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## Introduction to Angular (TT4165)

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### Overview

Angular is one of the most popular JavaScript frameworks for creating web and native mobile applications. This introductory course thoroughly explores the latest Angular features and advances, demonstrating how to solve the traditional challenges of JavaScript web application development. You will build custom components, using application routes, form validation, and unit-testing and delve into component-driven development with Angular components.

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### Prerequisite Comments

TT4650 Web Essentials: HTML5 / CSS3 & JavaScript

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### Target Audience

In order to be successful in this class, incoming attendees are required to have current, hands-on experience in developing basic web applications, and be versed in HTML5, CSS3 and JavaScript. This is an introductory level Angular development course but an intermediate level web development class, designed for experienced web developers that need to further extend their skills in web development

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### Course Objectives

Working within in an engaging, hands-on learning environment, guided by our expert team, attendees will learn to:

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

Best practices for Angular so that it works unobtrusively and performs well

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### Course Outline

#### 1 - Angular Overview

Overview of Angular Architecture

## 2 - Getting Started with Angular

Getting Started with TypeScript  
Bootstrapping with Angular CLI  
Angular Project Structure

## 3 - Unit Testing with Angular

Testing and Angular

## 4 - Working with Angular

Components and Events  
Third Party Libraries  
Dynamic Views  
Pipes

## 5 - Angular Forms

Forms and the Forms API

## 6 - Single Page Applications and Routes

Single Page Applications  
Services and Dependency Injection  
Modules

## 7 - Using RESTful Services

Overview of REST  
Angular and REST

## 8 - Angular Best Practices

Angular Style Guide  
What is New in Angular 9  
Additional Topics (Time Permitting)  
Lesson: ES6+  
Sass and SCSS for Angular and Material

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