

BLOCK NAME	MOBILE PROGRAMMING I
BLOCK CODE	CS-L3B4
COURSE	2
LEVEL	3
CREDITS	6
CLASS HOURS	60
HOMEWORK	90
TOTAL HOURS	150

DESCRIPTION

This block introduces the basis of Android mobile programming.

We will face the challenge of creating an Android App by making use of Android Studio. This will include the management of Android Manifests, Graddle build files, activities, fragments and graphical widgets, event handling, layout and styling.

PRE-REQUISITES

Basic programming skills are needed. Knowledge about networking is desirable.

CS-L1B1, CS-L3B1

OBJECTIVES

The goal is for students to be able to write basic Android applications.

SKILLS TO BE DEVELOPED

1 - Android fundamentals.

1.1 - Understand the fundamentals of the Android operative system at user level.

1.2 - Understand the inner workings of the Android operative system compared to common PC linux distributions.

2 - Android Studio

2.1 - Be up and running with Android Studio.

3 - Applications, Activities and Fragments.

3.1 - Understand the Application Lifecycle.

3.2 - Be able to create new mobile Apps.

3.3 - Understand the Activity Lifecycle.

3.4 - Be able to add activities to Apps.

3.5 - Understand the Fragment Lifecycle.

3.6 - Be able to add fragments to activities.

4 - Android Manifest.

4.1 - Understand the Android Manifest structure and be able to modify it to meet the needs of your application.

5 - Graddle build files.

5.1 - Understand the Graddle build files structure and be able to modify them to meet the needs of your application.

6 - Graphical widgets.

6.1 - Understand how graphical widgets work.

6.2 - Add widgets to your application.

7 - Interactions and events.

7.1 - Write functions able to handle events.

7.2 - Bind event handlers functions.

8 - Layout.

8.1 - Be able to layout an App.

9 - Style.

9.1 - Be able to style an App.

SYLLABUS

- 1 - Android fundamentals.
- 2 - Android Studio.
- 3 - Applications, Activities and Fragments.
- 4 - Android Manifest.
- 5 - Graddle build files.
- 6 - Graphical widgets.
- 7 - Interactions and events.
- 8 - Layout.
- 9 - Style.

METHODOLOGY

Resolution of practical activities supervised by the mentor. Compulsory attendance.

DEDICATION AND EVALUATION

The student must pass the mandatory activities (challenges/projects) that are covered in the block. Each challenge/project produces its own score and has been designed to cover certain block percentages.

Such score is 80% objective (the program that solves the challenge/project works without errors and producing the expected results) and 20% subjective (solution elegance, how clean the code is, documentation).

Block scores are finally calculated by prorating individual activities with respect to their block coverage percentages.