

Full Stack



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Front-end Course Modules

Hyper Text Mark-up Language (HTML5)

A. Module Objectives:

1. Building Strong expertise to develop front end application using HTML5
- 2 Implement MVC and responsive design to scale well across PC, tablet & Mobile Phone

B. Overview:

This course provides you hands-on experience and exposure to developing HTML5 based single page application for browsers. This course builds strong foundation on HTML5 which will help developer to use HTML5 concepts for building responsive web application.

C. Platform:

1. Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
2. Firefox, Chrome

D. Prerequisites:

Academic level web application knowledge

E. Delivery method:

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

F. Detailed Course Contents:

Introduction HTML	HTML Classes
HTML Basics	HTML Layout
HTML Elements	HTML Responsive
HTML5 Semantic	HTML iframes
HTML Attributes	HTML JavaScript
HTML Headings	HTML Head
HTML Paragraph	HTML Entities and URI Code
HTML Styles	HTML Symbols and XHTML
HTML Formatting	HTML Charset and Forms
HTML Quotations	
HTML Computer Code	
HTML Comments & Colours	
HTML CSS, Links and Images	
HTML Lists	
HTML Blocks	



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Cascading Style Sheets (CSS3)

Module Objectives:

1. Building Strong expertise to develop front end application using HTML5
2. Implement MVC and responsive design to scale well across PC, tablet & Mobile Phone

Overview:

This course provides you hands-on experience and exposure to developing CSS3 based web application. This course builds strong foundation on CS33 which will help developer to use CSS3 concepts for building responsive web application.

Platform:

1. Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
2. Firefox, Chrome

Prerequisites:

Academic level web application knowledge

Delivery method:

Instructor lead, hands-on exercises backed with assignments

Detailed course contents

Introduction CSS3	CSS Box Model
CSS3 Syntax	CSS Outline
CSS3 How To	CSS Display
CSS3 Colours	CSS Max-width
CSS3 Backgrounds	CSS Position
CSS3 Borders	CSS Float
CSS Padding	CSS Inline-block
CSS Height/Width	CSS Align
CSS3 Gradients	CSS Combinators
CSS3 Shadows	CSS Pseudo-class
CSS3 Text	CSS Pseudo-element
CSS3 Fonts	CSS Navigation Bar
CSS3 2D Transforms	CSS Dropdowns
CSS3 3D Transforms	CSS Tooltips
CSS Links	
CSS Lists	



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CSS3 Images	CSS3 Box Sizing
CSS Attr Selectors	CSS3 Filters
CSS Forms	CSS3 Media Queries
CSS Counters	CSS3 Responsive
CSS3 Animations	S3 Pagination
CSS3 Buttons	CSS3 Multiple Columns
CSS3 Pagination	CSS3 User Interface
CSS3 Multiple Columns	CSS3 Box Sizing
CSS3 User Interface	CSS3 Filters
	CSS3 Media Queries

CSS3 Responsive

Bootstrap

Module Objectives:

To become proficient in Bootstrap concepts

To develop a web pages based on Bootstrap

Overview:

This course is targeted for fresh engineers or professional who want to build competency in the Bootstrap Based web development.

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

Detailed course contents:

Introduction to Bootstrap

Bootstrap Basic

Bootstrap Grids

Bootstrap Themes

Bootstrap CSS

Bootstrap JS



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JavaScript

Module Objectives:

1. Building Strong expertise to develop front end application using HTML5, CSS3 and JavaScript along with jQuery and AngularJS framework
2. Implement MVC and responsive design to scale well across PC, Tablet & Mobile Phone

Overview:

This course provides you hands-on experience and exposure to develop JavaScript based web application. This course builds strong foundation of JavaScript which will help developer to apply JavaScript concepts for responsive web frontend & backend development.

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

Detailed course contents:

Introduction to JavaScript	JavaScript Loops
Java Script Language Basics	JavaScript Type Conversion
JavaScript Objects	JavaScript RegExp
JavaScript Scope	JavaScript Errors
JavaScript Events	JavaScript Debugging
JavaScript Strings	JavaScript Hoisting
JavaScript Numbers	JavaScript Strict Mode
JavaScript Math	JavaScript Functions
JavaScript Arrays	JavaScript Objects
JavaScript Boolean	JavaScript Forms
JavaScript Comparisons	JavaScript HTML DOM
JavaScript Conditions	JavaScript BOM
JavaScript Switch	



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jQuery

Module Objectives:

1. Building Strong expertise to develop front end application using HTML5, CSS3 and JavaScript along with jQuery and AngularJS framework
2. Implement MVC and responsive design to scale well across PC, Tablet & Mobile Phone

Overview:

This course provides you hands-on experience and exposure to develop jQuery Mobile based responsive web application. It builds strong foundation of jQuery which will help developer to apply concepts for responsive web frontend development.

Platform:

1. Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
2. Firefox, Chrome

Prerequisites:

Academic level web application knowledge

Delivery method:

Instructor lead, hands-on exercises backed with assignments

Detailed course contents:

Introduction to jQuery

- jQuery Syntax
- jQuery Selectors
- jQuery Events
- jQuery Effects
- jQuery HTML
- jQuery Traversing
- jQuery AJAX & Misc



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jQuery-Mobile

Module Objectives:

1. Building Strong expertise to develop front end application using HTML5, CSS3 and JavaScript along with jQuery and AngularJS framework
2. Implement MVC and responsive design to scale well across PC, Tablet & Mobile Phone

Overview:

This course provides you hands-on experience and exposure to develop jQuery Mobile based responsive web application. It builds strong foundation of jQuery which will help developer to apply concepts for responsive web frontend development.

