Course : Kotlin, developing applications for Android

Practical course - 4d - 28h00 - Ref. OTA
Price : 2100 € E.T.

★★★★⯪ 4,2 / 5

On completion of the course, learners will be able to use the Kotlin programming language to develop native mobile applications and web applications for Android.

Teaching objectives

At the end of the training, the participant will be able to:

- Understand the syntax and basic concepts of the Kotlin language
- Getting to grips with the Android Studio environment
- Master the development cycle on this platform
- Be able to design, build and deploy an Android application
- Understanding essential Android APIs
- Developing user interfaces

Intended audience
Developers, project managers, architects...

Prerequisites
Working knowledge of a programming language (Java, C#, C++, JavaScript, Python, etc.).

Course schedule

1 Kotlin syntax and basic concepts

- Basic syntax, conventions.
- Code organization, types, packages, control flows.
- Classes and objects. Functions.
- Syntax complements.

Hands-on work
Creation of a "Hello World" program, using Kotlin JVM. Write some algorithms and classes.

PARTICIPANTS
Developers, project managers, architects...

PREREQUISITES
Working knowledge of a programming language (Java, C#, C++, JavaScript, Python, etc.).

TRAINER QUALIFICATIONS
The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS
The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

(2) The Android platform

- Android architecture, Linux. History and features.
- Target terminals.

Hands-on work
Discover Google Console Developer resources.

(3) Android development with Android Studio

- Basic concepts. The development cycle.
- The framework's basic classes.
- The project in Android Studio.
- SDK emulator. SDK tools, SDK manager, AVD manager.
- Using Android Studio tools: debugger, profiler, etc.
- Manifest parameters.
- Application production and publication.

Hands-on work
Handling and demonstration of Android Studio/IntelliJ.

(4) User interfaces

- General layout organization.
- Layout examples: LinearLayout, RelativeLayout, ConstraintLayout.
- Resources: drawables, string. Styles.
- Event management.

Hands-on work
Application development.

(5) The component model

- The mother-daughter activity relationship.
- Fragments, services, IntentServices.
- Intents and their management through activity.

Hands-on work
Development of an application involving several communicating activities.

(6) Data management

- Preferences.
- Files, internal and external storage.
- SQLite.
- Content providers.

Hands-on work
Store information in preferences, files, database.

TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

(7) Network management

- Asynchronous with Kotlin coroutines.
- Connectivity info. Using HTTP.
- Parsing JSON.
- Access to Web Services: Volley, Retrofit.

Hands-on work
Store data in JSON format, access Web Services.

(8) Supplements

- Telephony, SMS. Multimedia, audio and video.
- Sensors. Google location APIs.

Hands-on work
Implement geolocation.

Dates and locations

REMOTE CLASS
2026 : 23 June, 29 Sep., 17 Nov.

PARIS LA DÉFENSE
2026 : 23 June, 29 Sep., 17 Nov.