

GOVT. POLYTECHNIC, HAMIRPUR (H.P.)
Lesson Planning and Coverage

Branch: Information Technology

Semester: 5th

Subject: MADA

Session: July -2025

Teacher: Pratibha Thakur

Laboratory: PL Lab

| Sr. No. | No of Lectures | Chapter/Unit Description | Detailed contents | Reference Resources | Remarks |
|---------|----------------|---|--|---------------------|---------|
| 1 | 8 | Android Platform and Development Environment | Introduction to Android OS and its versions, Android Platform, Linux Kernel, Libraries, Android Runtime Core Libraries and Dalvik Virtual Machine, Application Framework, Android Development Environment, Android SDK, Android Studio IDE, Android Emulator, Debugging Android Applications | R1, R2, R3 | |
| 2 | 8 | Fundamentals of Android Application | Components of Android Application - Activities, Services, Broadcast Receivers, Content Providers; Activity, Service, Broadcast Receiver and Content Provider, Fragments, Views, Layouts and Intents; Manifest - Role, Declaring Components and Component Capabilities; Creating Android Application - Define Resources, Implement Application Classes, Package Application, Install & Run Application, XML | R1, R2, R3 | |
| 3 | 8 | The Activity Class | ActivityClass, Task Backstack, Activity States and Life Cycle, Activity Callback Methods - onCreate(), onStart(), onResume(), onPause(), onRestart(), onStop() and onDestroy(); Starting Activities; Handling Configuration Changes; Configuring the Manifest - Declaring Activities, Intent Filters and Permissions | R1, R2, R3 | |
| 4 | 8 | Intents, Permissions and Fragments | Use of Intent, Intent Class, Intent Types, Building an Intent, Intent Filter, Intent Resolution; Android Permissions, Defining Application Permissions, Component Permissions; Fragment, Role of Fragment, Fragment States and Life Cycle, Fragment Callback Methods, Adding Fragments to Activities | R1, R2, R3 | |
| 5 | 8 | Android User Interface | Views - TextView, EditText, AutoCompleteTextView, Button, ImageButton, CheckBox, ToggleButton, RadioButton, RatingBar; View Groups - RadioGroup, TimePicker, DatePicker, WebView, MapView, Gallery, Spinner; Adapter Views - ListView, Spinner, Gallery; View Events - Sources, Handling View Events, Common View Operations; Layouts | R1, R2, R3 | |

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|---|---|--|--|------------|--|
| | | | - Constrained Layout, Linear Layout, Relative Layout, Table Layout, Absolute Layout, Frame Layout, Grid View | | |
| 6 | 8 | Android User Notification, BroadcastReceiver and SQLite | Toast, Creating Toast Notification, Notification Area, Broadcast Receiver, Create and Register Broadcast Receiver, Broadcasting Custom Intents, Broadcast Receiver Event Handling, Manage Data using SQLite. | R1, R2, R3 | |

Pratibha Triakus
 01/18/25
 (Pratibha Triakus)
 Signature of Teacher with Date

Pankaj Triakus
 (Pankaj Triakus)
 Signature of HOD

Reference Books & Online Resources

1. Android Application Development for Dummies By Donn Felker, Wiley Pub..
2. Android Programming: The Big Nerd Ranch Guide By Bill Phillips, Pearson Pub.
3. Online Android Guides at <https://developer.android.com/guide>

Course Outcomes

After completing this course the students will be able to :

- CO-1. Understand the fundamental Android OS and applications terminology.
- CO-2. Design and implement basic applications for the Android platform.
- CO-3. Make use of virtual Android devices to test applications.
- CO-4. Install and run the applications of real Android devices.