

Node.js Course Syllabus

Module 1: Introduction to Node.js

- What is Node.js
- Features of Node.js
- Concept
- Where to fit and not fit
- Event-Driven programming style
- What is Asynchronous

Module 2: Installation / Setup

- Local environment setup
- Node.js runtime
- Download source code
- Installation on OS
- Verify

Module 3: Node Package Manager

- Install module by NPM
- Global vs Local setup
- Update Module
- CRUD Module

Module 4: Express Framework

- What is Express
- Setup Express
- Request And Response
- Handling Routes
- Route Middleware
- Objects
- Cookies Management
- File upload
- HTTP methods

Module 5: Buffers and Streams

- What is buffers and Streams
- Benefit of Streams over buffers
- Create / Write / Read operation on Buffers
- Process on Buffers
- Read / Write data by Streams
- Pipeline
- Chaining Stream

Module 6: REST API

- RESTful Architecture
- HTTP URI and Methods
- RESTful web services
- Expose solution as API
- Best practice for REST API solution

Module 7: Callback

- What is Callback
- Benefit of Callback
- Asynchronous communications
- Block and Non-Blocking
- Standard Callback pattern
- Async Flow control Library
- Executing in parallel

Module 8: Events

- What is Events
- Events types
- Event Emitter API
- Multiple event listeners
- Event emitter pattern
- Class methods
- Event Loop
- Blocking Event Loop
- Escaping Event Loop

Module 9: Connecting with Database

- Introduction of MySQL
- Connect with MySQL
- Introduction of MongoDB
- Features of MongoDB
- Connect with MongoDB
- Defining a schema
- Defining a Model

Module 10: External Processes and Services

- What is processes
- Spawning Child process
- Create and kill processes
- Building with HTTP Servers
- HTTP requests
- Secure HTTP Server

Module 11: External Processes and Services

- Using Test Runner
- Using Assertion Testing Module
- Built-in Debugger
- Console log
- Node Inspector