

ANDROID PROGRAMMING

SYLLABUS

DEPARTMENT: DEPARTMENT OF COMPUTER SCIENCE

NAME OF COURSE: ANDROID PROGRAMMING

COURSE CODE: CPCC11

TOTAL HOURS: 120

UNIT-I GETTING STARTED

1. Introduction to Android.

- Overview
- Versions & Features

2. Environment Setup

- Setup JDK
- Setup SDK
- Installation of Android Studio
- Emulator

3. Android Architecture

- Linux Kernel
- Libraries
- Android RunTime
- Application Framework
- Applications

4. Application Components

- Activities
- Services
- Content Providers
- Broadcast Receivers

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UNIT- II WORKING WITH USER INTERFACE

5. Create Android Application

- Hello World Application
- Android Manifest
- XML
- String
- Resources

6. UI Controls

- Widgets
- Text
- Layout etc.

7. UI Layouts

- Linear Layout
- Relative Layout
- Absolute Layout
- Table Layout
- Frame Layout
- List View
- Grid View

8. Fragments

9. Intents

10. Styles & Themes

11. Event Handling

UNIT -III SAMPLE APPLICATIONS

12. Basic Examples

- Login Page
- Calculator
- Notification

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- Sending SMS and Email, Phone calls
- Bluetooth
- Camera App
- Location Based Services

13. Google Map

- Media

14. Images

15. Video

16. Audio

UNIT -IV DATABASE CONNECTIVITY

17. Data Storage

- Shared Preferences
- Android File Systems
- Internal Storage
- External Storage
- SQLite
- Introducing SQLite
- SQLite Open Helper and creating a database
- Opening and Closing a database
- Working with cursors, Inserts, updates and deletes.

UNIT -V FIREBASE

18. Introduction to Firebase

- Firebase overview
- Creating Firebase Project
- Implementing the Firebase API in Android Application

19. Firebase Authentication

- Design a login and registration form

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- Creating Users
- Authenticating Users

20. Firebase Database

- Realtime Database
- Cloud Firestore
- Storing and Retrieving data

21. Firebase Storage

- Storing Multimedia data in firebase
- Retrieving the data
- Modify the UI based on retrieved data