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## AZUR 0303: Microsoft Azure Architect Technologies (AZ-303)

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### EFFECTIVE DATE

September 2020

### DEPARTMENT

Computers - City Centre

### DESCRIPTION

Learn how to translate business requirements into secure, scalable, and reliable solutions. Course topics include virtualization, automation, networking, storage, identity, security, data platform, and application infrastructure. This course outlines how decisions in each these area affects an overall solution. This course prepares you to write the Microsoft Certification Exam AZ-303: Azure Architect Technologies. This course is ideal for IT Professionals with expertise in designing and implementing solutions running on Microsoft Azure. You would gain most from this course if you have a broad knowledge of IT operations, including networking, virtualization, identity, security, business continuity, disaster recovery, data platform, budgeting, and governance. Azure Solution Architects use the Azure Portal and as they become more adept they use the Command Line Interface. Candidates must have expert-level skills in Azure administration and have experience with Azure development processes and DevOps processes.

### CREDITS

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### YEAR OF STUDY

Continuing Professional Development

### PREREQUISITES

Highly recommended: Understanding of on-premises virtualization technologies, including: VMs, virtual networking, and virtual hard disks. Understanding of network configuration, including TCP/IP, Domain Name System (DNS), virtual private networks (VPNs), firewalls, and encryption technologies. Understanding of Active Directory concepts, including domains, forests, domain controllers, replication, Kerberos protocol, and Lightweight Directory Access Protocol (LDAP). Understanding of resilience and disaster recovery, including backup and restore operations. Optional: Microsoft Azure Fundamentals (AZ-900) course

### COREQUISITES

None

## **COURSE LEARNING OUTCOMES**

Upon successful completion of this course, students will be able to:

- Secure identities with Azure Active Directory and users and groups.
- Implement identity solutions spanning on-premises and cloud-based capabilities.
- Apply monitoring solutions for collecting, combining, and analyzing data from different sources.
- Manage subscriptions, accounts, Azure policies, and Role-Based Access Control.
- Administer Azure using the Resource Manager, Azure portal, Cloud Shell, and CLI.
- Configure intersite connectivity solutions like VNet Peering, and virtual network gateways.
- Administer Azure App Service, Azure Container Instances, and Kubernetes.

## **PRIOR LEARNING ASSESSMENT & RECOGNITION (PLAR)**

None

## **HOURS**

Lecture: 20

Lab: 20

## **INSTRUCTIONAL STRATEGIES**

### **GRADING SYSTEM**

Satisfactory/Unsatisfactory

### **PASSING GRADE**

'S' based on 100% attendance

## **EVALUATION PLAN**

None

## **COURSE TOPICS**

- Virtual Machine Size and High Availability
  - Implement Azure Dedicated Hosts
  - Deploy and Configure Scale Sets
  - Configure Azure Disk Encryption
  - Azure Resource Manager and Virtual Hard Disk Templates
  - Evaluate Location of New Resources
  - Create and Execute an Automation Runbook
  - Virtual Network Peering and Azure Load Balancer
  - Web Application Firewall
  - Implement Application Gateway, Azure Firewall, Azure Front Door, Azure Traffic Manager

Implement Network Security and Application Security Groups, and Azure Bastion  
Storage Accounts, Security, and Management  
Accessing Blobs and Queues using AAD  
Configure Azure Storage Firewalls and Virtual Networks  
Azure Active Directory: Users and Groups, Domains and Custom Domains, and Identity Protection, Access Reviews, and AD Connect  
Implement Conditional Access and Bypass Options  
Configure Fraud Alerts for MFA, Trusted IPs and Guest Users  
Manage Multiple Directories  
Create Management Groups, Subscriptions, and Resource Groups  
Role-Based Access Control (RBAC) and Roles  
Azure Policy and Blueprints  
Configure Password Sync and Password Writeback, and Azure AD Connect and Service Health  
Azure Migrate  
VMware - Agentless and Agent-Based Migration  
Implement Azure Backup and Update Management  
Azure to Azure Site Recovery  
Azure Infrastructure Security Monitoring, Monitor, Workbooks, and Alerts  
Log Analytics, Network Watcher, and Azure Costs  
Azure Application Insights  
Unified Monitoring in Azure  
Azure Key Vault and Managed Identity  
Azure App Service, Plan, Networking, and Web App for Containers  
Create and Manage Deployment Slots  
Implement Logic Apps and Azure Functions  
Azure Container Instances  
Configure Azure Kubernetes Service and Storage Account Tables  
Select Appropriate CosmosDB APIs  
Configure Azure SQL Database Settings and Implement Managed Instances  
High-Availability and Azure SQL Database

## LEARNING RESOURCES

None

### Notes:

- Course contents and descriptions, offerings and schedules are subject to change without notice.
- Students are required to follow all College policies including ones that govern their educational experience at VCC. Policies are available on the VCC website at:

<https://www.vcc.ca/about/governance--policies/policies/>

- To find out how this course transfers, visit the BC Transfer Guide at <https://www.bctransferguide.ca>.

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1155 East Broadway  
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**Downtown campus**

250 West Pender Street  
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**Annacis Island campus**

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