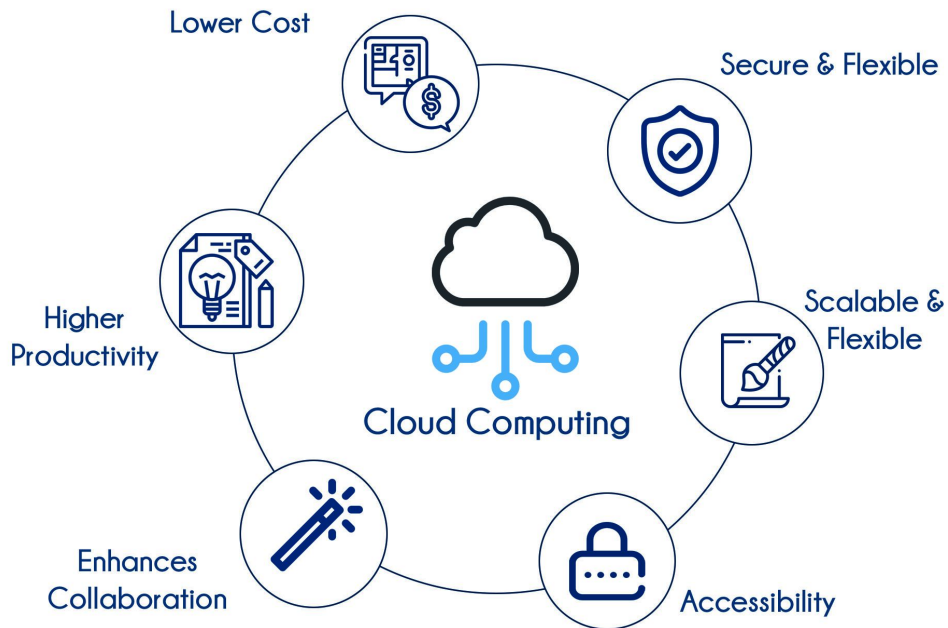




LEARN, THINK, INNOVATE



CLOUD COMPUTING MASTER PROGRAM



Overview

Let eMexo Technologies **Best Cloud Masters Program Training in Electronic City Bangalore** take you from the fundamentals of Cloud Computing to Advance Cloud Computing and make you an expert in developing real-time Apache Spark applications. Here are the major topics we cover under this Cloud Masters Program course Syllabus **Fundamentals of Cloud Computing & Linux, Why Cloud?, AWS – An overview, Understand Identity Access Management of AWS, EC2 Instance, Auto-scaling, Load Balancing, EBS (Elastic Block Storage), Object Storage in Cloud, Cloud Front, Route53, AWS Security Management, Amazon Virtual Private Cloud (VPC), Relational Database Service (RDS), NDynamo DB, Monitoring Services, Application Services – An Overview, AWS Troubleshooting, AWS Architecture and Design, DevOps Fundamentals, A kick start on the Microsoft Azure platform, Managing Microsoft Azure Subscription, Azure Resource Management, Azure Virtual Machines, Managing Azure Virtual Machines, Azure Virtual machine backups, Azure Virtual Networks, Introduction to Load Balancing, Azure network security groups, Azure DNS Services, Azure AD – Basic vs Premium, Implementing MFA, Azure RBAC, Creating and configuring storage accounts, Google Cloud Platform, Instances, Storage: Persistent Disk, Storage: Cloud Storage, Storage: Cloud SQL and Cloud Datastore, Networking, Advanced Topics, Introduction to DevOps, GIT – A version control tool, Jenkins – Continuous integration, Docker – A containerization technology, Ansible – A Configuration Management, DevOps on Cloud, An Introduction to Python, Beginning Python Basics, Python Program Flow, Functions& Modules, File Handling, Classes In Python, Generators and iterators, Data Structures, and Collections.** Each topic will be covered in a practical way with examples for our **Cloud Masters Program Course in Electronic City Bangalore**.

