

WORK-STUDY DIPLOMA IN DATA CENTRE INFRASTRUCTURE & OPERATION

MODULE OBJECTIVES

Core Modules

Data Centre Infrastructure

On completion of the module, trainees should be able to assess and evaluate data centre setup and components.

Data Centre Operation

On completion of the module, trainees should be able to perform data centre operation management.

Computer System Architecture

On completion of the module, trainees should be able to set up, install and maintain computer hardware and operating system, as well as troubleshoot computer system.

Workplace Safety and Health (Data Centre)

On completion of the module, trainees should be able to identify workplace hazards and practices, and implement Workplace Safety and Health (WSH) legal compliance and incident reporting to ensure safe workplace environment in data centre.

Networking Essentials

On completion of the module, trainees should be able to set up, configure, maintain and troubleshoot network system as well as build peer-to-peer network.

Server Administration

On completion of the module, trainees should be able to install, upgrade and support Linux server.

Server and Storage Management

On completion of the module, trainees should be able to set up, configure and troubleshoot server and storage system.

Air-Conditioning and Mechanical Ventilation

On completion of the module, trainees should be able to monitor cooling infrastructure in data centre and escalate issue accordingly.

Access Control System

On completion of the module, trainees should be able to conduct security check on data centre facility and monitor security access system. Trainees should also be able to maintain and generate physical access rights report.

Fire Protection System

On completion of the module, trainees should be able to inspect fire protection system and escalate issue accordingly.

Electrical System

On completion of the module, trainees should be able to monitor performance level of the power infrastructure and escalate issue accordingly.

Physical Security Operation

On completion of the module, trainees should be able to conduct physical security risk assessment and system audit. They should also be able to identify security gap, propose improvement and assess security operation requirements.

Technical Writing and Communication

On completion of this module, trainees should be able to write and present technical report. They should also be able to apply communication and supervision skills to build essential relationships at the workplace.

Service Operation Management

On completion of the module, trainees should be able to apply the key concepts, terms and principles of service operation to areas such as asset and configuration management. He should also be able to supervise work performed by vendor.

On-The-Job Training I

On completion of this module, trainees should be able to apply and integrate Year 1 skills and knowledge acquired at ITE College, and further develop competencies at the workplace.

On-The-Job Training II

On completion of this module, trainees should be able to apply and integrate Year 2 skills and knowledge acquired at ITE College, and further develop competencies at the workplace.

On-The-Job Training III

On completion of this module, trainees should be able to apply and integrate Year 3 skills and knowledge acquired at ITE College, and further develop competencies at the workplace.

Standard OJT Task List for Work-Study Diploma in Data Centre Infrastructure & Operation

1	Evaluate data centre site
2	Assess data centre setup requirements
3	Evaluate data centre components
4	Monitor data centre operation
5	Document management policies and procedures
6	Perform data centre maintenance
7	Plan computer system installation
8	Set up computer system
9	Maintain and troubleshoot computer system
10	Identify Workplace Safety and Health (WSH) hazards and implement risk control measures
11	Support WSH legal compliance and incident reporting
12	Solve problem and make operational decision
13	Plan network system installation
14	Set up / configure local area network
15	Troubleshoot network connectivity
16	Install / configure operating system and services
17	Perform essential system administration
18	Create script
19	Set up and configure storage system
20	Set up file sharing on network attached storage system
21	Install / configure server and services
22	Perform backup and restore operations
23	Monitor server performance
24	Monitor temperature and humidity in data centre
25	Monitor data centre containment for cold and hot air separation
26	Monitor air-conditioning/chiller/cooling system
27	Identify / escalate cooling infrastructure issue
28	Conduct security check on data centre facility
29	Maintain physical access rights log
30	Generate access rights report
31	Manage security access system
32	Prepare fire protection system inspection plan
33	Inspect fire suppression and detection system
34	Establish safety signage
35	Identify / escalate fire protection system issue
36	Check power equipment
37	Identify / escalate power infrastructure issue
38	Perform power simulation exercise
39	Schedule / facilitate preventive maintenance
40	Monitor performance level of Uninterruptible Power Supply (UPS)
41	Conduct physical security risk assessment
42	Propose security risk control plan
43	Conduct security system audit
44	Manage security system operation
45	Prepare and write technical report
46	Communicate / present at meeting / discussion
47	Identify service management lifecycle
48	Provide guidance on service management component
49	Identify opportunity for improvement
50	Manage / supervise vendor