

**Course Code: TCS 602**

**L T P C**

**Course Name: Mobile Application Development**

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**UNIT – I**

**10Hours**

**Mobile technology** : Overview of Mobile operating systems and platforms, Android- Installation and setting up of Android application development environment using Android Studio and SDK tools, debugging tools, Android Project components.

**Android Architecture:** Linux Kernel, Libraries, Android Runtime, Application Framework, Android Startup and Zygote, Android Permission model, Android Manifest File.

**UNIT – II**

**12 Hours**

**Android Application Components** : Android application components:- Activity- Life cycle, Creating activities, Broadcast Receivers- Generating broadcasts and handling types of broadcasts, Services- Life cycle and using Started services, Local bounded services, Messenger based services, IntentServices and AsyncTasks, Intents and pending Intents, System Services.

**UNIT – III**

**11 Hours**

**UI Design And Navigation:** UI Layouts and Layout properties( linear, relative, constraint etc), Fundamental Android UI Design, Drawable Resources, Images, Graphics, Audio, Video, Styles, Themes, Views( texts, buttons, spinners etc), viewgroups( Adapter, Grid, Recycler etc), Material design, animation and Transitions.

**Unit – IV**

**11 Hours**

**Event based Programming:** Event handling, Threads in Android using Executor framework, Swipes, Menus, Dialogs, Toasts, Notifications in Android, Lists & Adapters, Fragments. Sending requests and receiving responses from remote server( Rest api) using high end libraries.

**Unit - V**

**10 Hours**

**Working with Database:** Android Persistent data: preference files, working with internal and external files and directories, using Content providers to access and share data across applications, database connectivity using SQLite.

**Text Books:**

1. Professional Android fourth edition , Reto Meier, Ian Lake Wiley India Pvt Ltd.
2. Android Programming: The Big Nerd Ranch Guide (3rd Edition) by Bill Phillips.

**Reference Books:**

1. Android Studio Development Essentials by Neil Smyth
2. Android Application Development Cookbook: 93 Recipes for Building Winning Apps  
by Wei-Meng Lee.