All the topics will be covered with Practical and hands-on training. Our trainers have industry experience with live project experience in cutting-edge technologies which they teach. We hire only the Best Cloud Masters Program industry specialists as trainers for our **Cloud Masters Program Certification Training in Electronic City Bangalore**.

If you are looking for **Cloud Masters Program Certification Course in Electronic City Bangalore**, eMexo Technologies is the **Best Cloud Masters Program Training Institute in Electronic City Bangalore**. Come over to our training institute for a free demo class. Let our trainer give you a demo on Cloud Masters Program and only then do you make the decision to enroll in the training program.

Training Features

Real-life Case Studies

Do a real-life case study to understand the usage in real-world scenarios.

Assignments

Each class will be followed by a practical assignment which that can be completed before the next class.

Preparation for interview

Our trainers are professionals working in multinational corporations. They are experts in their field and know exactly what the interviewer will look for in the candidate. Experienced trainers not only share interview questions but also conduct mock interviews to help prepare for the actual interview.

Key Features

eMexo Technologies offers the **Best Cloud Masters Program Training Course in Electronic City Bangalore** with the TOP industry expert trainers.

Here are the key features.

- ★ Free Demo Class Available
- ★ Practical Approach
- ★ Expert & Certified Trainers
- ★ 100% Job Oriented Training
- ★ Real World use cases and Scenarios
- ★ Completed 500+ Batches
- ★ Certification Guidance

Unit 1: Fundamentals of Cloud Computing & Linux

- Overview of all basic commands
- Vim editor modes
- Filesystem hierarchy – Basic topics
- File and directories creation
- Grep
- Filter commands (head, tail, more, less)
- Creating users and groups
- Important files related
- Modifying, deleting users and group
- Linux permissions
- Basic permissions overview
- Software management
- Yellowdog update modifier(yum)
- Yum commands
- Different run levels
- Services and daemons

Unit 2: Why Cloud?

- Why Cloud and What is Cloud Computing?
- Identify the features and benefits of cloud computing

- Different types of Cloud Computing deployment model
- Public Cloud, Private Cloud, Hybrid Cloud
- Virtualization – An essential in cloud
- Virtualization in the Cloud model
- Different types of virtualization
- Hypervisor – Benefits
- Different types of services and its difference in Cloud computing
- IaaS, PaaS, SaaS
- Importance of scaling in cloud computing
- Different types of scaling and its applications
- Issues we overcome using cloud and applications
- Cost model that we use in cloud computing

Unit 3: AWS – An overview

- Describe the features of AWS
- The features of the AWS Marketplace
- Describe the features of Amazon Compute Services
- Describe the features of Amazon Storage Services
- Describe the features of Amazon Network Services
- Describe the features of Amazon Database services
- Describe various services in AWS
- Global Infrastructure – Regions and Availability Zones
- Create a free tier account in AWS and onboarding
- Introduction AWS management console
- Hands-on

Unit 4: Understand Identity Access Management of AWS

- Protect your AWS with the different authentication system
- Password policies set for users
- AWS User Account and Groups in detail
- Creating custom policies in AWS
- Introduction about Roles and their use
- Creating Roles and associating policies
- Creating programmatic access and management console access for users
- Associating policies to the user and groups
- Hands-on

Unit 5: EC2 Instance

- Describe AMI and AWS Marketplace templates
- Launch a basic EC2 instance
- Different types of Instances Reserved, On-demand, Spot, Dedicated
- Security groups and tags for EC2 instance

- Public key – Private key introduction and protecting EC2 with keys
- Attaching and detaching EBS volumes
- Launch an ec2 instance from an AMI
- Creating custom AMI and working with a different region
- Make use of Amazon EBS volume and create snapshots
- Manage the configuration of your application
- Deploying a new instance from the created AMI
- Hands-on

