



# Angular 6

## Training

by

## Zeolearn

**20 hours**

**Instructor Led**

**Beginner to Advanced Level**

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Angular is a dynamic and robust JavaScript-based development framework used to create Single Page Applications. This open source framework backed by Google is widely popular for creating dynamic apps as its data binding and dependency injection features significantly reduce the amount of code that needs to be written.

Zeolearn's course on Angular will make you familiar with the fundamentals of this language to build SPA applications that will help your business achieve faster ROI due to lesser development and maintenance cost, and faster accessibility.

## YOU WILL LEARN TO -

- Understand how Angular is different from traditional web development frameworks
- Code using new ES6 and TypeScript language features
- Develop an application from scratch using Angular 6
- Explore Angular coding and architecture best practices
- Understand and use Angular Forms, Observables, Dependency Injection, and Routing
- Retrieve, update, and delete data using Angular's Http service
- Unit test all the parts of an Angular application including Modules, Components, Services, and Pipes
- Create, build, and deploy an Angular (Angular 6) application using the Angular CLI
- Develop reusable elements (even out of Angular applications) using angular elements
- Develop dynamic model-driven forms that are easier to unit test

## PRE-REQUISITES

All attendees must have substantial prior experience developing with JavaScript. If attendees will not have prior JavaScript experience, we would be delighted to precede this class with a one- or two-day intensive JavaScript

## CURRICULUM FOR ANGULAR 6

- **Module 1: Introduction**
  - Angular 6 Introduction
- **Module 2: Why Angular ?**
  - User Experience similar to a Desktop Application
  - Productivity and Tooling



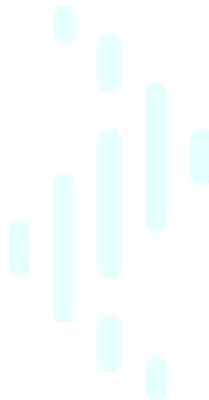
- Performance
- Community
- Full-featured Framework
- Platform for Targeting Native Mobile not just Web Browsers
  
- **Module 3: Understanding Angular Versions**
  - AngularJS (Angular 1.x)
  - Angular
    - Angular 2
    - Angular 4
    - Angular 5
    - Angular 6
  
- **Module 4: Typescript & ES6**
  - Introduction
    - What is Typescript
    - Why Typescript
    - Setup and installation
    - IDE support
  - Scoping using Let and Const Keywords ( ES6 )
  - Template Literals ( ES6 )
  - Spread Syntax and Rest Parameters ( ES6 )
  - Destructuring ( ES6 )
  
- **Module 5: Power of Types**
  - Introduction
  - Type inference
  - Type Annotations
  - Number
  - Boolean
  - String
  - Array



- Tuple
- Enum
- Any
- Void
- Null and Undefined
- Never (Typescript 2)

- **Module 6: Explore Functions**

- Introduction
- Type inference
- Type Annotations
- Number
- Boolean
- String
- Array
- Tuple
- Enum
- Any
- Void
- Null and Undefined
- Never (Typescript 2)



- **Module 7: Classes**

- Introduction
- Inheritance
- Access modifiers
- Getters and setters
- Read only & static
- Abstract classes

- **Module 8: Interfaces**

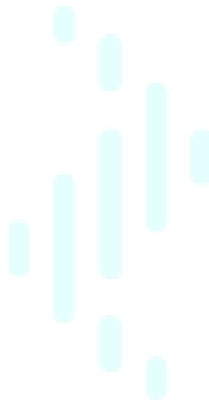
- Introduction



- Optional properties and methods
  - Readonly&const
  - Strict structural contract
  - Extending interface
  - Implementing interface
- **Module 9: Modules**
    - Introduction
    - Import
    - Export
    - Default
  - **Module 10: Decorators (Typescript Aspect Oriented Programming)**
    - Decorators (Typescript Aspect Oriented Programming)
  - **Module 11: Working with Angular CLI**
    - Angular CLI
    - Anatomy of the project
    - Debugging Angular apps
    - Working with Augury
  - **Module 12: 8 Main Building blocks of Angular (Birds Eye View Of Angular 5)**
    - Modules
    - Components
    - Templates
    - Metadata
    - Data binding
    - Directives
    - Services
    - Dependency injection
  - **Module 13: Angular modules**

