Course Code: **CIS312**
Course Name: AWS SysOps Administrator – Associate
Certification: AWS Certified SysOps Administrator – Associate – SOA-C01
Duration: 3 months
Tuition: $1895

Course Overview

In this course, you will explore SysOps administration, core AWS services, and the three-tier architecture. The course discusses the process of creating the first AWS account, as well as the various management fundamentals and service control activities. You will explore the various networking components and services that form a virtual private cloud (VPC) in AWS. Explore various security services in AWS including IAM, NACLs, security groups, WAF, and Shield. The course covers the various compute services in AWS and the aspects that make them distinctive and powerful. Explore the main components of storage services, including Simple Storage Service (S3), Elastic Block Store (EBS), Elastic File System (EFS), and Amazon Glacier. Discover various AWS database services, including RDS, DynamoDB, ElastiCache, and Redshift, and explore monitoring, maintenance, and security. The course discusses application deployment strategies and how to better deploy and manage AWS. You will explore the collection of metrics in Amazon CloudWatch along with other services to monitor and report on management, deployment, and optimization of AWS cloud resources. Finally, you will explore highly available AWS architectures and services including Amazon's Simple Queue Service (SQS), Simple Notification Service (SNS), Scaling Amazon Relational Database Service (RDS), and business continuity planning (BCP).

Course Content

- **Lesson 1** – **AWS Certified SysOps Administrator: Introduction**
  This lesson covers the following topics:
  - describe the AWS SysOps Administrator - Associate certification
  - realize the objectives of the SysOps Administrator - Associate exam
  - define core AWS compute services
  - define core AWS storage services
  - define core database services
  - define core security services
  - define key network and content delivery solutions
  - define AWS serverless solutions
  - describe the three-tier reference architecture
  - identify key AWS certifications, exam domains, and core services

- **Lesson 2 – AWS Certified SysOps Administrator: Preparing for Cloud Service Management**
  This lesson covers the following topics:
  - create the first AWS account
  - describe credentials and password fundamentals
  - install the Windows AWS CLI
  - work with AWS services
  - define software development kits
  - examine additional AWS management resources
  - describe AWS management

- **Lesson 3 – AWS Certified SysOps Administrator: Networking Services**
  This lesson covers the following topics:
  - implement an AWS VPC
  - utilize route tables
  - describe NACLs and security groups
  - explore DHCP in the Virtual Private Cloud
  - describe AWS gateways
  - describe ENIs and EIPs
  - define VPC flow logs
  - describe AWS direct connect
  - describe AWS load balancing
  - defining Amazon Route 53
  - describe AWS networking services

- **Lesson 4 – AWS Certified SysOps Administrator: Security and IAM Services**
  This lesson covers the following topics:
  - describe security of the cloud
  - describe security in the cloud
  - secure managed services
  - define compliance services
  - describe fundamentals of IAM
  - work with IAM roles
  - secure AWS cloud services
  - work with NACLs and security groups
  - explore the Web Application Firewall (WAF)
  - describe AWS Shield and GuardDuty
  - define cloud service-specific security
  - apply security monitoring and reporting
  - describe AWS security features and services

- **Lesson 5 – AWS Certified SysOps Administrator: Compute Services**
  This lesson covers the following topics:
  - describe compute services and EC2
  - define AMIs and instance types
  - describe EC2 additional settings
  - monitor compute services
  - describe EC2 container service
  - describe AWS Elastic Beanstalk
  - define AWS Lambda
  - describe Amazon Lightsail
  - define AWS Batch
  - deploy Amazon CloudFront
  - describe Compute Services

- **Lesson 6 – AWS Certified SysOps Administrator: Storage Services**
  This lesson covers the following topics:
  - describe AWS storage services
  - compare AWS block and object storage
  - define the AWS EC2 instance store
  - describe Amazon Elastic File System
  - describe EBS
  - configure EBS
  - describe S3
  - configure S3
  - define Amazon Glacier
  - configure Glacier
  - describe additional storage services
  - describe AWS storage services

- **Lesson 7 – AWS Certified SysOps Administrator: Database Services**
  This lesson covers the following topics:
  - define database technology in AWS
  - describe AWS Relational Database Service (RDS)
  - describe Amazon Aurora
  - configure RDS
  - configure Aurora
  - monitor RDS
  - describe Amazon DynamoDB
  - configure Amazon DynamoDB
  - describe Amazon Redshift
  - describe Amazon Redshift

- describe AWS database services

- **Lesson 8– AWS Certified SysOps Administrator: Application Infrastructure**
  This lesson covers the following topics:
  - define application deployment strategy
  - compare specific deployment strategies
  - identify instance profiles
  - describe continuous deployment methods
  - describe AWS Elastic Beanstalk
  - define EC2 Container Service
  - identify AWS OpsWorks
  - describe AWS CloudFormation
  - apply CloudFormation templates
  - describe strategies and services

- **Lesson 9 – AWS Certified SysOps Administrator: Monitoring the AWS Environment**
  This lesson covers the following topics:
  - define AWS CloudWatch monitoring
  - specify CloudWatch metrics
  - configure CloudWatch dashboards
  - describe CloudWatch limits and alarms
  - compare CloudWatch metrics
  - define CloudWatch events
  - describe CloudWatch logs
  - classify CloudWatch charges and billing
  - identify CloudTrail use cases
  - describe AWS Config
  - describe AWS monitoring features

- **Lesson 10 – AWS Certified SysOps Administrator: High Availabilty**
  This lesson covers the following topics:
  - describe high availability in AWS
  - recognize the features and uses of AWS Simple Queue Service
  - recognize the features and uses of AWS Simple Notification Service
  - compare highly available architectures
  - describe multi-region availability
  - compare highly available connectivity options
  - define disaster recovery
  - describe AWS high availability