

Syllabus for IT Support Service Supervisor for Academic Institutes

Course Name	IT Support Service Supervisor for Academic Institutes
Sector	ELECTRONICS & HARDWARE
Course Code	ELE/2024/ITAI/284
Level	4
Occupation	IT SUPPORT SERVICE SUPERVISOR IN SCHOOL
Job Description	The IT support Service Supervisor is responsible for managing and coordinating all aspects of information technology within the academic institution environment. This role involves overseeing the institute's IT infrastructure, providing technical support to staff and students, implementing technology initiatives, and ensuring the effective integration of educational technology into the curriculum. The IT support Service Supervisor will collaborate with school administrators, teachers and support staff to ensure the smooth operation of all information technology-related processes.
Course Duration	Total Duration 480 Hrs (T- 120, P- 240, OJT-60 and ES-60)
Trainees' Entry Qualification	<ul style="list-style-type: none"> • 12th grade pass • Completed 2nd year of 3-year diploma (after 10th) • Pursuing 2nd year of 3-year regular Diploma (after 10th) • 10th grade pass with two years of any combination of NTC/NAC/CITS or equivalent. <ul style="list-style-type: none"> • 8th pass plus 2-year NTC plus 1-Year NAC plus 1-Year CITS • 10th grade pass and pursuing continuous schooling (for 2-year program) • 11th Grade Pass and pursuing continuous schooling • Previous relevant Qualification of NSQF Level 3.0 with minimum education as 8th Grade pass with 3-year relevant experience • Previous relevant Qualification of NSQF Level 3.5 with 1.5-year relevant experience
Trainers Qualification	<p>B.E./B.Tech in Computer Science/Information Technology with 1 year experience in relevant field OR</p> <p>Diploma in Computer Science/ Information Technology with 2 year experience in relevant field OR</p> <p>NTC/NAC in Electronics Mechanics/ ITESM with 3 years of relevant working experience in relevant field</p>

Structure of Course:

Module No.	Module name	Outcome	Theory (Hrs)	Practical (Hrs)	Total (Hrs) [Multiple of 30]
1	Role and responsibilities of IT Coordinator in Academic Institutes	Demonstrate proficiency in managing and optimizing academic institute by coordinating and troubleshooting IT infrastructure	20	40	60

Module No.	Module name	Outcome	Theory (Hrs)	Practical (Hrs)	Total (Hrs) [Multiple of 30]
2	Computer Hardware and Software Fundamentals	Identify, test and troubleshoot basic computer hardware and software problems	20	70	90
3	Networking Fundamentals and Practical Applications	Implement basic network configurations, troubleshoot common networking issues and set up secure and efficient networks by using networking tools	20	40	60
4	Content development techniques	Articulate clear content objectives, creating structured outlines for systematic content development	20	40	60
5	E-Learning Delivery Methods	Illustrate effective utilization of e-learning platforms	20	40	60
6	Team Leadership	Develop leadership and team management skills to lead a cohesive and productive IT team	20	10	30
7	OJT	Work in real job situation with special emphasis on basic safety and hazards in this domain (OJT).	--	60	60
8	Employability Skill	As per guided curriculum	60	--	60
TOTAL			180	300	480

SYLLABUS:**Module 1: Role and responsibilities of IT Coordinator in Academic Institutes**

Outcome: Demonstrate proficiency in managing and optimizing academic institute by coordinating and troubleshooting IT infrastructure

Theory Content:

- Define the role and significance of IT infrastructure in supporting academic activities
- Coordinating IT resources for academic operations
- Troubleshooting techniques for academic IT systems
- Security measures for academic IT infrastructure
- Optimizing IT infrastructure performance

Practical Content:

- Simulate the coordination of IT resources for a specific academic event
- Plan and execute the setup of IT infrastructure required for a mock academic event
- Diagnose and resolve simulated IT problems
- Identify vulnerability, implement security measures and document strategies for on going security enhancements
- Implement strategies to improve the efficiency of servers, networks or software applications
- Work with a team to implement an IT solution that enhances a specific academic process

Tools & Equipment needed:

Computers or Laptops, White board, duster, marker pen, projector, projector screen.

