# Microsoft Azure Fundamentals (1 Day)

**Module 1: Cloud Concepts**

In this module, you'll take an entry level end-to-end look at Azure and its capabilities, which will provide you with a solid foundation for completing the available modules for Azure Fundamentals.

**Lessons**

- Introduction to Azure fundamentals
- Fundamental Azure concepts

After completing this module, students will be able to:

- Understand the benefits of cloud computing in Azure and how it can save you time and money.
- Explain concepts such as high availability, scalability, elasticity, agility, and disaster recovery.

**Module 2: Core Azure Services**

In this module, you learn about core Azure services like Azure database, Azure compute, Azure storage, and Azure Networking.

**Lessons**

- Core Azure architectural components
- Core Azure workload products
- Azure networking services
- Azure storage services
- Azure database services

After completing this module, students will be able to:

- Describe core Azure architecture components such as subscriptions, management groups, and resources.
- Summarize geographic distribution concepts such as Azure regions, region pairs, and availability zones.
- Understand the services available in Azure including compute, network, storage, and databases.
- Identify virtualization services such as Azure VMs, Azure Container Instances, and Azure Kubernetes.
- Compare Azure's database services such as Azure Cosmos DB, Azure SQL, and Azure Database for MySQL.
- Examine Azure networking resources such as Virtual Networks, VPN Gateways, and Azure ExpressRoute.
- Summarize Azure storage services such Azure Blob Storage, Azure Disk Storage, and Azure File Storage.

**Module 3: Core Solutions**

In this module, you'll learn about AI machine learning, Azure DevOps, monitoring fundamentals, management fundamentals, serverless computing fundamentals. and IoT fundamentals.

**Lessons**

- Choose the best Azure IoT service
- Choose the best AI service
- Choose the best Azure serverless technology
- Choose the best tools with DevOps and GitHub
- Choose the best management tools
- Choose the best Azure monitoring service

After completing this module, students will be able to:

- Choose the correct Azure AI service to address different kinds of business challenges.
- Choose the best software development process tools and services for a given business scenario.
- Choose the correct cloud monitoring service to address different kinds of business challenges.
- Choose the correct Azure management tool to address different kinds of technical needs.

- Choose the right serverless computing technology for your business scenario.
- Choose the best Azure IoT service for a given business scenario.

**Module 4: General security and networking features**

In this module, you will learn how to protect yourself against security threats, and secure your networks with Azure.

**Lessons**

- Security Tools and Features
- Secure Network Connectivity

After completing this module, students will be able to:

- Strengthen your security posture and protect against threats by using Microsoft Defender for Cloud.
- Collect and act on security data from many different sources by using Microsoft Sentinel.
- Manage dedicated physical servers to host your Azure VMs for Windows and Linux.
- Identify the layers that make up a *defense in depth* strategy.
- Explain how Azure Firewall enables you to control what traffic is allowed on the network.
- Configure network security groups to filter network traffic to and from Azure resources.
- Explain how Azure DDoS Protection helps protect your Azure resources from DDoS attacks.

**Module 5: Identity, Governance, Privacy, and Compliance**

In this module, you will learn about Azure identity services, how to build a cloud governance strategy, and privacy, compliance and data protection standards on Azure.

**Lessons**

- Core Azure identity services
- Azure Governance Methodologies
- Privacy, Compliance, and Data Protection standards

After completing this module, students will be able to:

- Explain the difference between authentication and authorization.
- Describe how Azure Active Directory provides identity and access management.
- Explain the role single sign-on (SSO), multifactor authentication, and Conditional Access play.
- Make organizational decisions about your cloud environment by using the CAF for Azure.
- Define who can access cloud resources by using Azure role-based access control.
- Apply a resource lock to prevent accidental deletion of your Azure resources.
- Apply tags to your Azure resources to help describe their purpose.
- Control and audit how your resources are created by using Azure Policy.
- Enable governance at scale across multiple Azure subscriptions by using Azure Blueprints.
- Explain the types of compliance offerings that are available on Azure.
- Gain insight into regulatory standards and compliance on Azure.
- Explain Azure capabilities that are specific to government agencies.

**Module 6: Azure Pricing and Lifecycle**

In this module, you will learn how to plan and manage Azure costs, and how to choose the right Azure services though SLAs and service lifecycle.

**Lessons**

- Planning and Cost Management
- Azure Service Level Agreements (SLAs) and Lifecycle

After completing this module, students will be able to:

- Use the Total Cost of Ownership Calculator.
- Describe the different ways you can purchase Azure products and services.

- Use the Pricing calculator to estimate the monthly cost of running your cloud workloads.
- Define the major factors that affect total cost and apply recommended practices to minimize cost.
- Describe what a service-level agreement (SLA) is and why SLAs are important.
- Identify factors, such as the service tier you choose, that can affect an SLA.
- Combine SLAs to compute a composite SLA.
- Describe the service lifecycle in Azure.