

DevOps Course Catalog – 60 Days

Day	Module	Topics Covered
1-3	Introduction to DevOps	Overview of DevOps, DevOps Culture, History and Evolution of DevOps, Benefits and Challenges, Key DevOps Practices
4-6	DevOps Tools Overview	Introduction to DevOps Toolchain, Continuous Integration (CI), Continuous Delivery (CD), Version Control (Git), Monitoring, Configuration Management
7-9	Version Control with Git	Git Basics, Git Branching, Merging and Rebasing, GitHub/GitLab, Git Workflow, Pull Requests and Code Reviews
10-12	Continuous Integration (CI) Basics	CI Concepts, Jenkins Installation and Configuration, Creating Jobs in Jenkins, Automating Builds, Integration with GitHub, Jenkins Pipelines
13-15	Configuration Management with Ansible	Introduction to Ansible, Ansible Playbooks, Inventory, Ansible Modules, Automating Server Configuration, Managing Remote Servers
16-18	Containerization with Docker	Introduction to Docker, Docker Installation, Docker Images and Containers, Docker Hub, Docker Compose, Creating Custom Docker Images
19-21	Docker Orchestration with Kubernetes	Introduction to Kubernetes, Kubernetes Architecture, Pods, Services, Deployments, ConfigMaps, Volumes, Kubernetes Deployment and Scaling
22-24	Infrastructure as Code (IaC) with Terraform	Introduction to IaC, Terraform Basics, Writing Terraform Configurations, Provisioning Resources with Terraform, Working with Providers
25-27	Cloud Platforms Overview	Introduction to AWS, Azure, and Google Cloud, Cloud Services (Compute, Networking, Storage), Setting up EC2 Instances in AWS, Cloud Monitoring
28-30	CI/CD Pipeline Setup	Continuous Deployment (CD) Concepts, Jenkins Pipelines, Automating Testing, Automating Deployment, Integration with GitHub and Docker
31-33	DevOps Monitoring Tools	Introduction to Monitoring in DevOps, Prometheus and Grafana, Setting up Alerts, Log Management with ELK Stack (Elasticsearch, Logstash, Kibana)
34-36	Automation with Puppet	Introduction to Puppet, Puppet Architecture, Installing Puppet Master and Agent, Writing Puppet Manifests, Automating Configuration Tasks
37-39	Continuous Testing in DevOps	Introduction to Continuous Testing, Unit Testing and Integration Testing, Jenkins with Selenium, Testing Automation Tools

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40-42	Logging and Monitoring	Introduction to Logging in DevOps, Log Aggregation Tools (ELK Stack, Fluentd), Centralized Logging, Creating Dashboards and Alerts
43-45	Security in DevOps (DevSecOps)	Introduction to DevSecOps, Security Automation, Securing Infrastructure, Secure Coding Practices, Vulnerability Scanning, Static and Dynamic Analysis
46-48	Automated Deployment with Kubernetes	Deploying Applications with Kubernetes, Scaling Applications, Blue-Green Deployments, Rolling Updates, Deploying Microservices
49-51	Collaboration and Communication Tools	Using Slack, Jira, Trello for Collaboration, ChatOps in DevOps, Integrating Communication Tools into CI/CD Pipelines
52-54	Container Orchestration with Docker Swarm	Introduction to Docker Swarm, Setting up Swarm Cluster, Creating Services and Networks, Scaling Applications with Docker Swarm
55-57	DevOps Metrics and KPIs	Key Metrics in DevOps, Deployment Frequency, Lead Time, Mean Time to Recovery (MTTR), Change Failure Rate, Measuring Performance
58-60	Capstone Project & Review	Final Hands-on Project (Building an End-to-End DevOps Pipeline), Review of Key Concepts, Final Exam, Certification of Completion