Module 2: Computer Hardware and Software Fundamentals

Outcome: Identify, test and troubleshoot basic computer hardware and software problems

Theory Content:

- Introduction to Computers- Historical overview, Types of Computers
- Computer Hardware Components
- Different Storage Devices
- Identification of Peripheral devices and their uses
- Introduction to Operating Systems
- Basic knowledge on Software with its types

Practical Content:

- Identify of computer Hardware components
- Connecting Peripheral Devices (printers, scanners, projector etc.)
- BIOS/UEFI Setup
- OS Installation (e.g., Windows, Linux)
- Basic Troubleshooting- diagnosing and resolving hardware issues
- Installing and troubleshooting software applications (Application & Device driver installation)

Tools & Equipment needed:

Computer Components- CPUs, Motherboards, RAM modules, Storage devices (HDDs, SSDs), Power supplies, Peripherals (keyboard, mouse, monitor) etc. Dummy Components, Computer- desktop or laptop, USB drives, DVDs for OS installation and other purposes, Active Internet Connection

Module 3: Networking Fundamentals and Practical Applications

Outcome: Implement basic network configurations, troubleshoot common networking issues and set up secure and efficient networks by using networking tools

Theory Content:

- Overview of Networking with all terminologies
- Basic concept of LAN, MAN, WAN
- Principles of Network Components
- Network Devices- Routers, Switches, Hubs, Repeater etc.

Practical Content:

- Identification and demonstration of network devices
- Implement wired cable connection by using crimping tool and RJ-45 Connector
- Configuration of basic wireless connections
- Network Troubleshooting- Identifying and resolving common network issues

Tools & Equipment needed:

Routers, Switches, Access Points, Network Cables (Ethernet cables), Wireless Routers, Computers or Laptops

Network Adapters, Tools (screwdrivers, pliers, cable testers, crimping tool kit etc), RJ-45 connector

Module 4: Content development techniques

Outcome: Articulate clear content objectives, creating structured outlines for systematic content development

Theory Content:

- Definition and Importance of Content Development
- Types of Content- Written Content, Visual Content, Multimedia Content
- Defining Content Objectives, Creating Content Outlines
- Interactive Whiteboards and Smart Classroom Technologies

Practical Content:

- To implement different Writing Techniques, Editing and Proofreading
- Developing Visual Content, Multimedia Content
- To use Content Collaboration Tools (e.g., Google Workspace, Microsoft 365)
- Monitoring and analyzing content performance using content analytics tools (e.g., Google Analytics)
- Implementation and support for smart classroom tools

Tools & Equipment needed:

Computers or Laptops, Writing and Editing Software (e.g., Microsoft Word, Grammarly)

Graphic Design Software (e.g., Canva, Adobe Creative Cloud), Multimedia Creation Tools (e.g., video editing software, audio editing software, Collaboration Tools (e.g., Google Workspace, Microsoft 365)

Analytics Tools (e.g., Google Analytics), Presentation Equipment (projector or screen), Internet Connectivity

Document Sharing and Version Control Tools (e.g., Google Drive, Dropbox), Smart Class Room Set-up

Module 5: E-Learning Delivery Methods

Outcome: Illustrate effective utilization of e-learning platforms

Theory Content:

- Definition of E-Learning
- Types of e-learning (synchronous, asynchronous, blended)
- E-Learning Technologies- LMS, Virtual classrooms, webinars, and video conferencing tools
- Basics of Instructional Design- ADDIE model (Analysis, Design, Development, Implementation, Evaluation)
- Effective Use of Multimedia- Graphics, audio, video, animations etc
- Interactive Elements- Quizzes, simulations, interactive scenarios, Gamification principles
- Formative and Summative Assessment- Designing quizzes, assignments, and exams
- Evaluation Strategies- Assessing learner performance and course effectiveness
- Introduction to Mobile Learning

Practical Content:

- Use of e-learning authoring tools
- Use of various LMS Platforms
- Hands-on practice with content creation

- Designing quizzes, assignments, and exams
- Building slide presentations and modules based on given content
- Demonstration and Hands-on practice on various live online sessions platforms
- To use different Mobile apps for learning

Tools & Equipment needed:

Computers or Laptops, Internet Connectivity, Learning Management System (LMS), E-Learning Authoring Tools (e.g., Articulate, Captivate), Webinar and Video Conferencing Tools (e.g., Zoom, Microsoft Teams, Google Meet, Multimedia Creation Tools (e.g., Adobe Creative Cloud), Mobile Devices (for mobile learning exercises), Projector or Screen for Presentations and Demonstrations, Evaluation and Assessment Tools (e.g., online quizzes and surveys), Headsets with Microphones (for virtual classroom sessions)

