

# Angular 6 – course syllabus

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**Course length:** Six full days (eight hours each)

**Course goals:** Angular is one of the most popular Front-end frameworks out there today and is being used in many large and popular web sites. There is a good reason why Angular is so popular and it's not only because it's being pushed forward by Google, but also because of its many strong and easy to use capabilities. In this course we will cover Angular needed basics as well as what's new in Angular6, such as Angular-CLI, Angular components, new RxJS, Web components, Lazy loading and much more.

**Target audience:** Front end developers with knowledge and hands-on experience with:

- Basic web technologies (HTML5, CSS)
- Javascript programming and OOP concepts

**Course Methodology:** Six daily sessions of about eight hours each. This is the general daily schedule:

- 09:00-10:30 First session
- 10:30-10:45 Recess
- 10:45-12:00 Second session
- 12:00-13:00 Lunch break
- 13:00-15:00 Third Session
- 15:00-15:15 Recess
- 15:15-17:00 Fourth Session

We believe that only practical hands on experience will help fully understand the material at hand. For this reason each session includes a practical exercise where the actual hands on experience can be gained.

**As with all our courses, the content of this course can be personally tailored to your needs and requirements. Content can be removed, added or altered as needed.**

## Detailed curriculum:

### Day 1 – ES6, TypeScript, Angular-CLI and Angular Components

- ES6
  - Module system
  - Classes
  - Variable declaration
  - Arrow Functions
  - Template Strings
- TypeScript
  - Type safety, inference and intellisense
  - Interfaces
  - Decorators
- Angular-CLI & project structure
  - Creating a new project
  - Project settings, bootstrapping
  - Building and serving
  - Component-based architecture
  - Angular building blocks overview
  - Generating project elements
  - Root Angular Module
- Angular Components
  - Component definition
  - Component types
  - Template syntax
  - Data, property and event binding
  - Using directives and pipes
  - Inputs
  - Outputs (events)
  - Component style
- Advanced Components
  - Data projection, building a wrapper component
  - Querying view and children
- Dynamic components

### Day 2 – Providers, Dependency Injection, Observables

- Providers and Dependency Injection
  - Understanding the role of the Provider
  - Understanding the injector tree
  - Creating and using a class provider (service)
  - Other provider strategies
  - Configuring providers
- Observables and RxJS
  - Subscription
  - RxJS Operators
  - Creating Subjects and Observables
- HttpClient
  - Http requests (GET, PUT, POST)
  - Configuring headers
  - Interceptors
  - Progress events

### Day 3 – Angular Router

- Setting up the router
- Navigation
- Child routes
- Routing params
- Lazy loading
- Guards and hooks

### Day 4 – Angular Modules, directives and Pipes

- Angular Modules
  - Root Module vs. Feature Module
  - Module definition
  - Module configuration
- Directives
  - Types of directives
  - Built-in directives
  - Writing your own directives
- Pipes
  - Sync and async Pipes
  - Built-in Pipes
  - Writing your own pipes

### Day 5 – Angular Forms

- Template-driven forms
- Reactive forms
- FormBuilder
- Form validation
- Custom validators
- Async validators

### Day 6 – State management with ngRx

- Understanding Redux architecture
- ngRx Store
- Actions & Reducers
- Middleware
- Effects and Facades
- Action Splitters

# Good luck!