Unit 6: Auto-scaling

- Get Started with Auto Scaling Using the Console
- Creating Launch configurations and making use of them for autoscaling groups
- Maintain a Fixed Number of Running EC2 Instances
- Dynamic Scaling
- The lifecycle of autoscaling
- Policies of autoscaling
- Hands-on

Unit 7: Load Balancing

- Introduction to Load balancer (ELB)
- Different types of Load balancer in AWS
- Application Load balancer
- Network Load balancer
- Classic Load balancer
- Migrating classic load balancer to new load balancer
- Components and types of load balancing
- Hands-on

Unit 8: EBS (Elastic Block Storage)

- Create EBS volumes
- Delete EBS Volumes
- Attach and detach EBS volumes with the EC2 instance
- Creating and deleting snapshots
- Hands-on

Unit 9: Object Storage in Cloud

- Understanding S3 durability and redundancy
- Introduction about S3 Buckets
- How S3 Uploading works and how to Download
- How to S3 Permissions
- How to implement S3 Object Versioning S3 Lifecycle Policies

- Storage Gateway
- Import Export
- S3 Transfer Acceleration
- Glacier storage
- Hands-on

Unit 10: Cloud Front

- Describing cloud front
- Creating a cloud-front distribution
- Hosting a website for cloud-front distribution
- Implementing global restrictions
- Configuring origins and behaviors
- Hands-on

Unit 11: Route53

- Describe Hosted zones and Domain name understanding
- How to create hosted zones
- Hosting a website with a custom domain name
- Understanding routing policies
- Hands-on

Unit 12: AWS Security Management

- Describing Security Practices for Cloud Deployment
- AWS Shared Responsibilities and Securities
- Importance of Cloud Trail
- Describing Trust advisor
- Hands-on

Unit 13: Amazon Virtual Private Cloud (VPC)

- Introduction to Amazon Virtual Private Cloud (VPC)
- VPC Advantages and understanding IP addressing CIDR
- Default and Non-default VPC
- Different Components in VPC
- Describe, create, and manage Amazon Virtual Private Cloud
- Amazon VPC, Private Subnet, and Public Subnet
- AWS Networking, Security Groups, and Network ACLs
- Configuration and management of VPN connectivity
- Subnet and Subnet Mask
- Hands-on

Unit 14: Relational Database Service (RDS)

- Introduction to RDS
- Different database services of AWS: Amazon RDS, Dynamo DB, Redshift
- Create MYSQL RDS Instance, Oracle RDS Instance, MS SQL RDS Instance
- Configuring the database
- Configuring backups
- Configuring the maintenance windows
- Connecting to the database
- Hands-on

Unit 15: NDynamo DB

- Creating a dynamo dB
- Adding data manually
- Learn about strong and eventual consistency
- Calculating Read-write consistency
- Configuring alarms
- Hands-on

Unit 16: Monitoring Services

- Knowledge of Cloud watch – A monitoring service
- Create and Configuring Monitoring services
- How to perform Setting thresholds and Configuring actions
- Creating a cloud watch alarm
- Getting statistics for ec2 instances
- Monitoring other AWS services
- Configuring Notifications
- Integrating cloud watch with Autoscaling
- Hands-on

Unit 17: Application Services – An Overview

- What is SNS
- Creating a topic
- Create subscription
- Subscribed to the subscription
- SQS & SES
- Lambda and Elastic Beanstalk
- Hands-on

Unit 18: AWS Troubleshooting

- Troubleshooting EC2 instance

- Troubleshooting using Cloud watch
- Troubleshooting using ELB
- Troubleshooting by using Cloud front
- Hands-on

Unit 19: AWS Architecture and Design

- Backup and Disaster Recovery
- How to manage Disaster Recovery and Backups?
- Best Practice for DR and Backups
- AWS High Availability Design
- Hands-on

