Modern Web Developer SkillJourney

Introduction to Angular 16 Essentials (TT4165)

Get Started with Angular! Learn How to Construct Robust, Scalable, and Feature-Rich Web Applications using Angular 15

Course Snapshot

- **Course: Introduction to Angular 16 Essentials (TT4165)**
- **Duration**: 3 days
- **Skill-Level**: This introduction to Angular is for experienced Web Developers. Solid hands-on incoming experience with HTML5, CSS3 and JavaScript is required. This can be adjusted for dedicated course deliveries. Please inquire for details.
- **Focus**: This course is on Angular 15 but also available for other versions. Please inquire for details.
- **Format / Hands-on:** This course combines engaging instructor-led presentations and practical demonstrations with hands-on programming exercises, challenge labs, use case exploration and engaging group activities. Student machines are required.
- **Flexible Delivery Options**: This course can be delivered for your team or organization **online-live (virtual)**, **onsite in-person, self-paced** or across our immersive **blended learning experience platform (LXP).**
- **Public Schedule**: This course is currently available on our Public Open Enrollment Schedule.
- **Customizable**: We're flexible! This course agenda, topics, labs, hours and delivery modalities can be adjusted to target your specific training skills objectives, tools and learning goals. Please ask for details.

Description

Geared for experienced web developers, **Introduction to Angular 16 Essentials** is a three-day hands-on program that explores the latest features and benefits Angular has to offer. It provides you with the practical "real-world" foundational and advanced Angular skills required to solve the usual challenges you might face when developing modern web applications with JavaScript. You'll leave the course equipped with basic skills required to construct robust, scalable, and feature-rich web applications using Angular 15.

The course starts off with a solid introduction to the core features of the Angular CLI and TypeScript. You'll then jump right into component-driven development with Angular components, covering data-binding, directives, services, SPA routing, the RxJS library, forms, unit testing, and HTTP/REST.

By the end of this course, you'll have developed a streamlined yet feature-rich application. This application will integrate components for website structuring, directives for dynamic interactivity, custom pipes for content filtration and formatting, and reactive forms for enhanced user engagement. You'll also employ SPA routing for quick navigation, services for efficient data management, and REST APIs for modern, effective communication with web servers.

NOTE: For additional topics, labs and skills coverage beyond the basics you might consider our **TT4168 Mastering Angular 16 Boot Camp** five-day superset of this course as an alternative. These courses are also available for prior editions of Angular. Please inquire for details and options.

Learning Objectives

The course includes plenty of hands-on lab work designed to immerse you in the skills required to get you up and running with Angular right away. Guided by our engaging, highly-experienced instructor, you'll explore:
- What Angular is and why should you use it
- How Angular reduces the amount of code that you must write to add rich functionality to both existing and new web pages
- What TypeScript is, why it is useful, and how to use it with Angular
- How to facilitate development and deployment using Angular CLI
- How to work with the various aspects of the Angular architecture to implement clean, responsive web interfaces
- How Routers can support navigation within a Single Page Application

- What the best practices are for using Angular so that it works unobtrusively and performs well
- How to use Angular with HTTP to support JSON, REST, and other services

If your team requires different topics, additional skills or a custom approach, our team will collaborate with you to adjust the course to focus on your specific learning objectives and goals.

Audience

The content is appropriate for experienced web developers new to Angular. In order to be successful in the course, you should have solid, current hands-on experience developing basic web applications, and be well versed in HTML5, CSS3 and JavaScript.

NOTE: For additional topics, labs and skills coverage beyond the basics you might consider our **TT4168 Mastering Angular 15 Boot Camp** five-day superset of this course as an alternative.

Pre-Requisites

Take Before: Attendees should have experience with the topics in the following courses, or should have recently attended these as a pre-requisite:
- TT4003   Introduction to HTML5, CSS3 & JavaScript - 3 days

Related Courses

The following is a small subset of related courses. We offer many additional courses and topics on modern web, mobile and full stack development. Please see the online catalog for a complete list of courses and learning paths.
- TT4002   Introduction to HTML5 / CSS3 - 2 days
- TT4003   Introduction to HTML5, CSS3 & JavaScript - 3 days
- TT4110   Introduction to Moden JavaScript – 3 days
- TT4165   Introduction to Angular Essentials - 3-day subset of this course
- TT4168   Mastering Angular Boot Camp - 5 days
- TT4190   Getting Started with React Essentials – 3 days
- TT4195   Mastering React Boot Camp |With Redux, Flux, Unit Testing, JSX & More – 5 days (TT4190 superset)

Enhanced Learning Services: Please also ask about our robust Learning Experience Platform (LXP), Skills Assessment & Skills Prep Services, Skills Immersion Programs & Camps, Coaching and Mentoring Services and Extended Learning Support programs.