Module 6: Team Leadership

Outcome: Develop leadership and team management skills to lead a cohesive and productive IT team

Theory Content:

- Foundation of leadership in IT
- Building and leading effective IT teams
- Communication strategies for IT leaders
- Strategic decision-making in IT
- Motivating and engaging IT teams

Practical Content:

- Organize team building workshops or activities to strengthen interpersonal relationships and foster a positive team culture
- Navigate through simulated scenarios, making decisions that impact team dynamics, project outcomes and overall team success.
- Practice and role-play various communication scenarios, emphasizing clarity, active listening and providing constructive feedback
- Engage in decision-making exercises that mimic real-world IT scenarios
- Execute a project that includes elements like recognition programs, skill development opportunities or team-building events to motivate and engage the IT team.

Tools & Equipment needed:

Computers or Laptops, White board, duster, marker pen, projector, projector screen.

Module Name 7 : OJT

Outcome: Work in real job situation with special emphasis on basic safety and hazards in this domain

Practical Content:

Assessor will check report prepared for this component of Practical training of the course and assess whether competency has been developed to work in the real job situation with special emphasis on basic safety and hazards in this domain. (The trainee is expected to undertake work in actual workplace under any supervisor / contractor for **60 Hours.**)

Module Name 8: Employability Skills (60 Hrs)**Key Learning Outcomes****Introduction to Employability Skills**

Duration: 1.5 Hours

After completing this programme, participants will be able to:

1. Discuss the Employability Skills required for jobs in various industries
2. List different learning and employability related GOI and private portals and their usage

Constitutional values - Citizenship

Duration: 1.5 Hours

3. Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen
4. Show how to practice different environmentally sustainable practices.

Becoming a Professional in the 21st Century

Duration: 2.5 Hours

5. Discuss importance of relevant 21st century skills.
6. Exhibit 21st century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.
7. Describe the benefits of continuous learning.

Basic English Skills

Duration: 10 Hours

8. Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone
9. Read and interpret text written in basic English
10. Write a short note/paragraph / letter/e -mail using basic English

Career Development & Goal Setting

Duration: 2 Hours

11. Create a career development plan with well-defined short- and long-term goals

Communication Skills

Duration: 5 Hours

12. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.
13. Explain the importance of active listening for effective communication
14. Discuss the significance of working collaboratively with others in a team

Diversity & Inclusion

Duration: 2.5 Hours

15. Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD
16. Discuss the significance of escalating sexual harassment issues as per POSH act.

Financial and Legal Literacy

Duration: 5 Hours

17. Outline the importance of selecting the right financial institution, product, and service
18. Demonstrate how to carry out offline and online financial transactions, safely and securely

19. List the common components of salary and compute income, expenditure, taxes, investments etc.
20. Discuss the legal rights, laws, and aids

Essential Digital Skills

Duration: 10 Hours

21. Describe the role of digital technology in today's life
22. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
23. Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely
24. Create sample word documents, excel sheets and presentations using basic features
25. utilize virtual collaboration tools to work effectively

Entrepreneurship

Duration: 7 Hours

26. Explain the types of entrepreneurship and enterprises
27. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan
28. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
29. Create a sample business plan, for the selected business opportunity

Customer Service

Duration: 5 Hours

30. Describe the significance of analyzing different types and needs of customers
31. Explain the significance of identifying customer needs and responding to them in a professional manner.
32. Discuss the significance of maintaining hygiene and dressing appropriately

Getting Ready for apprenticeship & Jobs

Duration: 8 Hours

33. Create a professional Curriculum Vitae (CV)
34. Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
35. Discuss the significance of maintaining hygiene and confidence during an interview
36. Perform a mock interview
37. List the steps for searching and registering for apprenticeship opportunities