Unit 20: DevOps Fundamentals

- An understanding of DevOps and the modern DevOps toolsets
- The ability to automate all aspects of a modern code delivery and deployment pipeline using:
- Source code management tools – CVS, Git
- Build tools – Apache ant, Maven
- Test automation tools – JUnit
- Continuous Integration Tools – Jenkins, Team City
- Configuration management tools – Chef, Puppet, Ansible
- Hands-on

Azure Course Syllabus

Unit 21: A kick start on the Microsoft Azure platform

- Microsoft Azure – An High-level overview
- Creation of Azure account
- Overview of the services provided in Azure
- Learn support center help and other controls

Unit 22: Managing Microsoft Azure Subscription

- Creating a subscription for the account
- Cost center and tagging
- Azure policies

Unit 23: Azure Resource Management

- Managing and analyzing Azure resource
- Diagnostics and baseline environment
- Creating alerts and metrics
- Managing costs

- Log analysis
- Hands-on

Unit 24: Azure Virtual Machines

- Introduction to Virtual machine architecture
- Azure Virtual Machine – an overview
- Understanding different families of virtual machines
- Understanding the plans and costs of virtual machines
- Creating a virtual machine
- Connecting the virtual machine remotely
- Understanding VM Availability
- Understanding and setting virtual machine monitoring
- Virtual Machine scale sets (VMSS)
- Creating Windows and Linux virtual machines
- Hands-on

Unit 25: Managing Azure Virtual Machines

- Adding additional data disks to the Virtual machine
- Adding network interface cards to virtual machines
- Changing different VM sizes
- Redeploying virtual machines
- Hands-on

Unit 26: Azure Virtual machine backups

- Understanding virtual machine backups
- Virtual machine backup jobs and restores
- Hands-on: virtual machine concepts

Unit 27: Azure Virtual Networks

- Understanding Basic networking
- Understanding CIDR
- Creation of virtual networks
- Public IP addressing concepts
- Learning network routing on Azure
- Setup virtual networks peering between different virtual networks
- Vent-to-vent connection
- Hands-on

Unit 28: Introduction to Load Balancing

- Setup Load Balancer

- Front-End IP Configuration
- Hands-on

Unit 29: Azure network security groups

- An intro to Network security groups
- Implementing Network security group rules
- Hands-on

Unit 30: Azure DNS Services

- Azure DNS services introduction
- Assigning custom domains
- Hands-on

Unit 31: Azure AD – Basic vs Premium

- Introduction and Creating Azure AD
- Adding our Custom Domains
- Learn about AD Identity Protection
- How to implement Self-Service Password Reset
- Conditional Access and Access Reviews
- Hands-on

Unit 32: Implementing MFA

- Azure AD MFA – An introduction
- Azure AD Conditional Access
- Configuring Fraud Alerts
- MFA One-Time Bypass
- Hands-on

Unit 33: Azure RBAC

- Understanding Azure Role-based access control (RBAC)
- Creating custom RBAC
- Hands-on

Unit 34: Creating and configuring storage accounts

- Create Storage Account
- Virtual Networks and Firewalls
- Access Keys and SAS
- Storage Explorer
- Log Analytics

- Redundant Storage
- Hands-on

Google Cloud Platform Course Syllabus

Unit 35: Google Cloud Platform

- Creating a Compute Engine Project
- Enabling Billing
- Adding Team Members
- Compute Engine Resources
- Manage Compute Engine Resources

Unit 36: Instances

- Creating an Instance Using the Developers Console
- Accessing an Instance Using the Developers Console
- Deleting an Instance Using the Developers Console
- Creating an Instance Using gcloud
- Instance Attributes
- Accessing an Instance Using gcloud
- Deleting an Instance Using gcloud
- Creating an Instance Programmatically
- Creating an Instance Using a Service Account
- Selecting an Access Mode
- Cleaning Up
- Hands-on

