

**Centre for Machine Learning and Intelligence
Multidisciplinary Course
Mobile Application Development**

**Semester: III
25MAIM03**

**Hours of Instructions / Week: 2
No. of Credits: 2**

Course Objectives:

1. To understand Android OS
2. To design and develop Mobile Apps in Android Studio
3. To run the developed apps on Android mobile phones

Unit 1: Introduction and Installation of Android

- 6 Hrs

Introduction to Android - Android Overview - Features of Android, Android Application Categories, Android version history, Android Architecture, Prerequisites for Android Studio installation. Installing Android Studio – JDK (Java Development Kit) installation, Android SDK installation (Create Android Virtual Device.)*

Unit 2: Application Design Essential

- 6 Hrs

Understanding Anatomy of Android Application, Android editor layout, Project file of the application, Android Manifest file, Java file of the application, Android Widgets, Attributes of the widgets, Building First Android application using TextView. Run the Application in the Virtual Device, Build APK file and install it in the Android mobile. Types of Android LayoutDesign – Linear Layouts, Absolute Layouts, Relative Layouts, Table Layout, (Frame Layout).*

Unit 3: Application for Beginners

- 6 Hrs

Develop an app using TextView, Develop an app using Button, Develop an app using IntentActivity, Develop an app using ImageView, (Develop an app using ImageButton)*

Unit 4: Condition based App Development

- 6 Hrs

Develop a program using Multiple Activity Pages, Develop an app using IF...else, Develop an app using Math Operation, Develop an app using Function, (Develop an app using Switch case).*

Unit 5: App Development using Other Widgets

- 6 Hrs

Develop an app using Checkbox, Develop an app using Audio player, Develop an app using MediaPlayer, Develop an app using Google Map, (Develop an app using WebView)*.

*** Indicates Self - Study Component
Total Hours: 30**

Reference Books:

1. M. Krishnaveni, P. Subashini, B. Preethi, (2020), "*I am your Android – Volume I, Simple Concepts*", Notion Press, Chennai, ISBN - ISBN-10: 1636330010, ISBN-13: 978-1636330013.
2. M. Krishnaveni, P. Subashini, B. Preethi, (2020), "*I am your Android – Volume II, Advanced Concepts*", Notion Press, Chennai, ISBN-10: 1636330118, ISBN-13 : 978-1636330112.
3. John Horton , (2021), "*Android Programming for Beginners: Build in-depth, full-featured Android apps starting from zero programming experience*", Packt Publishing Limited; 3rd Edition

E-Learning Resources:

1. <https://www.javatpoint.com/android-tutorial>
2. <https://www.youtube.com/watch?v=EknEIzswvC0&list=PLS1QulWo1RIbb1cYyzZpLFCK>
3. https://www.tutorialspoint.com/android/android_network_connection.htm
4. <https://www.geeksforgeeks.org/android-studio-tutorial/>

Course Outcomes:

- CO1: Know the functioning of Android OS and Android Studio Installation
- CO2: Build and run their own Mobile Apps
- CO3: Develop the mobile application using basic widgets
- CO4: Implement mobile application using condition statements
- CO5: Illustrate multimedia objects based mobile applications