Course Topics / Agenda

Please note that this list of topics is based on our standard course offering, evolved from typical industry uses and trends. We'll work with you to tune this course and level of coverage to target the skills you need most. Topics, agenda and labs are subject to change, and may adjust during live delivery based on audience skill level, interests and participation.

Getting Started with Angular

1. **Overview of Angular Architecture**
- Angular Versioning
- Data Binding
- Components and Dependency Injection
- Services and Events
- Common Component Lifecycles and Hooks

2. **TypeScript**
- Angular, ES6 and TypeScript
- Typing and Classes

- Abstract Classes and Interfaces
- Annotations
- Generics
- Optional Chaining
- Nullish coalescing
- Decorators
- Partial, Record, Union types

3. **Bootstrapping with Angular CLI**
- Angular CLI Overview
- New Projects with CLI
- Testing and Generating with CLI
- Angular Console – NX Console

4. **Angular Basics**

- Configuration Files
- Working with angular.json
- Top-Level Directories
- Contents of `app` folder
- Angular DevTools

Working with Angular

5. **Components and Events**
- Data Binding and Components
- Event Binding
- Custom Events
- Parent/Child Events
- EventEmitter/emit()

6. **Third Party Libraries**
- Angular and the Need for Libraries
- Options for adding Libraries
- Working with npm install

7. **Dynamic Views - Directives**
- View Encapsulation
- Structural/Attribute Directives
- Conditional Styling

8. **Pipes**
- Overview of Pipes
- Built-in Pipes
- Formatting and Conversions
- Parameterizing Pipes
- Pure vs. Impure Pipes
- Customizing Pipes

Angular Forms

9. **Forms and the Forms API**
- Forms and NgModel
- NG Form Groups
- NG Form Validation
- Model-Driven Reactive Forms
- FormBuilder API
- Reactive Form Validation

Single Page Applications and Routes

10. **Single Page Applications - Routing**
- Overview of the SPA Concept
- Routing for Page Display
- Working with ActivatedRoute
- Location Strategies
- Nested Routes

11. **Services (Dependency Injection)**
- Angular's DI Framework
- Components and Injectables
- Tree-shakeable providers
- Service Interfaces and DI
- Constructor Injection

12. **Modules**
- Overview of Modules
- Feature Modules
- Feature Module Routing
- Shared Modules

Using RESTful Services

13. **Angular and REST**
- REST in Angular
- Promises, Observables, Subject
- HttpClient and Observables
- async Pipes and HttpClient Interceptors

Setup Made Simple! Learning Experience Platform (LXP)

All applicable course software, digital courseware files or course notes, labs, data sets and solutions, live coaching support channels, and rich extended learning and post training resources are provided for you in our "easy access, single source, no install required" online **Learning Experience Platform (LXP),** remote lab and content environment. Access periods vary by course. We'll collaborate with you to ensure your team is set up and ready to go well in advance of the class. Please inquire about set up details and options for your specific course of interest.

For More Information

For more information about our training services (instructor-led, self-paced or blended), collaborative coaching services, robust Learning Experience Platform (LXP), Career Experiences, public course schedule, partner programs, courseware licensing options or to see our complete list of course offerings, solutions and special offers, please visit us at **www.triveratech.com**, email **Info@triveratech.com** or call us toll free at **844-475-4559.** Our pricing and services are always satisfaction guaranteed.

TRIVERA TECHNOLOGIES ● **Collaborative IT Training, Coaching & Skills Development Solutions**
www.triveratech.com ● **toll free +1-844-475-4559** ● **Info@triveratech.com** ● **Twitter TriveraTech**

ONSITE, ONLINE & BLENDED TRAINING SOLUTIONS ● PUBLIC / OPEN ENROLLMENT COURSES
LEARNING EXPERIENCE PLATFORM (LXP) ● COACHING / MENTORING ● ASSESSMENTS ● CONTENT LICENSING & DEVELOPMENT
LEARNING PLAN DEVELOPMENT ● SKILLS IMMERSION PROGRAMS / RESKILLING / NEW HIRE / BOOT CAMPS
PARTNER & RESELLER PROGRAMS ● CORPORATE TRAINING MANAGEMENT ● VENDOR MANAGEMENT SERVICES

Trivera Technologies is a Woman-Owned Small-Business Firm