

## NODEJS

**Duration-** 24 hours

**Prerequisite** - A solid foundation on javascript syntax , Understanding of OOP and functional programming , knowledge of the (unix) command line.

**Course Objectives** - You have experience working with NODEJS, but you want to take it to the next level. This course will offer a deep dive into the configuration techniques you'll need to build a Websites and Applications. We'll cover a set of modules that are essential to large-scale sites and cover topics ranging from managing media and content moderation to configuring an advanced search interface.

You'll also learn about concepts like Configuration Management that are key to maintaining a successful Application.

### Lab Setup Details :

#### Hardware requirement:

CPU : I4/I5 , Hard Disk : 50GB , RAM :8 GB

#### Software Requirement:

- XAMPP <https://www.apachefriends.org/download.html> (DOWNLOAD VERSION 5.6.31)
- MSOFFICE 2010
- NOTEPAD++ <https://notepad-plus-plus.org/download/v7.5.1.html> (DOWNLOAD VER 7.5.1)
- SUBLIME TEXT3 <https://www.sublimetext.com/3>
- Visual Studio Code <https://code.visualstudio.com/download>
- PDF READER <https://adobe-reader.en.softonic.com/download>
- Browser Google Chrome OS Window 10

### Course Outline

#### Day 1

- Node.js Basics & Basic Core Modules
- Parsing Requests & Sending Responses
- Rendering HTML Dynamically (on the Server)
- Using Express.js
- Working with Files and generating PDFs on the Server (on-the-fly)
- File Up- and Download
- Using the Model-View-Controller (MVC) Pattern

#### Day 2

- Using Node.js with SQL (MySQL) and Sequelize
- Using Node.js with NoSQL (MongoDB) and Mongoose
- Working with Sessions & Cookies
- User Authentication and Authorization
- Sending E-Mails
- Validating User Input
- Data Pagination
- Handling Payments with Stripe.js

### **Day 3**

- Building REST APIs
- Authentication in REST APIs
- File Upload in REST APIs
- Building GraphQL APIs
- Authentication in GraphQL APIs
- File Upload in GraphQL APIs
- Building a Realtime Node.js App with Websockets
- Deploying a Node.js Application