

**Kotlin for JavaScript**

**Course Number:** MBL-234  
**Duration:** 2 days

**Overview**

This private, online Kotlin for JavaScript training teaches attendees how to how to use Kotlin to leverage JavaScript libraries and frameworks as well as Kotlin multi-platform libraries. In addition, participants learn how to write Kotlin wrappers around existing JavaScript code as well as auto-generate library wrappers from TypeScript type definition files.

**Prerequisites**

All attendees must already be comfortable with both Kotlin and React development. If your team is not up to speed on these technologies, Accelebrate's [Kotlin](file:////training/kotlin-introduction) and [React](file:////training/react) courses can be incorporated to create a customized Kotin with JavaScript course.

**Materials**

All attendees receive comprehensive courseware.

Course outline and materials are copyrighted and owned by [Instil Software](https://instil.co/).

**Software Needed on Each Student PC**

* Windows or Mac minimum 8 GB RAM
* Android Studio installed
* Provided lab files from Accelebrate

**Objectives**

* Understand where Kotlin/JS fits in the ecosystem
* Use Kotlin to create front-end apps via React
* Simultaneously leverage JavaScript (NPM) and Kotlin libraries
* Interoperate with native JavaScript
* Write Kotlin wrappers

**Outline**

* Introduction to Kotlin for JavaScript
  + Expanding Kotlin beyond the JVM
  + Differentiating the Legacy Compiler vs IR Backend
  + Supported platform templates in IntelliJ
  + JVM functionality not available in Kotlin/JS
  + Deconstructing a simple Kotlin/JS project
* Interoperating with JavaScript
  + Working with the provided platform libraries
  + Interacting with the DOM and Browser APIs
  + Consuming Promise based APIs from Kotlin
  + Writing JavaScript module wrappers manually
  + Understanding the external keyword
  + Using the Any and dynamic types
  + The limitations of Kotlin wrapping JavaScript types
  + Auto-generating wrappers using dukat
* React in Kotlin/JS
  + Examining the React DOM DSL
  + Attaching standard and custom attributes to elements
  + Writing class and functional components
  + Naming components for debugging
  + Use React Hooks and write custom hooks
  + Using delegation patterns for state
  + Writing DSL extensions
  + Understanding RProps for React props
  + The difference in functional components and extensions
* Going Deeper with Kotlin/JS
  + Leveraging coroutines for simpler code
  + Understanding as and unsafeCast
  + When to apply jsObject
  + When to apply json
  + Writing inline JavaScript with js
  + Customizing Webpack
  + Testing Kotlin/JS code
* Conclusion