

Syllabus

Developing Dynamic Web Applications Using Angular 2

Instructors:

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Course Description:

This course introduces the new Angular 2 web framework as a method of building web applications. The learner will briefly learn about the history of the platform to get a better context on how and why Angular 2 exists. The learner will have an opportunity to explore each component of Angular 2 and how they co-exist in a complete solution. The learner will gain experience with Angular 2 by implementing their own directives, components and services to create their own complex web applications. The course teaches the essential tasks necessary to create a basic Angular 2 web application and then covers the extensibility points currently available to extend the capabilities of a web application and enhance the built-in functionality of Angular 2.

Prerequisites:

Students should have the following experience:

- Equivalent HTML, JavaScript and CSS Experience of **DEV211.1x** (<https://www.edx.org/course/javascript-html-css-web-development-microsoft-dev211-1x>)
 - Course demonstrates some concepts in JavaScript
 - Angular 2 Templates are based on HTML syntax
- Equivalent TypeScript Experience of **DEV201x** (<https://www.edx.org/course/introduction-typescript-microsoft-dev201x-1>)
 - Angular 2 components are authored in TypeScript
 - Later course modules use advanced language features and configures the TypeScript compiler

Learning Outcomes and Objectives:

After completing this course, learners will be able to:

- Describe the relationship between Angular 2, HTML, Node Package Manager and TypeScript.
- Author Angular 2 Applications using Visual Studio Code.
- Create Custom Angular 2 Components, Modules, Directives and Services.
- Author Angular 2 Templates and Utilize Angular 2 Routing.
- Use Advanced TypeScript Language Features in Angular 2.
- Describe Dependency Injection and Unit Testing in Angular 2.
- Describe Angular 2 Application Lifecycle Events.

Course Outline:

Module 1: Getting Started with Angular 2

In this module, you will learn about the history of Angular 2 and will explore how to bootstrap a new Angular 2 application.

Module 2: Building Dynamic Applications using Angular 2

In this module, you will learn about components and modules and how they are used in the context of Angular 2. We will also explore the template syntax for HTML templates.

Module 3: Advanced Angular 2 Features

In this module, you will look at advanced Angular 2 features such as Dependency Injection and component lifecycles.

Module 4: TypeScript Features in Angular 2

In this module, you will explore some advanced TypeScript features and look at how they can be used to make Angular development easier.

Grading:

This course will be graded based on the following criteria:

Assessment Type	# of Assessments	% of Final Grade
Module Assessments	4	70%
Homework Labs	4	30%

A passing grade for this course is 50% or above.