Platform:

1. Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
2. 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 jQuery Mobile
jQuery Mobile Pages
jQuery Mobile Transitions
jQuery Mobile Buttons
jQuery Mobile Mobile Toolbars
jQuery Mobile Navbars
jQuery Mobile Panels
jQuery Mobile Collapsibles
jQuery Mobile Tables
jQuery Mobile Grids
jQuery Mobile Lists
jQuery Mobile Forms
jQuery Mobile Themes
jQuery Mobile Events



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Foundation Paradigms

Module Objectives:

1. To become proficient in OOPS, Design Patterns and Data Modelling concepts
2. At the end of the course candidates will learn the concepts and their practical applications

Overview:

This course is targeted for fresh engineers or professional who want to build competency in the Object-Oriented Programming. We focus on understanding OOPs concepts and its applications

Platform:

1. Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
2. Firefox, Chrome

Prerequisites:

Academic level web application knowledge

Delivery method:

Instructor lead, hands-on exercises backed with assignments

Detailed course contents:

OOPs
Design Patterns
Object Oriented Design
JSON
DOM
AJAX



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MEAN Stack – Course Modules

MongoDB

A. Module Objectives:

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

B. Overview:

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

C. Platform:

1. Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
2. Firefox, Chrome

D. Prerequisites:

Academic level web application knowledge

E. Delivery method:

Instructor lead, hands-on exercises backed with assignments

F. 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
MongoDB Replication



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C. Platform:

1. Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
2. Firefox, Chrome

D. Prerequisites:

Academic level web application knowledge

E. Delivery method:

Instructor lead, hands-on exercises backed with assignments

F. Detailed Course Contents:

Introduction to MongoDB
MongoDB Environment
MongoDB Create Database
MongoDB Drop Database
MongoDB Create Collection
MongoDB Drop Collection
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MongoDB Security
MongoDB Aggregation
MongoDB Indexes
MongoDB Storage
MongoDB Replication



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Express Framework

A. Module Objectives:

1. Building Strong expertise to develop front end application using HTML5, CSS3 and JavaScript along with jQuery and AngularJS framework
2. Implement MVC and responsive design to scale well across PC, Tablet & Mobile Phone

B. 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.

C. Platform:

1. Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
2. Firefox, Chrome

D. Prerequisites:

Academic level web application knowledge

E. Delivery method:

Instructor lead, hands-on exercises backed with assignments

F. 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



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Angular JS

A. Module Objectives:

1. Building Strong expertise to develop front end application using Angular JS
2. Implement MVC and responsive design to scale well across PC, tablet & Mobile Phone

B. Overview:

This course provides you strong foundation on AngularJS driven by hands-on experience and exposure to develop responsive web application using MVC design pattern. During the course, you should be able to builds strong background about AngularJS architecture, usage of services and applying AngularJS concept to develop front-end application.

C. Platform:

1. Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
2. Firefox, Chrome

D. Prerequisites:

Academic level web application knowledge

E. Delivery method:

Instructor lead, hands-on exercises backed with assignments

F. Detailed Course Contents:

Introduction to AngularJS
AngularJS Expressions
AngularJS Modules
AngularJS Data Binding
AngularJS Scopes
AngularJS Directives & Events
AngularJS Controllers
AngularJS Filters
AngularJS Services
AngularJS HTTP
AngularJS Tables
AngularJS Select
Fetching Data from MySQL
AngularJS Validation
AngularJS API
AngularJS Animations



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Node.js

A. Module Objectives:

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

B. Overview:

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

C. Platform:

1. Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
2. Firefox, Chrome

D. Prerequisites:

Academic level web application knowledge

E. Delivery method:

Instructor lead, hands-on exercises backed with assignments

F. Detailed Course Contents:

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



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Data Exchange – Course modules

Hyper Text Transfer Protocol (HTTP)

A. Module Objectives:

1. Developing single page application using Express Framework

B. Overview:

This course provides you hands-on experience and exposure to developing web application using HTTP. This course builds strong foundation of HTTP based request and response scenarios which will help developer to build efficient web applications.

C. Platform:

1. Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
2. Firefox, Chrome

D. Prerequisites:

Academic level web application knowledge

E. Delivery method:

Instructor lead, hands-on exercises backed with assignments

F. Detailed Course Contents:

Introduction to HTTP
HTTP Parameters
HTTP Messages
HTTP Request
HTTP Response
HTTP Methods
HTTP Status Code
HTTP Header Fields
Registration
HTTP Authentication
HTTP Caching
HTTP URL Encoding
HTTP Security



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WebSockets

A. Module Objectives:

1. Building strong expertise in WebSockets
2. Implement frontend and backend scenarios using WebSockets

B. Overview:

This course provides you hands-on experience and exposure to use WebSockets in frontend and backend scenarios.

This course builds strong foundation for web application development based on client-server architecture.

C. Platform:

1. Linux (Fedora / Mandriva / Ubuntu) or Windows Host system
2. Firefox, Chrome

D. Prerequisites:

Academic level web application knowledge

E. Delivery method:

Instructor lead, hands-on exercises backed with assignments

F. Detailed Course Contents:

Introduction to Web sockets

Web socket URIs

Web socket APIs

Opening Handshake

Data Framing

Sending and Receiving Data

Closing the Connections

Error Handling

Web socket Security

Deployment Considerations

Project



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