Unit 37: Storage: Persistent Disk

- Compute Engine Storage Options at a Glance
- Persistent Disk
- Persistent Disk Performance
- Create a Persistent Disk Using Developers Console
- Create a Persistent Disk Using Gcloud
- Attaching/Detaching a PD to/from a Running VM
- Create a Persistent Disk Programmatically
- Persistent Disk Snapshots
- Hands-on

Unit 38: Storage: Cloud Storage

- Understanding BLOB Storage
- Getting Started
- Introducing G-suit
- Using Cloud Storage from Your Code

- Configuring Access Control
- Understanding ACLs
- Using Default Object ACLs
- Understanding Object Immutability
- Understanding Strong Consistency
- Hands-on

Unit 39: Storage: Cloud SQL and Cloud Datastore

- Cloud SQL
- Getting Started
- Creating Databases and Tables
- Running SQL Queries
- Cloud Datastore
- Getting Started
- Creating and Viewing Entities via the Developers Console
- Creating and Retrieving Entities Programmatically from a VM
- Bring Your Own Database
- Hands-on

Unit 40: Networking

- A Short Networking Primer
- Network Addresses and Routing
- Transport Control Protocol (TCP)
- The Domain Name System (DNS)
- Hypertext Transfer Protocol (HTTP)
- Load Balancing
- Firewalls
- Default Networking
- Configuring Firewall Rules
- Configuring Load Balancing
- Reserving External IP Addresses
- Configuring Networks
- Understanding Networking Costs
- Understanding Routing
- Selecting an Access Mode
- Hands-on

Unit 41: Advanced Topics

- Startup Scripts
- cloud compute
- Literal-Value Approach
- Local-File Approach

- Cloud-Storage Approach
- Publicly Available Approach
- API Approach
- Custom Images
- Creating a Custom Image
- Using a Custom Image
- Metadata
- Metadata Server
- Metadata Entries
- Project Metadata
- Instance Metadata
- Data Formats
- Default Versus Custom
- Project-Level Custom Metadata
- Instance-Level Custom Metadata
- wait_for_change URL parameter
- Hands-on

DevOps Course Syllabus

Unit 42: Introduction to DevOps

- DevOps Principles in detail
- DevOps Engineer Skills in the Market
- Knowing DevOps Delivery Pipeline
- The market trend of DevOps
- DevOps Technical Challenges
- Tools we use in DevOps
- Hands-on

Unit 43: GIT – A version control tool

- Knowing about Version control
- Git – A CLI
- Essentials of GIT in Industry
- How to setup GIT
- Installing Git
- First-Time Git Setup
- Getting a Git Repository
- Working with various commands in GIT
- Recording Changes to the Repository
- How to check the Status of Your Files
- How to track New Files
- Staging our modified files
- Ignoring Files from GIT
- Viewing Your Unstaged and Staged Changes

- How to Commit Your Changes
- Skipping the Staging Area and commit
- Removing Files from GIT
- Viewing the Commit History
- Limiting Log Output
- Using a GUI to Visualize History
- Undoing Things
- Changing Your Last Commit
- Upstaging a Staged File
- In modifying a Modified File
- Working with Remotes
- Showing Your Remotes
- Adding Remote Repositories
- Fetching and Pulling from Your Remotes
- Pushing to Your Remotes
- Inspecting a Remote
- Removing and Renaming Remotes
- Branching and Merging in Git
- What a Branch Is
- Basic in Branching and Merging
- Branch Management in GIT
- Branching Workflows and their Usage
- Remote Branches – create and delete
- Rebasing
- Git workflows
- Git cheat sheet
- Hands-on

Unit 44: Jenkins – Continuous integration

- Essentials of Continuous Integration
- An example scenario where CI is used
- Know about Jenkins and its architecture in detail
- Jenkins tool Management in detail
- Installing Jenkins
- Post-installation setup wizard
- Unlocking Jenkins
- Customizing Jenkins with plugins
- Creating the first administrator user
- Know about User management in Jenkins
- Authentication
- Jenkin's own database user creation
- Options to enable integration with LDAP
- Authorization
- Matrix-based authorization

