

# Course : Android Jetpack Compose, build a mobile application

*Practical course - 2d - 14h00 - Ref. JPK*

*Price : 1500 CHF E.T.*

Jetpack Compose is a modern toolbox for creating a native Android user interface. It simplifies and accelerates UI development on Android with intuitive Kotlin APIs. You'll learn how to use Jetpack Compose and manage complex interfaces and applications.

## Teaching objectives

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

- ✓ Using Jetpack Compose's graphical interface
- ✓ Create and compose a complex interface
- ✓ Implementing effects and animations in Jetpack Compose
- ✓ Using application constraints
- ✓ Divide the interface into reusable components

## Intended audience

Experienced Android and non-Android mobile developers. Anyone interested in building mobile applications.

## Prerequisites

Some knowledge of mobile application development.

## Course schedule

### 1 A reminder of the Android Studio project

- How do I start a traditional project in Android Studio?
- Study the main elements of the application. Activities, services, broadcastreceiver, applications...
- Traditional GUI construction with XML layouts. Advantages and disadvantages.

### Hands-on work

Take charge of an existing project and examine weak points.

### PARTICIPANTS

Experienced Android and non-Android mobile developers. Anyone interested in building mobile applications.

### PREREQUISITES

Some knowledge of mobile application development.

### 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 Using Jetpack Compose

- Android GUI development. New way to practice.
- Fundamental components. Basic composable functions: Text, TextField, Button, Progress Bar, AlertDialog...
- Assembling groups. Layouts: LinearLayout, Boxes, Scaffold...
- Create lists. Alternative to RecyclerView. Horizontal and vertical scrolling. Lists and grids.

### Hands-on work

Create your first Jetpack Compose application, using the initial project (2 screens) as an example.

## 3 Managing complex interfaces

- Compose an interface. Reusing components. Composing the interface, adding advanced elements.
- Use modifiers to apply styles. Link modifiers. Add font and background colors.
- Manage reports. Define stateless, Compose, ViewModel and LiveData composables. Use the Bar application.
- Apply Material Design. Manage events. Manage themes.

### Hands-on work

Enhance the existing application by adding additional screens.

## 4 Managing complex applications

- Use ConstraintLayout constraints. Attach elements to their neighbors or parents. Create an AppDrawer.
- Divide the interface into reusable components.
- Use effects. React at specific points in the life cycle.
- Using animations in Jetpack Compose. Animating properties, animating buttons or animating toast.

### Hands-on work

Implement drawer navigation by refactoring the interface.

### 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.