

## 1. DevOps Architecture & Culture

- Understand DevOps maturity models and platform engineering.
- Learn about internal developer platforms (IDPs) and golden paths.
- Study The Three Ways of DevOps: Flow, Feedback, and Continuous Learning.
- Read: DevOps and CI/CD Mastery 2025 - <https://www.besttechie.com/devops-and-cicd-mastery-2025-complete>
- Read: Azure DevOps Architecture Guide - <https://learn.microsoft.com/en-us/azure/architecture/guide/devops/devops-architecture>

## 2. CI/CD Pipelines (Advanced)

- Implement multi-stage pipelines with rollback strategies.
- Use GitHub Actions, GitLab CI, ArgoCD, and Jenkins.
- Explore blue-green, canary, and feature flag deployments.
- Read: CI/CD Pipeline Automation Guide - <https://www.landskill.com/blog/ci-cd-pipeline-automation-complete-guide>
- Read: Ultimate Guide to CI/CD Pipelines - <https://www.kunal-chowdhury.com/2025/07/devops-ci-cd-pipelines.html>
- Books: Top CI/CD Books - <https://cloudspinx.com/top-books-for-learning-ci-cd-pipelines/>

### 3. Kubernetes & GitOps

- Master Kubernetes Operators, Helm, Kustomize, and Service Meshes (Istio, Linkerd).
- Implement GitOps using ArgoCD or FluxCD.
- Learn Kubernetes security, networking, and policy-as-code.
- Read: Kubernetes the Hard Way - <https://github.com/kelseyhightower/kubernetes-the-hard-way>
- Read: GitOps with ArgoCD - <https://shyam.kubeify.com/2025/02/devops-learning-roadmap-beginner-to.html>

## 4. Infrastructure as Code (IaC)

- Deep dive into Terraform modules, state management, and remote backends.
- Explore CloudFormation, Pulumi, and Ansible.
- Learn compliance-as-code and policy enforcement.
- Read: KodeKloud Terraform Labs - <https://kodekloud.com/blog/best-devops-courses-in-2025/>
- Read: GeeksforGeeks DevOps Engineering Course - <https://www.geeksforgeeks.org/blogs/best-devops-courses-in-2025/>

## 5. DevSecOps & Security

- Implement Secrets Management (Vault, AWS Secrets Manager).
- Use Trivy, Snyk, and Aqua for container scanning.
- Learn SBOMs, supply chain security, and policy-as-code.
- Read: DevOps Security Practices - <https://github.com/PierreChukason/My-Cloud-and-DevOps-Practice-Repository>
- Read: DevSecOps Modules - <https://shyam.kubeify.com/2025/02/devops-learning-roadmap-beginner-to.html>

## 6. Observability & Monitoring

- Use Prometheus, Grafana, ELK Stack, and OpenTelemetry.
- Learn distributed tracing, alerting, and dashboards.
- Integrate observability into CI/CD pipelines.
- Read: Monitoring & Observability Guide - <https://www.learndevopsnow.it.com/>
- Read: DevOps Monitoring Tools - <https://www.geeksforgeeks.org/blogs/best-devops-courses/>

## Top Courses & Certifications

- Courses:

- DevOps Mastery Specialization - Coursera - <https://www.coursera.org/specializations/devops-mastery>
- DevOps with Docker, Kubernetes, Terraform - Udemy - <https://www.udemy.com/course/devops-with-docker-kubernetes/>
- KodeKloud DevOps Labs - <https://kodekloud.com/blog/best-devops-courses-in-2025/>

- Certifications:

- AWS Certified DevOps Engineer - Professional
- Google Professional Cloud DevOps Engineer
- Certified Kubernetes Administrator (CKA)