- Project-based authorization
- Overview of Maven
- Maven project structure
- Maven plugins
- Project Object Model (POM) – the fundamental unit of work in the Maven project
- Maven build lifecycle
- Adding external dependencies to Maven XML
- Maven build and test project
- Creating jobs and automatic build settings
- What is Jenkins Pipeline?
- Why Pipeline?
- Integration with GIT
- How to enable project-based authorization for a job
- Source code management while creating jobs
- Triggering automated build
- Maven job setup
- Know about post-build options for jobs like notifications, triggering another build, publishing reports, etc.
- Adding a slave node to Jenkins
- Building Delivery Pipeline
- Notification settings in Jenkins
- Plugin management in Jenkins
- Hands-on

Unit 45: Docker – A containerization technology

- Introduction
- Real-world Shipping Transportation Challenges
- Introducing Docker and its technology
- Understanding of Docker images and containers
- Working with container
- How to Share and copy a container
- Container Life Cycle
- How to use Base Image and customize
- Creation of Docker File
- How to Publish Images on Docker Hub
- Introduction to Docker Networking
- Network Types in docker technology
- Docker Container Networking
- Docker Compose – An introduction
- Docker Swarm – An introduction
- Use Docker Compose to create PHP, WordPress, MySQL
- How to Start Containers on a Cluster with Docker Swarm
- Creating and Scaling an application in Docker swarm
- Hands-on

Unit 46: Ansible – A Configuration Management

- Introducing Ansible – A configuration management tool
- Basics / What Will Be Installed
- Understanding Ansible architecture
- Control Machine Requirements
- Managed Node Requirements
- Inventory
- Hosts and Groups
- Host Variables
- Group Variables
- Learn various Ansible Modules
- How to use ad-hoc commands
- Parallelism and Shell Commands
- File Transfer
- Managing Packages
- Users and Groups
- Deploying From Source Control
- Managing Services
- Introduction to the YAML script
- Playbook
- About Playbooks
- Playbook Language Example – YAML
- How to Write Playbooks
- Tasks in Playbooks
- Understanding various tasks in the playbook
- Introduction to Handlers and Variables
- Learn about using handlers, variables in the playbook
- Become (Privilege Escalation)
- Roles
- Role Directory Structure
- Using Roles
- Role Duplication and Execution
- Role Default Variables
- Role Dependencies
- Role Search Path
- Ansible Galaxy
- Including and Importing
- Includes vs. Imports
- Importing Playbooks
- Including and Importing Task Files
- Including and Importing Roles
- Writing a playbook to install and configure web servers and deploy an application
- How to create Ansible Role and use it
- Using an ansible role in the playbook

- How to use Ansible Galaxy to download
- Example – Install and use Jenkins roles from ansible-galaxy
- Hands-on

Unit 47: DevOps on Cloud

- Essentials of Cloud Computing?
- Cloud and virtualization architecture
- Cloud deployment architecture
- Cloud providers – An overview
- Why do we need DevOps on Cloud?
- Introducing to Amazon web services
- Various AWS services for DevOps – An overview
- DevOps using AWS – Demo
- Hands-on

Python Essentials

Unit 48: An Introduction to Python

- What can Python do?
- Why Python?
- Good to know
- Python Syntax compared to other programming languages
- Python Install

Unit 49: Beginning Python Basics

- The print statement
- Comments
- Python Data Structures & Data Types
- String Operations in Python
- Simple Input & Output
- Simple Output Formatting
- Operators in python
- Hands-on

Unit 50: Python Program Flow

- Indentation
- The If statement and its' related statement
- An example with if and it's related statement
- The while loop
- The for loop
- The range statement
- Break &Continue

