

# Angular Syllabus

## COURSE DURATION FOR ANGULAR TRAINING:

## OBJECTIVES FOR ANGULAR TRAINING:

### GET FAMILIAR WITH ANGULAR FRAMEWORK AND HOW ANGULAR WORKS

Learn about the changes in Angular and the new updates in Angular12  
Get up to speed with TypeScript

### IMPLEMENT SINGLE-PAGE APPLICATIONS

- → Use various Angular features like directives, components and services
- Implement one-way as well as Two-Way Data Binding
- Handle Angular forms using both Template-driven as well as Reactive Approach
- Use Angular modules and optimize apps
- Learn & Implement Dependency Injection
- Change pages with Routing
- Understand & use Observables
- Learn about Authentication & how it works in SPAs

### IMPLEMENT A FUNCTIONAL WEB APPLICATION USING ANGULAR RUNNING TESTS WITH CLI AND TESTING DEPENDENCIES

### MODULE 1:- HTML INTRODUCTION

- How Web Works?
- What is a Web Page?
- HTML Basic
- HTML Fundamentals
- HTML Attributes
- HTML Styles
- HTML Controls
- HTML Formatting
- HTML Forms

## MODULE 2:-CSS OVERVIEW

- CSS Syntax
- CSS Id & Class
- CSS Styling
- CSS Box Model
- CSS Margins, Dimensions
- Display CSS Navigation Bar

## MODULE 3:-TYPESCRIPT

- What is Typescript
- First Typescript Example
- Basic Data Types & Variables
- Using Types
- Variables in Typescript

## MODULE 4:-INTRODUCTION TO ANGULAR

- What is Angular?
- Angular CLI
- Setup of Node.Js and Angular
- What is Typescript?
- How does Angular get started?
- First Angular App

## MODULE 5:-COMPONENTS OVERVIEW

- Introduction to Components 1  
Creating components
- Role of AppModule & Component Declaration
- Registering Components
- Using Registered Components 1  
Creating Components with CLI
- Multiple components & passing data  
1 Nesting Components
- Working with Component templates 1  
Working with Component Styles
- Understanding Component Selector

## MODULE 6:-COMPONENTS & DATABINDING

- Introduction to Modules & Databinding 1 Splitting Apps into Components
- Property & Event binding overview 1 Binding to Custom Properties
- Assigning an Alias to Custom Properties 1 Binding to Custom Events
- Assigning an Alias to Custom events
- Custom Property and Event Binding Summary 1 Understanding View Encapsulation
- Using Local References in Templates
- Getting Access to the Template & DOM with @ViewChild
- Projecting Content into Components with ng-content
- Understanding the Component Lifecycle
- Lifecycle Hooks in Action
- Lifecycle Hooks & Template Access
- Accessing ng-content with @ContentChild

## MODULE 7:-UNDERSTANDING DIRECTIVES

- Using ngIf to Output Data Conditionally
- Enhancing ngIf with an Else Condition
- Output Lists with ngFor
- Styling Elements Dynamically with ngStyle
- Applying CSS Classes Dynamically with ngClass
- Creating Basic Attribute Directive
- Using the Renderer to build Better Attribute Directive
- More about Renderer
- Listen to Host Events using HostListener
- Bind to Host Properties using HostBinding
- Binding to Directive Properties
- Behind the scenes of Structural Directives
- What is ngSwitch?

## MODULE 8:-SERVICES AND DEPENDENCY INJECTION

- Introduction to Dependency Injection
- Why do we need Services ?
- Creating a Data Service
- Injecting Services into Services
- Using Service for Cross-Component Communication

## MODULE 9:-TRANSPORT OUTPUT USING PIPES

- Introduction to Pipes
- Why are Pipes useful? Using Pipes
- Parameterizing Pipes Chaining Multiple Pipes
- Creating a Custom Pipe
- Parameterizing a Custom Pipe
- Creating a Filter Pipe
- Pure & Impure Pipes Understanding 'async' Pipes

## MODULE 10:-CHANGING PAGES WITH ROUTING

- Setting up and Loading Routes
- Navigating with Router Links
- Understanding Navigation Paths
- Styling Active Router Links
- Navigating Programmatically
- Passing Query Parameters and Fragments
- Retrieving Query Parameters & Fragments

## MODULE 11:-TEMPLATE DRIVEN FORMS

- Introduction to handling forms
- Creating Template driven Forms & Registering Controls
- Submitting & Using the Form
- Understanding Form State
- Adding Validation to check User Input

## MODULE 12:-REACTIVE FORMS

- Introduction to Reactive Approach
- Creating a Reactive Form in Code
- Syncing HTML and Form
- Submitting Reactive Forms
- Adding Validation to Reactive Forms

## MODULE 13:-INTRODUCTION TO HTTPCLIENT

- Request Configuration & Response
- Requesting Events
- Setting Headers
- Http Parameters
- Interceptors

## PROJECT

Students will create a dynamic web site using various Angular components like controllers, directives, filters, Angular forms and modules. This project will be completed under the careful guidance of an experienced faculty. Working on this project will give students all the clarity they require in order to develop Angular applications in the software world.