**Course Modules**

1. Create AWS EKS Cluster using eksctl CLI
2. Docker Fundamentals
3. Kubernetes Fundamentals (Pods, ReplicaSets, Deployments & Services)
4. EKS Storage with AWS EBS CSI Driver
5. Kubernetes Important Concepts for Application Deployments
6. Kubernetes - Secrets
7. Kubernetes - Init Containers
8. Kubernetes - Liveness & Readiness Probes
9. Kubernetes - Requests & Limits
10. Kubernetes - Namespaces, Limit Range and Resource Quota
11. EKS Storage with AWS RDS MySQL Database
12. Load Balancing using CLB & NLB
13. Load Balancing using CLB - AWS Classic Load Balancer
14. Load Balancing using NLB - AWS Network Load Balancer
15. Load Balancing using ALB - AWS Application Load Balancer
16. ALB Ingress Controller - Install
17. ALB Ingress - Basics
18. ALB Ingress - Context path-based routing
19. ALB Ingress - SSL
20. ALB Ingress - SSL Redirect HTTP to HTTPS
21. ALB Ingress - External DNS
22. Deploy Kubernetes workloads on AWS Fargate Serverless
23. AWS Fargate Profiles - Basic
24. AWS Fargate Profiles - Advanced using YAML
25. Build and Push Container to AWS ECR and use that in EKS
26. DevOps with AWS Developer Tools CodeCommit, CodeBuild and CodePipeline
27. Microservices Deployment on EKS - Service Discovery
28. Microservices Distributed Tracing using AWS X-Ray
29. Microservices Canary Deployments
30. EKS HPA - Horizontal Pod Autosaler
31. EKS VPA - Vertical Pod Autosaler
32. EKS CA - Cluster Autosaler
33. EKS Monitoring using CloudWatch Agent & Fluentd - Container Insights

**AWS Services Covered**

1. AWS EKS - Elastic Kubernetes Service
2. AWS EBS - Elastic Block Store
3. AWS RDS - Relational Database Service MySQL
4. AWS CLB - Classic Load Balancer
5. AWS NLB - Network Load Balancer
6. AWS ALB - Application Load Balancer
7. AWS Fargate - Serverless
8. AWS ECR - Elastic Container Registry
9. AWS Developer Tool - CodeCommit
10. AWS Developer Tool - CodeBuild
11. AWS Developer Tool - CodePipeline
12. AWS X-Ray
13. AWS CloudWatch - Container Insights
14. AWS CloudWatch - Log Groups & Log Insights
15. AWS CloudWatch - Alarms
16. AWS Route53
17. AWS Certificate Manager
18. EKS CLI - eksctl
19. AWS SNS - Simple Notification Service

**Kubernetes Concepts Covered**

1. Kubernetes Architecture
2. Pods
3. ReplicaSets
4. Deployments
5. Services - Node Port Service
6. Services - Cluster IP Service
7. Services - External Name Service
8. Services - Load Balancers
9. Services - Ingress Service
10. Services - Ingress SSL & SSL Redirect
11. Services - Ingress & External DNS
12. Imperative - with kubectl
13. Declarative - Declarative with YAML
14. Secrets
15. Init Containers
16. Liveness & Readiness Probes
17. Requests & Limits
18. Namespaces - Imperative
19. Namespaces - Limit Range
20. Namespaces - Resource Quota
21. Storage Classes
22. Persistent Volumes
23. Persistent Volume Claims
24. Annotations
25. Canary Deployments
26. HPA - Horizontal Pod Autoscaler
27. VPA - Vertical Pod Autoscaler
28. CA - Cluster Autoscaler
29. DaemonSets
30. DaemonSets - Fluentd for logs
31. Config Maps