**Node.js Course (24 Hours Minimum)**

1. **Getting Started with Node.js**
   1. Course Introduction
   2. What in Node.js
   3. Why Node.js
   4. Installing Node.js
   5. Building Sample Node Script
   6. Executing Node Scripts
   7. Working with Node Package Manager
2. **Working with Modern JavaScript**
   1. Working with ES6
   2. Variable and Block Scope
   3. Arrow Functions
   4. Object Literals
   5. Destructuring Operations
   6. Rest and Spread Operators
   7. Template String
   8. Working with Classes
   9. Promises in ES6
   10. Working with Async and Await
3. **Node.js Execution Model**
   1. Working with Event Loop
   2. Node Asynchronous Programming
   3. Working with Callbacks
   4. Working with Promises
   5. Synchronous Execution of Code
4. **Events in Node.js**
   1. Event Based Programming
   2. Events and Event Emitter Classes
   3. Broadcasting Events in Node.js
   4. Capture Node Events
5. **Streams in Node.js**
   1. Understanding Streams
   2. Working with Writable Streams
   3. Working with Readable Streams
   4. Working with Duplex and Transform Streams
6. **Accessing Local System using Node.js**
   1. Understanding “Process” Object
   2. Interaction with File Systems
   3. Capturing Operating System Details using Node.js
   4. Working with “fs” Module
   5. Reading and Writing Data in Files
   6. Understanding “os” Module
   7. Working with Node Global Objects
7. **Building Web Page with Node.js**
   1. Using Express.js
   2. Working with View Engines
   3. Creating View Template
   4. Building Controllers
   5. Serving Static Resources
   6. Speeding Up Development
8. **Node.js for Web**
   1. Creating Basic HTTP Server
   2. Working with HTTP Routes
   3. Parsing URLs and Query Strings
   4. Web Scraping Data from Web Pages
   5. Exposing Rest APIs
   6. Error Handling in NODE APIs
9. **Socket Programming**
   1. Understanding Sockets in Node.js
   2. Setting up Socket.io
   3. Sending Messages via Sockets
   4. User Triggered Messaging
   5. Broadcasting Mouse Movements
   6. Creating Sample Chat Application
10. **Accessing Data with Node.js**
    1. Working with No-SQL Databases
    2. Installing MongoDB
    3. Accessing MongoDB Server
    4. Writing Data to MongoDB Server
    5. Querying Data from MongoDB Server
    6. Inserting Data in MongoDB
    7. Using Forms for Data Insertion
    8. Creating New Documents
11. **Error Handling in Node.js**
    1. Understanding Error Handling in Node
    2. Working with try catch finally
    3. Capturing error using “Process” Object
12. **Building APIs with Node.js**
    1. What is HTTP APIs
    2. Creating a Controller
    3. Creating a GET Action
    4. Creating POST Action
    5. Creating a PUT Request
    6. Using APIs to interact with MongoDB Server
13. **Securing Node.js**
    1. Understanding Passport Authentication
    2. Creating Registration Page
    3. Securing Passwords
    4. Installing Passport
    5. Verifying Credentials
    6. Integration of Passport and Express
    7. Creating Login Page
    8. Authorization Pages and APIs
14. **Scaling Node Application**
    1. Working with PM2
    2. Child Processes with Spawn and Fork
    3. Node.js Best Practices
15. **Deploying Node Application**
    1. Deploy Node Application on AWS
    2. Deploying Application on Docker
16. **Working with TypeScript**
    1. Working with TypeScript
    2. Understanding the concepts of TypeScript
    3. Setting Up Node Application with TypeScript
17. **Testing Node Application**
    1. Testing Node Application
    2. Working with Testing Frameworks
18. Lambda Integration to [Node.js](http://node.js)