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COURSE BROCHURE

# Computer Operating System Fundamentals Training Course

21 – 25 February 2027
Muscat

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Registered in the United Kingdom and Saudi Arabia

# Computer Operating System Fundamentals Training Course

**Ref:** 3050_115778 **Date:** 21 – 25 February 2027 **Location:** Muscat **Fees:** 6500 GBP

Computer Operating System Fundamentals is a 1-week training course for new support staff, junior technicians and non-specialist staff who look after workplace computers, and it ends with each participant building a Workstation Care and Fault Checklist. Organisations now run more devices, more remote users and more frequent updates, so staff who can read what an operating system is doing prevent lost hours and data. Jupiter Prime Training delivers Computer Operating System Fundamentals for this audience.

## Why Computer Operating System Fundamentals Matters Now

Three forces shape this subject today. Update cycles are shorter, and each patch or driver can change how a machine starts. Hybrid working multiplies accounts, storage locations and access rights. Security teams also expect frontline support to spot suspicious processes and weak permissions early. An organisation whose support staff understand processes, memory, file systems and accounts restores service quickly; one that relies on guesswork reinstalls machines needlessly and leaves gaps attackers exploit.

## Who Gains Most from Computer Operating System Fundamentals

- Service desk staff who take first calls about slow, frozen or unbootable machines
- Junior technicians who prepare, image and hand over new workstations
- Office coordinators who manage shared computers, printers and user accounts locally
- Laboratory and classroom assistants who keep fleets of teaching or test machines running
- Field engineers who support point-of-sale terminals, kiosks and site computers

A small support group that attends together gains most, because its members leave with one escalation routine and one checklist.

## Computer Operating System Fundamentals Capabilities

Participants move from clicking through settings to reading the evidence a machine gives about its processes, storage, accounts and start-up sequence.

- Explain how the kernel, drivers and services share processor time and memory — fault reports to senior engineers
- Apply file system structure, paths and permissions to grant safe access — data owners and managers
- Build user and group accounts with least privilege — security reviewers
- Use command-line tools to inspect processes, disks and network settings — first-line diagnosis
- Diagnose start-up faults from boot logs and recovery options — repair or replace decisions
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Specify an update, backup and maintenance routine for a workstation group — service owners

## Key Computer Operating System Fundamentals Terms

- Kernel — the core of the operating system that controls hardware, memory and program scheduling.
- Process — a running program with its own memory space and priority.
- Virtual memory — disk space used as an extension of physical memory.
- File system — the method a disk uses to organise and protect files and folders.
- Permission — a rule setting which user or group may read, change or run a file.
- Boot sequence — the ordered steps from power-on to the sign-in screen.

## Computer Operating System Fundamentals Day by Day

### Day 1: How an Operating System Is Built

- Kernel, Drivers and User Space — Where a Fault Really Sits
- Processor Scheduling and Priorities — Why One Program Slows Others
- Physical and Virtual Memory — When to Add Memory or Close Programs
- System Services and Background Tasks — Which Ones Are Safe to Stop
- Desktop and Server Editions Compared — Choosing the Right Build for Each Role

### Day 2: Files, Storage and Access

- Disk Partitions and Volume Layout — Planning Space for System and Data
- File System Formats and Paths — Compatibility Across Drives and Devices
- Users, Groups and Least Privilege — Who Should Hold Administrator Rights
- Read, Write and Run Permissions — Protecting Shared Folders From Mistakes
- Encryption at Rest and Recovery Keys — Balancing Protection With Access

### Day 3: Working at the Command Line

- Shell Navigation and File Commands — Speeding Up Routine Support Tasks
- Process Listing and Termination Commands — Stopping a Hung Program Safely
- Disk Usage and Health Commands — Spotting a Failing Drive Early
- Network Configuration Commands — Separating Machine Faults From Network Faults
- Simple Batch Scripts for Repeat Jobs — Reducing Errors on Many Machines

### Day 4: Installing, Updating and Recovering

- Clean Installation and Disk Imaging — Rebuild Versus Repair Decisions
- Patch and Driver Update Cycles — Testing Before Wide Release
- Boot Sequence and Firmware Settings — Tracing Why a Machine Will Not Start
- Event Logs and Error Codes — Evidence for Escalation Tickets
- Safe Mode, Restore Points and Recovery Media — Returning a Machine to Service

## Day 5: Practising the Workstation Care and Fault Checklist

- Slow Machine Case Using Scheduling and Memory Checks — Root Cause Agreement
- Locked-Out User Case Using Accounts and Permissions — Safe Access Restoration
- Failed Start-Up Case Using Boot Logs and Recovery — Repair Path Choice
- Backup and Maintenance Calendar for a Workstation Group — Service Owner Sign-Off
- Workstation Care and Fault Checklist — Completed for Team Use

## Applying Computer Operating System Fundamentals After the Course

- Run a permissions review of one shared folder set, removing unneeded administrator rights and recording each change.
- Lead a monthly patch test on a small pilot group of workstations, checking event logs before wider release.

## Computer Operating System Fundamentals Questions FAQ

### What is Computer Operating System Fundamentals and why does it matter now?

It is the working knowledge of how an operating system runs programs, stores files, controls accounts and starts up. It matters now because frequent updates and remote users demand diagnosis from evidence.

### Which roles gain most from Computer Operating System Fundamentals?

Service desk staff, junior technicians and office coordinators gain most. Classroom assistants in education and field engineers supporting retail terminals also use the methods daily.

### How does Computer Operating System Fundamentals differ from a server administration course?

It focuses on single workstations and small groups of machines rather than directory services, clustering or data centre operations. It prepares you for later server study.

### What do you bring back from Computer Operating System Fundamentals?

You bring back a fault and care checklist built on real cases. It covers start-up faults, lockouts, permissions, updates and backups.

## Computer Operating System Fundamentals: The Way Forward

The Workstation Care and Fault Checklist first informs whether a troubled machine is repaired in place or rebuilt from an image. Service desk staff and technicians use it on every call, and team leads use it to plan maintenance. After its first month in use, revisit the permissions and update sections, since those change fastest as software and working patterns move.