[1) Introduction to Jenkins](https://www.opstrainerz.com/jenkins-training" \l "collapseCurriculum0)

**Topics:**

* Jenkins installation on a local machine
* Getting started with Jenkins
* Understanding Jenkins UI
* Overview of Jenkins Architecture and terms of use
* Creation and configuration of a Jenkins job.

**Learning Outcome:** By the completion of this chapter you will learn the procedure to install Jenkins on your local machine, creation and configuration of jobs and become familiar with the terminology used in Jenkins.

[2) Continuous Integration](https://www.opstrainerz.com/jenkins-training#collapseCurriculum1)

**Topics:**

* What is Integration?
* Need for continuous Integration
* Advantages of continuous integration
* History of continuous integration
* Role of Jenkins in Continuous integration

**Learning Outcome:** Upon the completion of this module you will have gained knowledge of continuous integration, its advantages, tools used for continuous integration and best practices to be followed in continuous integration.

[3) Jenkins Plugins and its uses:](https://www.opstrainerz.com/jenkins-training#collapseCurriculum2)

**Topics**:

* Overview of Jenkins plugins
* Adding plugins to Jenkins
* Widely used plugins in Jenkins (Parameter Plugin, Git Plugin, HTML Publisher, Extended choice and Copy Artifact)
* Creating Jenkins workspace and Jenkins Build
* Making Jenkins ready to work with Maven, Git and Java
* The configuration of Jenkins to check for the source code changes frequently.
* Handling Maven build jobs.

**Learning outcome:** By the completion of this module, you will have learnt about various plugins available in Jenkins and their role in continuous integration. You will also learn the configuration process of Jenkins with other tools, pooling for source code changes, working with maven builds etc.

[4) Automated Testing:](https://www.opstrainerz.com/jenkins-training#collapseCurriculum3)

**Topics:**

* Introduction to Automated testing
* Automation of integration and unit tests
* Displaying test results
* Configuration of Test reports
* Using JUnit to create automated acceptance tests
* Ignoring tests
* Performance test automation using Jmeter

**Learning Outcome:** By the completion of this chapter you will learn to set up Jenkins to create automated tests and to reveal reports.  You will also gain hands-on experience in display test results, ignoring the tests, and Unit and integration testing.

[5) Setting Up Build Jobs and Security:](https://www.opstrainerz.com/jenkins-training#collapseCurriculum4)

**Topics**:

* Creation of a FreeStyle Build Job
* Adding properties files and properties
* Overview of Build Tests and Build Triggers
* Parameterized Builds
* Execution of new build job
* Email notification setup
* Security enabling in Jenkins
* Various levels of Authentication available in Jenkins ‘
* Distributed builds
* Different types of access and enabling access

**Learning Outcome:** Upon the successful completion of this chapter you will learn the process to create jobs, security authorization in Jenkins, running Jenkin jobs and sending email notifications etc.

[6) Metrics to Enhance Quality:](https://www.opstrainerz.com/jenkins-training#collapseCurriculum5)

**Topics:**

* Using Code Coverage to find foul code.
* Implementation of PMD Jenkins Plugin
* Implementation of Findbugs Jenkins plugin
* Reporting with JavaNCSS
* Verifying HTML Validity
* Using Jenkins with shell script build system ‘
* Working with Gradle script build system

**Learning Outcome:** After finishing this chapter you will gain complete knowledge to use Jenkins plugin for analyzing bugs, use Jenkins on a variety of build systems and reporting.

[7) Maintain and Use Jenkins:](https://www.opstrainerz.com/jenkins-training#collapseCurriculum6)

**Topics:**

* The process to manage Jenkins
* Rules to be followed in Jenkins
* Back up process in Jenkins
* Migrating Jenkins from one server to another

**Learning Outcome:** After finishing this chapter you will gain knowledge of standards to be followed in Jenkins, Backup process,  and Do’s and Don’ts in setting up Jenkins.

[8) Distributed Jenkins Configuration:](https://www.opstrainerz.com/jenkins-training#collapseCurriculum7)

**Topics:**

* Overview of Distributed Jenkins Build
* Configuration of Jenkins slave node in Jenkins
* Configuring Master Jenkins Node
* Managing various nodes and Jobs distribution
* Biding Jobs on different nodes
* Labelling nodes to execute a targeted job.

**Learning Outcome:** By the completion of this chapter you will learn about Jenkins distributed system and setting up master and slave configuration.

[9) Performing Continuous Delivery and Automated Deployment](https://www.opstrainerz.com/jenkins-training#collapseCurriculum8)

**Topics:**

* Overview of Deployment
* Implementation of continuous and automated deployment
* Process to deploy applications in an application server
* Jenkins Build Pipeline
* Tomcat installation and configuration
* Using TomCat to deploy a simple Java web application
* Parallel Jenkins build
* Scaling Jenkins
* Jenkins integrations

**Learning Outcome:** By the completion of this module, you will gain knowledge to deploy a web server using Tomcat and become familiar with parallel builds and pipelines.

[10) Jenkins Pipeline:](https://www.opstrainerz.com/jenkins-training#collapseCurriculum9)

**Topics:**

* Understanding Pipeline Plugin
* Learning about Pipeline as a code
* Automated Jenkins Pipeline

**Learning Outcome:** By the completion of this chapter you will gain an overall knowledge of Pipeline Plugin and Its usage in Jenkins.

S lis