

## Training Brochure

This document contains the basic information about our programs. By enrolling for **TRAINING** programs, you will learn the followings in **12 weeks**:

- Fundamentals of Graphics Design
- Web Development
  - ❖ HTML
  - ❖ CSS
  - ❖ JAVA Script
  - ❖ Introduction to React
  - ❖ Introduction to Node Js

## Fundamentals of Graphic Design course content

- Graphic Design Principles
- Key concepts of Graphic designing
- Accessibility
- Design and Development
- Understanding typography
- Color Theory
- Tips for Photoshop and illustrator

## Web Development

### ◆ HTML with JavaScript and CSS3 Course content

Module 1: Overview of HTML and CSS

- Overview of HTML
- Overview of CSS
- Creating a Web Application by Using Visual Studio 2017
- Lab : Exploring the Contoso Conference Application
- Exploring the Contoso Conference Application
- Examining and Modifying the Contoso Conference Application

Module 2: Creating and Styling HTML

- Creating an HTML Page
- Styling an HTML Page
- Lab : Creating and Styling HTML5 Pages
- Creating HTML5 Pages

- Styling HTML pages

### Module 3: Introduction to JavaScript

- Overview of JavaScript
- Introduction to the Document Object Model
- Lab : Displaying Data and Handling Events by Using JavaScript.
- Displaying Data Programmatically
- Handling Events

### Module 4: Creating Forms to Collect and Validate User Input

- Creating HTML5 Forms
- Validating User Input by Using HTML5 Attributes
- Validating User Input by Using JavaScript
- Lab : Creating a Form and Validating User Input
- Creating a Form and Validating User Input by Using HTML5 Attributes
- Validating User Input by Using JavaScript

### Module 5: Communicating with a Remote Server

- Async programming in JavaScript
- Sending and Receiving Data by Using the XMLHttpRequest Object
- Sending and Receiving Data by Using the Fetch API
- Lab : Communicating with a Remote Data Source
- Retrieving Data
- Serializing and Transmitting Data
- Refactoring the Code by Using the jQuery ajax Method

### Module 6: Styling HTML5 by Using CSS3

- Styling Text by Using CSS3
- Styling Block Elements
- Pseudo-Classes and Pseudo-Elements
- Enhancing Graphical Effects by Using CSS3
- Lab : Styling Text and Block Elements by Using CSS3
- Styling the Navigation Bar
- Styling the Register Link
- Styling the About Page

### Module 7: Creating Objects and Methods by Using JavaScript

- Writing Well-Structured JavaScript Code

- Creating Custom Objects
- Extending Objects
- Lab : Refining Code for Maintainability and Extensibility
- Object Inheritance
- Refactoring JavaScript Code to Use Objects

#### Module 8: Creating Interactive Pages by Using HTML APIs

- Interacting with Files
- Incorporating Multimedia
- Reacting to Browser Location and Context
- Debugging and Profiling a Web Application
- Lab : Creating Interactive Pages with HTML5 APIs
- Dragging and Dropping Images
- Incorporating Video
- Using the Geolocation API to Report the User's Current Location

#### Module 9: Adding Offline Support to Web

- Reading and Writing Data Locally
- Adding Offline Support by Using the Application Cache
- Lab : Adding Offline Support to Web Applications
- Caching Offline Data by Using the Application Cache API
- Persisting User Data by Using the Local Storage API

#### Module 10: Implementing an Adaptive User

- Supporting Multiple Form Factors
- Creating an Adaptive User Interface
- Lab : Implementing an Adaptive User Interface
- Creating a Print-Friendly Stylesheet
- Adapting Page Layout to Fit Different Form Factors

#### Module 11: Creating Advanced Graphics

- Creating Interactive Graphics by Using SVG
- Drawing Graphics by Using the Canvas API
- Lab : Creating Advanced Graphics
- Creating an Interactive Venue Map by Using SVG
- Creating a Speaker Badge by Using the Canvas API

#### Module 12: Animating the User Interface

- Applying CSS Transitions
- Transforming Elements
- Applying CSS Keyframe Animations
- Lab : Animating the User Interface
- Applying CSS Transitions
- Applying Keyframe Animations

#### Module 13: Implementing Real-time Communication by Using Web Sockets

- Introduction to Web Sockets
- Using the WebSocket API
- Lab : Performing Real-time Communication by Using Web Sockets
- Receiving Messages from a Web Socket
- Sending Messages to a Web Socket
- Handling Different Web Socket Message Types

#### Module 14: Performing Background Processing by Using Web Workers

- Understanding Web Workers
- Performing Asynchronous Processing by Using Web Workers
- Lab : Creating a Web Worker Process
- Improving Responsiveness by Using a Web Worker

#### Module 15: Packaging JavaScript for Production Deployment

- Understanding Transpilers And Module bundling
- Creating Separate Packages for Cross Browser Support
- Lab : Setting Up Webpack Bundle for Production
- Creating and Deploying Packages using WebPack

### ◆ **React JS**

#### Module 1

- Obstacles and Roadblocks
- React's Future
- Working with Files
- React Developer Tools
- Installation Node JS

## Module 2 : Emerging JavaScript

- Declaring Variable in ES6
- Arrow function
- Transpiling ES6
- ES6 Objects and Arrays
- Promises
- Classes

## Module 3: Pure React

- Page Setup
- The Virtual DOM
- React Elements
- React DOM
- Children
- Constructing Elements with Data
- React Components
- DOM rendering

## Module 4: React with JSX

- React Elements as JSX
- Babel
- Intro to Webpack

## Module 5: Props, State and the Component Tree

- Property Validation
- Refs
- React State Management
- State within component Tree

## Module 6: Enhancing Components

- Component Lifecycle
- JavaScript Library Integration
- Higher-Order Components
- Flux

## Module 7: Redux

- State
- Actions
- Reducers
- The Store

- Action creators
- Middleware

#### Module 8. React Redux

- Explicitly Passing the Store
- Passing Store via Context
- Presentation Versus Container Components
- The React Redux Provider
- React Redux Connect

#### Module 9: React Router

- Incorporating the Router
- Nesting Routes
- Route Parameters

#### 10. React on the Server

### ◆ Node Js course content

#### Module 1: Understanding Node Environment

- Extending JavaScript
- V8 Engine
- The Process Object

#### Module 2: Understanding Asynchronous Event Driven Programming

- Broadcasting Events
- Listening for Events
- Timers
- Understanding the Event Loop
- Callbacks and errors

#### Module 3: Streaming Data Across Node and clients

- Exporting Streams
- Creating an HTTP Server
- The Request objects
- Working with Headers
- Handling Post Data

#### Module 4: Access the file system

- Directories & iterating over files and folders
- Reading from File

- Writing to a File

#### Module 5: Using Express

- Installing Express and Making it Easier to Build Web Server
- Routes
- Static File and Middleware
- JSON

#### Module 6: Databases

- Relational Database and SQL
- Node & MYSQL
- NoSQL and Documents
- MongoDB and Mongoose
- CRUD operation using MongoDB

#### Module 7: Working with MySQL

- CRUD Operation using MYSQL

#### Module 8: Connecting Node with Angular

- Installation of Angular
- Components
- Services
- Template Form
- Event Handling