

## **COURSE 10967: FUNDAMENTALS OF A WINDOWS SERVER INFRASTRUCTURE**

**Duration:** 5 Days

**Delivery Method:** Instructor-led Classroom / Virtual Classroom

### **ABOUT THIS COURSE:**

Learn the fundamental knowledge and skills that you need to build a Windows Server infrastructure with Windows Server.

This five day course provides the networking, security, and system administration information that you need to implement a Windows Server infrastructure. It covers the basics of installation and configuration, storage, network infrastructure, network components, network protocols, server roles, Active Directory Domain Services (AD DS), Group Policy, IT security, server security, network security, security software, monitoring server performance, and maintaining a Windows Server.

This course includes the foundational level knowledge to prepare students to start a career or cross train in Microsoft Windows Server technologies

### **AUDIENCE PROFILE:**

Students for this course are just starting their Information Technology (IT) careers or want to change careers into Windows Server technologies. This fundamental knowledge and skills can be used by home computer users, small business owners, academic students, information workers, technical managers, help desk technicians, or students who want to cross train from another technology.

This course is a first step in preparing for a job in IT or as prerequisite training before you start the Microsoft Certified System Administrator (MCSA) training and certification path.

**COURSE OUTLINE:**

Here is the complete course outline.

**Module 1: Installing and Configuring Windows Server**

This module explains how the Windows Server editions, installation options, optimal service and device configuration and general post-installation configuration all contribute to the functionality and effectiveness of your Windows Server implementation.

**LESSONS**

- Windows Server Architecture.
- Installing Windows Server.
- Configuring Services.
- Configuring Devices and Device Drivers.

**LAB : Installing and Configuring Windows Server**

**Module 2: Implementing Storage in Windows Server**

This module will introduce you to different storage technologies and discuss how to implement the storage solutions in Windows Server. There is also a discussion on how to create a resilient strategy for your storage, helping to avoid unplanned downtime and loss of data.

**LESSONS**

- Identifying Storage Technologies.
- Managing Disks and Volumes.
- Fault Tolerance.

**LAB : Implementing Storage in Windows Server**

**Module 3: Understanding Network Infrastructure**

In this module, students will learn how to describe fundamental network component and terminology thus enabling the student to select an appropriate network component in a particular scenario.

<p><b>LESSONS</b></p> <p>Network Architecture Standards.</p> <p>Local Area Networking.</p> <p>Wide Area Networking.</p> <p>Wireless Networking.</p> <p>Connecting to the Internet.</p> <p>Remote Access.</p>	<p><b>LAB : Selecting Network Infrastructure Components</b></p>
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**Module 4: Connecting Network Components**

This module explores the functionality of low-level networking components, including switches and routers. In addition, the module provides guidance on how best to connect these and other components together to provide additional network functionality.

<p><b>LESSONS</b></p> <p>Understanding the OSI Model.</p> <p>Understanding Media Types.</p> <p>Understanding Adapters, Hubs, and Switches.</p> <p>Understanding Routing.</p>	<p><b>LAB : Connecting Network Components</b></p>
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### Module 5: Implementing TCP/IP

This module describes the requirements of a protocol stack and then focuses on the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol stack.

<p><b>LESSONS</b></p> <p>Overview of TCP/IP.</p> <p>IPv4 Addressing.</p> <p>IPv6 Addressing.</p> <p>Name Resolution.</p>	<p><b>LAB : Implementing TCP/IP</b></p>
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### Module 6: Implementing Windows Server Roles

This module explains the functional requirements of a server computer and how to select and deploy appropriate server roles to support these functional requirements.

<p><b>LESSONS</b></p> <p>Role-Based Deployment.</p> <p>Deploying Role-Specific Services.</p> <p>Considerations for Provisioning Roles.</p>	<p><b>LAB : Implementing Server Roles</b></p> <p><b>LAB : Implementing Server Roles</b></p>
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**Module 7: Implementing Active Directory**

This module explains that, as a directory service, how AD DS stores information about objects on a network and makes this information available to users and network administrators.

<p><b>LESSONS</b></p> <p>Introducing Active Directory Domain Services (AD DS).</p> <p>Implementing AD DS.</p> <p>Managing Users, Groups, and Computers.</p> <p>Implementing Group Policy</p>	<p><b>LAB : Lab : Implementing AD DS</b></p>
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**Module 8: Implementing IT Security Layers**

This module explains how, in addition to file and share permissions, you can also use data encryption to restrict data access

<p><b>LESSONS</b></p> <p>Overview of Defense-in-Depth.</p> <p>Physical Security.</p> <p>Internet Security.</p>	<p><b>LAB : Implementing IT Security Layers</b></p>
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**Module 9: Implementing Security in Windows Server**

This module reviews the tools and concepts available for implementing security within a Microsoft Windows infrastructure.

<p><b>LESSONS</b></p> <p>Overview of Windows Security.</p> <p>Securing Files and Folders.</p> <p>Implementing Encryption.</p>	<p><b>LAB : Implementing Windows Security</b></p>
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**Module 10: Implementing Network Security**

This module explains possible threats when you connect your computers to a network, how to identify them, and how implement appropriate Windows network security features to help to eliminate them.

<p><b>LESSONS</b></p> <p>Overview of Network Security.</p> <p>Implementing Firewalls.</p> <p>Internet Protocol Security (IPsec)</p>	<p><b>LAB : Implementing Network Security</b></p>
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**Module 11: Implementing Security Software**

This module explains how an information technology (IT) administrator can account for and mitigate the risks of malicious code, unauthorized use, and data theft.

<p><b>LESSONS</b></p> <p>Client Software Protection Features.</p> <p>E-Mail Protection.</p> <p>Server Protection.</p>	<p><b>LAB : Implementing Security Software</b></p>
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**Module 12: Monitoring Server Performance**

This module discusses the importance of monitoring the performance of servers, and how you monitor servers to ensure that they run efficiently and use available server capacity. It also explains performance monitoring tools to identify components that require additional tuning and troubleshooting, so that you can improve the efficiency of your servers.

<p><b>LESSONS</b></p> <p>Event Logging.</p> <p>Performance Monitoring.</p>	<p><b>LAB : Monitoring Server Performance</b></p>
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**Module 13: Maintaining Windows Server**

This module explains the importance of system updates, how to troubleshoot the Windows Server boot process, and how to implement high availability and recovery technologies to improve system availability.

<b>LESSONS</b>	<b>LAB : Maintaining Windows Server</b>
Troubleshooting Windows Server Startup. Server Availability and Data Recovery. Applying Updates to Windows Server. Troubleshooting Windows Server.	

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