[**DevOps Course Curriculum**](https://www.edureka.co/devops#CurriculumCourse)

[Overview of DevOps](https://www.edureka.co/devops" \l "Curriculum_18537)

**Learning Objective:** In this module you will be introduced to DevOps environment. 

**Topics:**

* Why DevOps?
* What is DevOps?
* DevOps Market Trends
* DevOps Engineer Skills
* DevOps Delivery Pipeline
* DevOps Ecosystem

### [Version Control with Git](https://www.edureka.co/devops" \l "Curriculum_18538)

**Learning Objective:** In this module you will be introduced to DevOps environment.

**Topics:**

* What is version control
* What is Git
* Why Git for your organization
* Install Git
* Common commands in Git
* Working with Remote Repositories

**Hands On:**

* GIT Installation, Version Control, Working with remote repository

### [Git, Jenkins & Maven Integration](https://www.edureka.co/devops?utm_source=google-search&utm_medium=cpc&utm_campaign=Devops-Brand-India&gclid=CjwKCAiAyfvhBRBsEiwAe2t_i95y2AeyTbd5K3sakk2MvmdLfJn744C0x_gCN-mtQtViv9czg60JdBoCyy4QAvD_BwE" \l "Curriculum_18539)

**Learning Objective:** In this module, you will learn about the different actions performed through git and will be introduced to Jenkins and maven.

**Topics:**

* Branching and Merging in Git
* Git workflows
* Git cheat sheet
* What is CI
* Why CI is Required
* Introduction to Jenkins (With Architecture)
* Introduction to Maven

**Hands On:**

* Branching and merging, Stashing, rebasing, reverting and resetting
* Build and automation of Test using Jenkins and Maven

### [Continuous Integration using Jenkins](https://www.edureka.co/devops?utm_source=google-search&utm_medium=cpc&utm_campaign=Devops-Brand-India&gclid=CjwKCAiAyfvhBRBsEiwAe2t_i95y2AeyTbd5K3sakk2MvmdLfJn744C0x_gCN-mtQtViv9czg60JdBoCyy4QAvD_BwE" \l "Curriculum_18540)

**Learning Objective:** In this module, you will know how to perform Continuous Integration using Jenkins by building and automating test cases using Maven. 

**Topics:**

* Jenkins Management
* Adding a slave node to Jenkins
* Building Delivery Pipeline
* Pipeline as a Code
* Implementation of Jenkins in the Edureka’s Project

**Hands On:**

* Build the pipeline of jobs using Jenkins
* Create a pipeline script to deploy an application over the tomcat server

### [Continuous Deployment: Containerization with Docker](https://www.edureka.co/devops?utm_source=google-search&utm_medium=cpc&utm_campaign=Devops-Brand-India&gclid=CjwKCAiAyfvhBRBsEiwAe2t_i95y2AeyTbd5K3sakk2MvmdLfJn744C0x_gCN-mtQtViv9czg60JdBoCyy4QAvD_BwE" \l "Curriculum_18542)

**Learning Objective:** This module introduces Docker to readers, the core concepts and technology behind Docker. Learn in detail about container and various operations performed on it.

**Topics:**

* Shipping Transportation Challenges
* Introducing Docker
* Understanding images and containers
* Running Hello World in Docker
* Introduction to Container
* Container Life Cycle
* Sharing and Copying
* Base Image
* Docker File
* Working with containers
* Publishing Image on Docker Hub

**Hands On:**

* Create and Implement docker images and containers

### [Containerization with Docker: Ecosystem and Networking](https://www.edureka.co/devops?utm_source=google-search&utm_medium=cpc&utm_campaign=Devops-Brand-India&gclid=CjwKCAiAyfvhBRBsEiwAe2t_i95y2AeyTbd5K3sakk2MvmdLfJn744C0x_gCN-mtQtViv9czg60JdBoCyy4QAvD_BwE" \l "Curriculum_18543)

**Learning Objective:** In this module, you will learn to integrate different containers using docker.

**Topics:**

* Introduction to Docker Ecosystem
* Docker Compose
* Docker Swarm
* Managing Containers
* Running Containers
* Introduction to Docker Networking
* Network Types
* Docker Container Networking
* Implementation of Docker in the Edureka’s Project

**Hands On:**

* Use Docker Compose to create a WordPress site
* Start Containers on a Cluster with Docker Swarm
* Deploy a multi-tier application over a cluster
* Scale an application

### [Continuous Deployment: Configuration Management with Puppet](https://www.edureka.co/devops?utm_source=google-search&utm_medium=cpc&utm_campaign=Devops-Brand-India&gclid=CjwKCAiAyfvhBRBsEiwAe2t_i95y2AeyTbd5K3sakk2MvmdLfJn744C0x_gCN-mtQtViv9czg60JdBoCyy4QAvD_BwE" \l "Curriculum_18544)

**Learning Objective:**In this module, you will learn to install and configure Puppet. Additionally, understand the master-agent architecture in Puppet.

