

BOS	Computer Science
Class	T.Y.B.Sc.C.S
Semester	VI
Subject Name	Android Programming
Subject code	PUSCS603
Level of The Subject	Medium

Course Objectives:

1. To provide comprehensive insight into developing applications running on smart mobile devices and demonstrate programming skills for managing tasks on mobile.
2. To provide a systematic approach for studying definition, methods and its applications for Mobile-App development.

Unit No.	Name of Unit	Topic No.	Content	No.Of Lectures
1	Introduction to Android	1.1	What is Android: Android, Obtaining the required tools, creating first android app, understanding the components of screen, adapting display orientation	15
		1.2	Action bar, Activities and Intents, Activity Lifecycle and Saving State, Basic Views: TextView, Button, ImageButton, EditText, CheckBox, ToggleButton, RadioButton, and RadioGroup Views	
		1.3	ProgressBar View, AutoCompleteTextView, TimePicker View, DatePicker View, ListView View, Spinner View	
2	Menus, Themes and Styles	2.1	Menus, Screen Navigation, RecyclerView, Drawables, Themes and Styles, Material design	15
		2.2	AsyncTask and AsyncTaskLoader, Connecting to the Internet	

		2.3	Broadcast receivers, Services, Notifications.	
3	Data – saving, Multimedia	3.1	Alarm managers, Transferring data efficiently Data - saving, retrieving and loading:	15
		3.2	Overview to storing data, Shared preferences, Internal Storage	
		3.3	Playing Audio and Video in Android	
4	SQLite	4.1	SQLite primer, store data using SQLite database	15
		4.2	Content Providers, loaders to load and display data	
		4.3	Permissions, performance and security, Firebase and AdMob, Publish your app	
Total No of Lectures				60

Course Outcomes:

1. Design and develop User Interfaces for the Android platform. (CO1)
2. Apply Java programming concepts to Android app development. (CO2)
3. Implement a menu bar in your activity (CO3)
4. Create interactive applications in android with multiple activities including audio, video and animation (CO4)
5. Use of Services, Broadcast Receiver, Notification (CO5)
6. Saving user data (CO6)
7. How to create applications using SQLite database (CO7)

Reference Books:

- 1) “Beginning Android 4 Application Development”, Wei-Meng Lee, March 2012, WROX

BOS	Computer Science
Class	T.Y.B.Sc.C.S
Semester	VI
Subject Name	Android Programming Practical
Subject code	PUSCSP608P
Level of The Subject	Medium

Practical No	Details
1.	Java Android Program to Perform all Operations using Calculators (addition, subtraction, multiplication, and division, Log, Clear)
2.	Create an android app that demonstrates Activity Lifecycle and Instance State.
3.	Create an android app with Interactive User Interface using different Layouts.
4.	Create an android app to create registration activity using different views and show data in another activity. and use Intent to transfer details to another activity
5.	Create an android app that demonstrates the use of Keyboards, Input Controls, Alerts , Pickers and Options Menu.
6.	Create an android app for Audio and Video
7.	Create an android app to Connect to the Internet and use BroadcastReceiver.
8.	Create an android app to show Notifications and Alarm manager.
9.	Create an android app that demonstrate Shared Preferences and Internal storage
10.	Create an android app to save user data in a database and use of different queries.