

Rest assured that this course will cover all relevant bases to make sure you have all the necessary skills to work with key Scala Test frameworks:

- ScalaTest
- ScalaMock
- ScalaCheck

## Introduction

- Recap of automatic software testing
- Testing styles
- Discuss popular Testing Frameworks for Scala

## ScalaTest

- Overview of **ScalaTest**
- Testing **styles** (FunSuite, WordSpec, FlatSpec, FunSpec, ...)
- Using **Given-when-then**
- **Running** tests (using sbt, maven, junit, ...)
- Writing **assertions**
- Using the **Matcher DSL**
- Writing **fixtures**

## Scala Mock

- Introduction to **Scalamock**
- Discuss different **mocking techniques** (function, proxy and macro)
- Integrate with **ScalaTest** and **Specs2**
- Discuss and use **expectation-first** (mocking)
- Discuss and use **record-then-verify** (stubbing)
- using **argument matchers**
- expect method/function **calls**
- mocking behaviour by **returning values**

## ScalaCheck

- Introduce **property-based testing**
- Introduce **scalacheck**
- Introduce the **architecture** (key types)
- Running and integrating with other test frameworks
- Defining **generators**
- Configuration (thresholds, number of workers etc.)
- Add **reporting**
- Discuss various property-based **patterns**
- Discuss extensions (e.g, using **shapeless**)