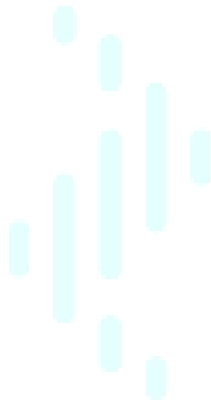


- Angular modules
- **Module 14: Angular libraries**
  - Angular libraries
- **Module 15: Components**
  - Introduction
  - @Component decorator
  - Component configuration object
  - Custom components
  - Component with templates
    - Inline
    - External
  - Component with Styles
    - Inline
    - External
- **Module 16: Templating**
  - HTML as template
  - Data binding
    - Interpolation
    - Property Binding
    - Event Binding
    - Two way binding
  - Template expressions
  - Template syntax
  - Attribute, class and style bindings
  - @Input()
  - @Output
  - Template reference variables
  - Safe navigation operator
- **Module 17: Directives**





- Introduction
  - Built-in directives
    - Structural directive
      - NgIf
      - NgFor
      - NgSwitch
    - Attribute directive
      - NgClass
      - NgStyle
      - NgModel
  - @Directive decorator
- 
- **Module 18: Pipes**
    - Introduction
    - Built-in pipes
    - @Pipe decorator
    - Custom pipe development
- 
- **Module 19: Forms**
    - Introduction
    - @angular/forms library
    - Template driven forms
    - Form and field validation
    - Validation check with ng-pristine, ng-dirty, ng-touched, ng-untouched, ng-valid, ng-invalid
    - Show and hide validation error messages
    - Form submission with ngSubmit
    - Reactive/ Model drive forms
    - ReactiveFormsModule
    - FormGroup, FormControl classes
    - FormBuilder for easy form building
    - Validations using Validators





- Setting form model using setValue and patchValue
- Use FormArray to build repeated form controls or form groups

- **Module 20: Dependency Injection**

- Introduction
- Why DI
- @Injectable decorator
- Custom service development
- Registering the service with NgModule using providers key
- Provider Types
- Class
- Factory
- Value

- **Module 21: Routing And Navigation**

- Introduction
- @angular/router library
- Configure routes
- RouterModule.forRoot and RouterModule.forChild
- RouterOutlet, RouterLink, RouterLinkActive
- Nested Routes
- Parametrized routes
- Route guards
- Router events

- **Module 22: RxJs Primer**

- Introduction
- Why RxJs
- Observable interface
- Streams
- Operators
- Subscription





- Subject
- Schedulers
  
- **Module 23: HTTP Deprecate& HttpClient**
  - Setup installing the module
  - Making a request for JSON data
  - Typechecking the response
  - Reading the full response
  - Error handling
  - Requesting non-JSON data
  - Sending data to the server
  - Making a POST request
  - Configuring other parts of the request
  - Working with HTTP interceptors for better error handling in http requests
  
- **Module 24: New Features in Angular 6**
  - New features in angular cli
    - ng update
    - ng add
  - Angular Elements
  - Updates to @angular/material
  - CLI workspaces
  - Building libraries
  - Tree shakable providers
  - RxJs 6 Support
  
- **Module 25: How to upgrade to Angular 6**
  - How to upgrade to Angular 6
  
- **Module 27: Testing**
  - Introduction
  - Testing in Typescript



- Testing Component
  - Testing Service/Provider
  - Testing Pipe
- 
- **Module 29: Deployment**
    - Manually
    - Using the Angular CLI with Ahead-Of-Time (AOT) Compilation and Tree-Shaking (removing unused library code)

### WHY ZEOLEARN:

- **Get Mentored by Industry Practitioners:** Zeolearn not only provides trainers for professional courses, we provide you with Industry Experts who are currently working in the field.
- **Immersive Hands-on Trainings:** All our training sessions are based on Learn by-doing method and hence every trainee learns by being immersed in projects that they develop along with their mentor. Every session is a combination of practical exercises, theoretical learning, hands-on exercises, group discussions, simulations and intensive Q & A sessions.
- **Build a Portfolio of Projects:** Zeolearn professionals help your employees to not only learn new concepts but also how to apply the theory to practice.
- **Mentoring Sessions:** Zeolearn professionals can also be retained even after the training session to help incorporate the learned concepts in a particular project and further mentoring.

### ZEOLEARN'S TRAINING DELIVERY METHOD:

- Hands-on Training with immersive, interactive and practice sessions.
- Administered Classroom Assignments, Group Discussions, Simulation based learning and Q & A Sessions
- Learning the concepts through examples and Build a project through the course of training
- Post Training Sessions from Industry Experts(2 - 4 Hours Online sessions)
- Mentors evaluate / review the Project (or)
- Deep dive into specific concepts (or)
- Assistance provided in implementing the technology in existing / new projects
- Exclusive Mentor Support provided via email up to 3 Months

## THANK YOU

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