- Assert
- Examples for looping
- Hands-on

Unit 51: Functions & Modules

- Create your own functions
- Functions Parameters
- Variable Arguments
- Scope of a Function
- Function Documentation
- Lambda Functions & map
- Exercise with functions
- Create a Module
- Standard Modules
- Exceptions Handling
- Errors
- Exception handling with try
- Handling Multiple Exceptions
- Writing your own Exception
- Hands-on

Unit 52: File Handling

- File handling Modes
- Reading Files
- Writing & Appending to Files
- Handling File Exceptions
- The with statement
- Hands-on

Unit 53: Classes In Python

- New Style Classes
- Creating Classes
- Instance Methods
- Inheritance
- Polymorphism
- Exception Classes & Custom Exceptions
- Hands-on

Unit 53: Generators and iterators

- Iterators
- The Functions any and all

- With Statement
- Data Compression
- Hands-on

Unit 53: Data Structures

- List Comprehensions
- Nested List Comprehensions
- Dictionary Comprehensions
- Functions
- Default Parameters
- Variable Arguments
- Specialized Sorts
- Hands-on

Unit 53: Collections

- namedtuple()
- deque
- ChainMap
- Counter
- OrderedDict
- Defaultdict
- UserDict
- UserList
- UserString
- Hands-on

FAQs

1. How is the training organized? How much percentage is theoretical and how much is practical hands-on?

We at eMexo believe nothing beats hands-on practice when it comes to learning a concept. Our teaching methodology is 100% practical and hands-on oriented. You learn a concept, you practice it then and there with the trainers. We also give you assignments for each topic which you can practice at home and any doubts regarding the topic can be cleared with the trainer the next day.

2. What is the course duration? How and when do you plan to complete the course?

We generally cover our courses in 60 hours, however, we know that we can't put a hard- stop to learning with a number. Our trainer will make sure that you have learned everything that is part of the curriculum. This could mean 48 hours or 60 hours, it doesn't matter.

3. What is the material provided in the training?

We have industry standard course material which is used by our trainers to train you. At the end of the training, apart from the notes which you have taken during the course, we will also provide you with the training material which was used. This training material includes the training content, interview questions, etc.

4. Do you help in preparing for the interview?

Our trainers are working professionals who work in MNCs. They are the experts in their domain and they know exactly what an interviewer looks into a candidate. Our expert trainers apart from sharing the interview questions will also conduct mock interviews to help you prepare for the real interview.

5. Who are your trainers?

Our trainers are industry experts who work in their respective technologies day in and day out. They work in MNCs and are technology experts within their organizations.

6. What is the total batch size per course?

We maintain a strict batch size of a maximum of 5 students. We also provide exclusive one-to-one training as well. Talk to our training partner to get more details.

7. Do you provide certification for the course?

Yes, at the end of the training, we provide a certification of completion.

8. Will I be joining a new batch or being merged with another batch?

You will be added to a new batch.

9. Is fast-track training available?

Yes, we also provide fast-track training for those who want to complete the course faster. The curriculum and the total hours required to complete the course will remain the same. However, the trainer will be spending more hours with you to complete the course.

10. Do you assist in job placement?

Our trainers are expert professionals in their organizations and they often act as the interviewer to hire new candidates. Our trainers will help you prepare your resume with industry standards. After all, they know exactly what to look for in a resume.

11. Timings for training - Regular training/weekend training?

We provide both regular and weekend training. Talk to our training partner to learn more about the timings.

12. Will you be working on a live project during training?

Yes, apart from doing the hands-on practice our trainer will also be taking a real-world project and working with you on the implementation.

13. What happens if I miss a class?

If you miss a class the content of that class will be taught to you again. With us, you might miss a class but not the content.

14. Can I attend a demo before the actual class?

Yes, absolutely! Talk to our training counselor on the phone at **+91-9513216462** or email us at **info@emexotechnologies.com** to arrange a free demo. You can also fill in the contact us form below and we will call you to discuss your training requirements.