



# BACKEND WEB DEVELOPER COURSE SYLLABUS

[WWW.WEBSTACKACADEMY.COM](http://WWW.WEBSTACKACADEMY.COM)

## COURSE OBJECTIVES

- Enable participants to develop a scalable and reliable backend web applications that can handle high volume concurrent connections, which is the need of modern day web application
- Build strong foundations (ex: OOPS) in entry level engineers thereby making them job ready as per industry requirements. Enable them to learn new technologies by applying foundation paradigms
- By the end of the program participants will be become an industry-ready engineer who can be readily deployed in a project

## COURSE FLOW

The 'JavaScript everywhere' paradigm became mainstream after the release of Node.js. This JavaScript run-time environment enables developers to build scalable web applications with minimal overhead. Combined with Express framework it helps developers to build an MVC architecture on the server side and expose necessary APIs. Our WSA backend web developer course makes individuals deep-dive into this phenomenon by making them hands-on with backend web development.

Subsequently participants will learn about MongoDB which is a No-SQL database created for cloud-scale applications. DISHA sessions are interleaved throughout the program for resume and interview preparation aspects for placements.

## MODULE TOPICS

- Express Framework – Building scalable web applications
- Foundation paradigms (OOPS | Design Patterns | Object Modelling | JSON | AJAX)
- Database and MongoDB
- Node.js
- Data Exchange (HTTP | Websockets)
- Development Environment & Tools
- DISHA (Resume & Interview prep package)

## DURATION

1.5 months

## PLATFORM

- Linux (Fedora / Mandriva /Ubuntu) or Windows Host system
- Firefox, Chrome Browsers

## PREREQUISITES

B.E / B.Tech / M.E / M.Tech / MCA

## DELIVERY METHOD

Live Virtual Classes and Intervention Sessions  
(Assignment / Project Explainer, Live Doubt Clearing and Evaluation)

## Express Framework

### Module Objectives:

- Building Strong expertise on Express framework to develop responsive web application
- Implement MVC and responsive design to provide unified and intuitive user experience across PC, tablet and Mobile Phone

### Overview:

This course provides you strong foundation on Express framework driven by hands-on experience and exposure to develop responsive web application using MVC design pattern. During the course, you should be able to build strong background about Express and Node.js architecture, usage of services and applying Node.js concept to develop frontend application supported by backend web servers.

### Platform:

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

### Prerequisites:

Academic level web application knowledge

### Delivery method:

Instructor lead, hands-on exercises backed with assignments and mini project

### Detailed course contents:

- Introduction to Express Framework
- Introduction to Nodejs
- What is Nodejs
- Getting Started with Express
- Your first Express App
- Express Routing
- Implementing MVC in Express
- Middleware
- Using Template Engines
- Error Handling
- API Handling
- Debugging
- Developing Template Engines
- Using Process Managers
- Security & Deployment

## Node.js

### Module Objectives:

- Building Strong expertise on Node.js core to develop web application
- Implement web application and deployment

### Overview:

This course provides you strong foundation on Node.js driven by hands-on experience and exposure to develop NodeJS based application and deployment. During the course you should be able to build strong background about Node.js architecture, usage of services and applying Node.js concept to develop frontend application supported by backend web servers.

**Platform:**

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

**Prerequisites**

Academic level web application knowledge

**Delivery method:**

Instructed lead, hands-on exercises backed with assignments and mini project

**Detailed course contents:**

- Getting started
- Node Core
- Node Modules
- File System
- Debugger
- Automation and Deployment

## MongoDB

**Module Objectives:**

- Building strong expertise in Document Oriented Non-Relational Database Management System
- Implement frontend and backend scenarios to read, write and update data stored in MongoDB

**Overview:**

This course provides you hands-on experience and exposure to implement frontend and backend scenarios to read, write and update data using MongoDB. This course builds strong foundation for web application development based on client-server architecture.

**Platform:**

- Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
- Firefox, Chrome

**Prerequisites:**

Academic level web application knowledge

**Delivery method:**

Instructor lead, hands-on exercises backed with assignments and mini project

**Detailed course contents:**

- Introduction to MongoDB
- MongoDB Environment
- MongoDB Create Database
- MongoDB Drop Database
- MongoDB Create Collection
- MongoDB Drop Collection
- MongoDB Read Operations
- MongoDB Write Operations
- MongoDB Data Modelling
- MongoDB Administration
- MongoDB Security
- MongoDB Aggregation
- MongoDB Indexes
- MongoDB Storage & replication

# BACK-END WEB DEVELOPER

## COURSE SYLLABUS



### WEB STACK ACADEMY

#83, Farah Towers,  
1st floor, MG Road,  
Bangalore - 560001

+91-809 555 7 333  
+91-80-4128 9576  
training@webstackacademy.com  
www.webstackacademy.com