

**Angular Unit Testing with Jasmine**

**Course Number:** ANG-184
**Duration:** 2 days

**Overview**

Accelebrate's live online or onsite Angular Unit Testing with Jasmine training course teaches attendees how to master the behavior-driven Jasmine test framework.

**Prerequisites**

Attendees should have prior familiarity with JavaScript, TypeScript, and modern Angular.

**Materials**

All attendees receive comprehensive courseware covering the topics in the class.

**Software Needed on Each Student PC**

* Google Chrome
* Other modern browsers as desired
* IDE/development environment of your choice
* Other free software (such as Node) and lab files that Accelebrate would specify

**Objectives**

* Learn synchronous and asynchronous testing with Angular components, pipes, and services
* Write component and DOM tests
* Configure Jasmine to behave the way you want
* Perform integration testing, including use of spies and mocks

**Outline**

* Unit testing in Jasmine
	+ Software Testing
	+ Types of tests
	+ Test Pyramid
	+ Unit Tests
	+ Jasmine, Karma and Angular
	+ Jasmine
	+ Karma
	+ Basic Terminology
	+ Test Suite
	+ Spec
	+ Assertion
	+ Matchers
	+ Setup and Teardown
	+ A Test Suite
	+ Auto-Generated Angular Test Suites
	+ Run a Test
* Jasmine Configuration
	+ Setup and Teardown
	+ Setup/Teardown Example
	+ Order of Execution
	+ Nested Test Suites
	+ Nested Test Suites Order of Execution
	+ Nested Setup/Teardown Order of Execution
	+ Custom Matchers
	+ Interface
	+ Matcher Factory
	+ Use the Matcher
	+ Run the Tests
	+ Disabling Suites and Specs
	+ The this Keyword
* Testing - Components, Pipes and Services
	+ Testing Components
	+ Testing the Class Only
	+ Example Component
	+ Test Component Class
	+ Test Component Class Example
	+ Test Component
	+ Test Component Example
	+ TypeScript async/await
	+ Change Detection
	+ DOM Element(s)
	+ Testing Pipes
	+ Pipe Class Example
	+ Pipe Spec Example
	+ Testing Services
	+ Service Class Example
	+ Service Spec Example
	+ Expecting an Error
* DOM, Routing and Code Coverage
	+ Testing in Angular
	+ Components
	+ Testing the DOM
	+ DOM Testing vs End-to-End Testing
	+ TestBed
	+ TestBed Use Cases
	+ Using TestBed
	+ ComponentFixture
	+ Get the Component and DOM Element
	+ Selecting DOM Elements with NativeElement
	+ Selecting DOM Elements with DebugElement
	+ Selection Examples
	+ Accessing Text
	+ Button Clicks
	+ Routing
	+ Routing Test Setup
	+ Routing Spec
	+ Code Coverage
	+ Detailed Coverage Summary
	+ Details
* Integration Testing
	+ Integration Testing
	+ Spies
	+ Service Class Example
	+ Spec
	+ Using a Spy to Return a Fixed Value
	+ Using a Spy to Return a Dynamic Value
	+ Injection
	+ Injection Example
	+ Injection in a Test Suite
	+ Mocks