13	Mentoring Support - Project Planning -1	9	3
14	Mentoring Support - Project Planning -2	10	3
15	Mentoring Support -Project Implementation -1	11	3
16	Summative Assessment (per learner)	12	30 min

12. Module Details – Capstone project - IT system support

12.1 Module Brief

The "Capstone project - IT system support" module offers learners practical experience in applying their knowledge and skills in IT system support. Participants will acquire expertise in system configuration, integration, and troubleshooting. They will develop the ability to determine appropriate network components and establish secure connections. Learners will also gain proficiency in testing system compatibility and configuring authorization and authentication for secure system access.

The module emphasizes the implementation of storage services and the planning of operating system upgrades and migrations. Learners will understand the importance of efficient storage management and learn to minimize disruptions during upgrades. Practical projects throughout the module will focus on troubleshooting operating systems and network issues, allowing learners to apply their knowledge and problem-solving skills to ensure smooth IT system operation.

By the end of the module, learners will have the necessary knowledge and skills to perform basic compatibility assessments, integrate system components according to a plan, and troubleshoot operating systems and network problems. These abilities will enable them to ensure optimal functioning of organizational IT infrastructure.

Instructional Units:

1. Determine Appropriate Network Components
2. Connect Network Components
3. Test system compatibility
4. Configure authorization and authentication.
5. Implement Storage Services
6. Operating System Upgrade and Migration Plan
7. Troubleshoot issues related to operating systems and network

Module Project:

Project Objective: Perform basic compatibility assessments and integrate selected system components according to a plan.

Project Tasks

1. Task 1: Identify and select appropriate network components based on system requirements.
2. Task 2: Establish connections between network components to ensure a functional network infrastructure.
3. Task 3: Conduct compatibility tests to ensure the seamless integration of system components.
4. Task 4: Configure authorization and authentication mechanisms for secure system access.

5. Task 5: Implement storage services to efficiently manage and store data.
6. Task 6: Develop an operating system upgrade and migration plan to minimize disruptions.
7. Task 7: Troubleshoot operating system and network issues and resolve problems effectively.

12.2 Module Session Plan

Session No#	Session Type	Day no#	Duration Hrs
1	Mentoring Support - Project Planning -1	1	3
2	Mentoring Support - Projects Implementation 1	2	2
3	Mentoring Support - Additional Practice - 1	2	1.5
4	Mentoring Support - Project Planning -2	3	3
5	Mentoring Support - Projects Implementation 2	4	2
6	Mentoring Support - Additional Practice - 2	4	1.5
7	Mentoring Support - Project Planning -3	5	3
8	Mentoring Support - Projects Implementation 3	6	2
9	Mentoring Support - Additional Practice - 3	6	1.5
10	Mentoring Support - Project Planning -4	7	3
11	Mentoring Support - Projects Implementation 4	8	2
12	Mentoring Support - Additional Practice - 4	8	1.5
13	Mentoring Support - Project Planning -5	9	3
14	Mentoring Support - Projects Implementation 5	10	2
15	Mentoring Support - Additional Practice - 5	10	1.5
16	Mentoring Support - Project Planning -6	11	3
17	Mentoring Support - Projects Implementation 6	12	2
18	Mentoring Support - Additional Practice - 6	12	1.5
19	Mentoring Support - Project Planning -7	13	3
20	Mentoring Support - Projects Implementation 7	14	2
21	Mentoring Support - Additional Practice - 7	14	1.5
22	Mentoring Support - Project Planning -8	15	3
23	Mentoring Support - Projects Implementation 8	16	2
24	Mentoring Support - Additional Practice - 8	16	1.5
25	Mentoring Support - Project Planning -9	17	3
26	Mentoring Support - Projects Implementation 9	18	2
27	Mentoring Support - Additional Practice - 9	18	1.5
28	Mentoring Support - Project Planning -10	19	3
29	Mentoring Support - Projects Implementation 10	20	2
30	Mentoring Support - Additional Practice - 10	20	1.5
31	Mentoring Support - Project Planning -11	21	3
32	Mentoring Support - Projects Implementation 11	22	2
33	Mentoring Support - Additional Practice - 11	22	1.5
34	Mentoring Support - Project Planning -12	23	3
35	Mentoring Support - Projects Implementation 12	24	2
36	Mentoring Support - Additional Practice - 12	24	3.5
37	Summative Assessment (per learner)	25	30 min

13. Credentials

Name of the Credentials	Details
Academic Qualification	WSQ Advanced Certificate in Infocomm Technology (Infrastructure) awarded by SSG
EduCLaaS Job Role Certification	IT Support Engineer, Desktop Support Engineer
Industry Skills Certification	<p>WSQ Server Basics (SF)</p> <ul style="list-style-type: none"> • CompTIA Server – Server Administrator <p>WSQ Networking Basics (SF)</p> <ul style="list-style-type: none"> • CompTIA Network – Network Administrator <p>WSQ IT Operating Systems deployment (SF)</p> <p>WSQ IT Operating systems support (SF)</p> <ul style="list-style-type: none"> • Microsoft 365 Certified: Modern Desktop Administrator Associate (MD100 & MD101) <p>WSQ Cloud Fundamentals (SF)</p> <ul style="list-style-type: none"> • Microsoft Azure Fundamentals - Certifications <p>WSQ Linux Fundamentals (SF)</p> <ul style="list-style-type: none"> • CompTIA Linux Administrator <p>Taking this certification is not mandatory. However, if the learner wishes to pursue it, they need to register for the examination directly with the vendor after paying the necessary fees.</p>
Statement of Attainment	<p>WSQ Server Basics (SF)</p> <p>WSQ Networking Basics (SF)</p> <ul style="list-style-type: none"> • ICT-DIT-3009-1.1 Network Configuration <p>WSQ IT Operating Systems deployment (SF)</p> <ul style="list-style-type: none"> • ICT-DIT-3008-1.1 Infrastructure Deployment <p>WSQ IT Operating systems support (SF)</p> <ul style="list-style-type: none"> • ICT-OUS-3007-1.1 Infrastructure Support <p>WSQ Cloud Fundamentals (SF)</p> <p>WSQ Linux Fundamentals (SF)</p> <ul style="list-style-type: none"> • ICT-OUS-3012-1.1 Security Administration <p>WSQ IT Customer service (SF)</p> <ul style="list-style-type: none"> • ICT-OUS-3011-1.1 Problem Management <p>WSQ Capstone project - IT system support (SF)</p> <ul style="list-style-type: none"> • ICT-DIT-3016-1.1 System Integration