Learning Outcome – Assessment Criteria

Module No.	Outcome	Assessment Criteria
1	Demonstrate proficiency in managing and optimizing academic institute by coordinating and troubleshooting IT infrastructure	1.1 Define the role of IT infrastructure in supporting academic activities 1.2 Describe how IT resources are managed efficiently to support academic event 1.3 Plan and execute the set up of IT infrastructure required for a mock academic event 1.4 Diagnose and resolve the IT problems 1.5 Identifies vulnerabilities and implements security measures 1.6 Implement strategies to improve the efficiency of servers, networks and software applications
2	Identify, test and Troubleshoot basic computer hardware and software problems	After completion of this module students will be able to: 2.1 Identify computer hardware and software units 2.2 Perform routine system maintenance tasks 2.3 Configure and troubleshoot various peripherals 2.4 Install and configure software applications 2.5 Troubleshoot basic hardware issues 2.6 Install and configures operating systems on different platforms
3	Implement basic network configurations, troubleshoot common networking issues and set up secure and efficient networks by using networking tools	After completion of this module students will be able to: 3.1 Define basic networking concepts 3.2 Identify the functions of common network devices 3.3 Configure wired connection using tools 3.4 Configure basic network settings and troubleshoots connectivity issues 3.5 Configure and troubleshoots wireless networks
4	Articulate clear content objectives, creating structured outlines for systematic content development	After completion of this module students will be able to: 4.1 Demonstrate content development principles and strategies 4.2 Utilizes effective writing styles using tools 4.3 Develop visual and multimedia contents using different tools 4.4 Recognize smart class room components and related troubleshooting
5	Illustrate effective utilization of e-learning platforms	After completion of this module students will be able to: 5.1 Describe the technologies used in e-learning, including Learning Management Systems (LMS) and authoring tools 5.2 Explain instructional design principles in the

Module No.	Outcome	Assessment Criteria
		development of e-learning contents 5.3 Define types of e-learning 5.4 Use e-learning authoring tools 5.5 Design quizzes, assignments, and exams using e-learning tools 5.6 Demonstrate use of different Mobile apps for learning
6	Develop leadership and team management skills to lead a cohesive and productive IT team	After completion of this module students will be able to: 6.1 Apply relevant leadership concepts to IT scenarios 6.2 Describe strategies for building and leading effective IT teams 6.3 Analyze real world example for strategic decision in IT and had a significant impact 6.4 Organize team building workshop and activities to make interpersonal relationship 6.5 Simulate scenarios and decision making in dynamic IT situations 6.6 Practice and role play in various communication scenarios 6.7 Engages in decision making exercises that mimic real world IT scenarios
7	OJT	Assessor will check report prepared for this component of Practical training of the course and assess whether competency has been developed to work in the real job situation with special emphasis on basic safety and hazards in this domain. (The trainee is expected to undertake work in actual workplace under any supervisor / contractor for 60 Hours.)
8	Employability Skill	As per guided curriculum

List of Tools, Equipment & materials needed for 30 Trainees (Practical)

SI No	Items Name	Specification	Qty
1	Computer	I3 equivalent or higher processor, 4GB or higher RAM and with adequate amount of ROM	15
2	Dummy Components of computer		3 set
3	USB and DVD drive		10/ Item
4	Screwdriver, Plier, Cable Tester, Crimping Tool Kit		3 / Item
5	Network Cable	CAT-6 or CAT-5	Adequate
6	Wireless Router		3
7	Network Adapter		3
8	RJ-45 connector		Adequate
9	Projector		2

SI No	Items Name	Specification	Qty
10	Headset with Microphone		10
11	Proper Internet Connectivity with both Ethernet and WIFI connection		Adequate
12	Software Applications	Open Sourced/Licensed	Adequate
13	Smart Class Room	Complete Set	01

Marks Distribution

Outcome	Outcome Code	Total Th marks	Total Pr marks	Total OJT marks
Demonstrate proficiency in managing and optimizing academic institute by coordinating and troubleshooting IT infrastructure	ELE/1024/OC1	30	110	0
Identify, test and troubleshoot basic computer hardware and software problems	ELE/1024/OC2	20	140	0
Implement basic network configurations, troubleshoot common networking issues and set up secure and efficient networks by using networking tools	ELE/1024/OC3	30	110	0
Articulate clear content objectives, creating structured outlines for systematic content development	ELE/1024/OC4	20	110	0
Illustrate effective utilization of e-learning platforms	ELE/1024/OC5	20	110	0
Develop leadership and team management skills to lead a cohesive and productive IT team	ELE/1024/OC6	30	70	0
Work in real job situation with special emphasis on basic safety and hazards in this domain (OJT).	ELE/1024/OC7	0	0	150
Employability Skills – 60 Hrs	DGT/VSQ/N0102	50	0	0