**Topics:**

* Introduction to Puppet
* Puppet Installation
* Puppet Configuration
* Puppet Master and Agent Setup
* Puppet Module
* Node Classification
* Puppet Environment
* Puppet Classes
* Automation & Reporting

**Hands On:**

* Install and configure Puppet
* Configure and implement servers using Puppet

### [Continuous Deployment: Configuration Management with Chef](https://www.edureka.co/devops?utm_source=google-search&utm_medium=cpc&utm_campaign=Devops-Brand-India&gclid=CjwKCAiAyfvhBRBsEiwAe2t_i95y2AeyTbd5K3sakk2MvmdLfJn744C0x_gCN-mtQtViv9czg60JdBoCyy4QAvD_BwE" \l "Curriculum_18544)

**Learning Objective:**In this module, you will learn to install and configure Chef. Additionally, understand the master-agent architecture in Chef.

**Topics:**

* Introduction to Chef
* Chef DK Installation
* Chef Configuration
* Chef Master and Agent Setup
* Chef Module
* Node Classification
* Chef Environment
* Chef Classes
* Automation & Reporting

**Hands On:**

* Install and configure Chef
* Configure and implement servers using Chef

### [Configuration Management with Ansible](https://www.edureka.co/devops?utm_source=google-search&utm_medium=cpc&utm_campaign=Devops-Brand-India&gclid=CjwKCAiAyfvhBRBsEiwAe2t_i95y2AeyTbd5K3sakk2MvmdLfJn744C0x_gCN-mtQtViv9czg60JdBoCyy4QAvD_BwE" \l "Curriculum_18545)

**Learning Objective:** In this module, you will learn to install Ansible and configure ansible roles. You will also learn to write playbooks and finally execute ad-commands using Ansible.

**Topics:**

* Introduction to Ansible
* Ansible Installation
* Configuring Ansible Roles
* Write Playbooks
* Executing adhoc command

**Hands On:**

* Installing Ansible
* Configuring Ansible Role
* Write Playbooks
* Execute adhoc command

### [Containerization using Kubernetes](https://www.edureka.co/devops?utm_source=google-search&utm_medium=cpc&utm_campaign=Devops-Brand-India&gclid=CjwKCAiAyfvhBRBsEiwAe2t_i95y2AeyTbd5K3sakk2MvmdLfJn744C0x_gCN-mtQtViv9czg60JdBoCyy4QAvD_BwE" \l "Curriculum_18546)

**Learning Objective:** In this module, you will learn the basics of Kubernetes and its integration with Docker.

**Topics:**

* Revisiting Kubernetes Cluster Architecture
* Spinning up a Kubernetes Cluster on Ubuntu VMs
* Exploring your Cluster
* Understanding YAML
* Creating a Deployment in Kubernetes using YAML
* Creating a Service in Kubernetes
* Installing Kubernetes Dashboard
* Deploying an App using Dashboard
* Using Rolling Updates in Kubernetes
* Containers and Container Orchestration
* Introduction to Kubernetes

**Hands On:**

* Setting up the Kubernetes Cluster
* Accessing your application through service
* Deploying an app through Kubernetes Dashboard
* Rolling updates in Kubernetes

### [Continuous Monitoring with Nagios](https://www.edureka.co/devops?utm_source=google-search&utm_medium=cpc&utm_campaign=Devops-Brand-India&gclid=CjwKCAiAyfvhBRBsEiwAe2t_i95y2AeyTbd5K3sakk2MvmdLfJn744C0x_gCN-mtQtViv9czg60JdBoCyy4QAvD_BwE" \l "Curriculum_18842)

**Learning Objective:** Learn how to continuously monitor your tasks using various plugins and implementing Nagios Commands.

**Topics:**

* Introduction to Continuous Monitoring
* Introduction to Nagios
* Installing Nagios
* Nagios Plugins(NRPE) and Objects
* Nagios Commands and Notification

**Hands On:**

* Installing Nagios
* Monitoring of different servers using Nagios