



CI/CD PIPELINES

LD . TEST . PACKAGE . DEPLOY
GITHUB ACTIONS . GITLAB CI
IRONMENTS . ROLLBACK . O

DURATION	LEVEL	MODULES	MODE
35 Hours	Intermediate to Advanced	8	Classroom · Online · Hybrid

01 COURSE OVERVIEW

A tool-agnostic course on designing delivery pipelines, then implementing them on three platforms. The course starts from delivery principles — small changes, fast feedback, reproducible builds, safe rollback — and then implements the same pipeline in GitHub Actions, GitLab CI and Jenkins so learners can compare.

Deployment strategies, environment promotion, secrets and observability are covered as first-class topics.

WHO IT IS FOR

DevOps and platform engineers
Developers owning deployments
QA engineers embedding tests in pipelines
Team leads defining release process

PREREQUISITES

Git, Docker basics and familiarity with one cloud platform.

02 LEARNING OUTCOMES

01 Design a pipeline around fast, reliable feedback.

03 Automate unit, integration and security testing.

05 Implement blue-green and canary deployments.

07 Measure lead time, failure rate and recovery time.

02 Produce reproducible, versioned build artifacts.

04 Promote releases through environments safely.

06 Manage secrets and approvals in pipelines.

03 MODULE STRUCTURE

8 MODULES

01 DELIVERY PRINCIPLES

Continuous integration

Trunk-based development

DORA metrics

Delivery vs deployment

Build reproducibility

02 PIPELINE DESIGN

Stages and gates

Parallelism

Pipeline as code

Caching

Artifact promotion

Reusable workflows

03 GITHUB ACTIONS

Workflows and triggers

Reusable workflows

OIDC to cloud

Matrix builds

Environments

Caching

LAB

BUILD-TEST-DEPLOY WORKFLOW

04 GITLAB CI

.gitlab-ci.yml

Runners

Environments

Stages and needs

Cache and artifacts

Review apps

LAB

PIPELINE WITH REVIEW APP

05 JENKINS PIPELINES

Declarative syntax

Agents

Approvals

Shared libraries

Credentials

LAB

EQUIVALENT JENKINS PIPELINE

06 TESTING AND SECURITY IN PIPELINES

Test pyramids

SAST and DAST stages

Image scanning

Coverage gates

Dependency scanning

Policy failures

07 DEPLOYMENT STRATEGIES

Rolling

Canary

Database migrations

Blue-green

Feature flags

Rollback drills

LAB

CANARY RELEASE

08 OPERATIONS

Pipeline observability

Cost and runtime tuning

Incident response

Flaky test handling

Secret rotation

PROJECT

FULL DELIVERY PIPELINE WITH ROLLBACK

04 ASSESSMENT & CERTIFICATION

Module assignments and labs

25%

Mini projects

20%

Internal assessments

15%

Final project and review

40%

CERTIFICATION

Learners who complete all modules, submit the final project and clear the review receive a course completion certificate from Kaizen Infinities Private Limited. Project work is documented for the learner's portfolio, and interview preparation is included in the closing sessions.

05 CAREER OUTCOMES

ROLES THIS PROGRAMME PREPARES FOR

CI/CD ENGINEER

DEVOPS ENGINEER

RELEASE ENGINEER

PLATFORM ENGINEER

SITE RELIABILITY ENGINEER

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