FACULTY OF COMPUTER APPLICATIONS

Programme	BCA Honors	Branch/Spec.	Computer Applications
Semester	V	Version	1.0.0.0
Effective from Academic Year	2026-2027	Effective for the batch Admitted in	June 2024
Subject Code	U35A1FAD	Subject Name	FUNDAMENTALS OF ANDROID DEVELOPMENT

Teaching scheme					Examination scheme (Marks)			
(Per week)	Lecture (DT)		Practical (Lab.)			CE	SEE	Total
	L	TU	P	TW				
Credit	2		2		4	Theory	50	50	100
Hours	2		4		6	Practical	-	-	-

Objectives:

Develop strong mobile apps and discover how to incorporate them with other services. utilizing Android services and components to create dependable, user-friendly mobile applications. Provide a fluid user experience that adapts to various mobile screen sizes.

Pre-requisites:

The two primary programming languages utilized in the creation of Android apps are Java and XML. Therefore, proficiency with these programming languages is a need for creating an Android app.

Course Outcomes :

Name of CO	Description
CO1	Understand the Android platform's Architecture and setup environment to build basic apps.
CO2	Understand core Android components like Activities, Intents, Services, and Broadcasts.
CO3	Design user-friendly interfaces using various layouts, UI components, and event-handling mechanisms.
CO4	Integrate multimedia features and menus in Android applications.
CO5	Develop data-driven Android apps using file handling, shared preferences, and SQLite.

Mapping of CO and PO												
Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	1	3	1	2	0	2	1	2	1

CO 2	3	3	3	1	3	1	2	1	3	1	2	1
CO 3	2	3	3	1	3	1	2	2	3	1	2	1
CO 4	2	2	3	1	3	1	2	2	2	1	2	1
CO 5	3	3	3	1	3	1	3	2	3	1	2	1

Content:

Unit		Hrs
1	**Introduction** History and evolution of Android, Application Components, Android Architecture, Setting up the development environment (Android Studio, SDK, Emulator), Android Emulator, Install Android, Creating and running a basic "Hello World" application, Dalvik Virtual Machine(DVM)	6
2	**Android Components** Activities and Activity Lifecycle, Intents (Explicit and Implicit), Services and Broadcast Receivers, Content Providers, Fragments, App Widgets and Notifications	6
3	**Graphical User Interface Screen with views** Layouts: Linear, Relative, Table, Frame, ScrollView, UI components: Buttons, TextViews, EditTexts, ImageViews, CheckBoxes, RadioButtons, Spinners, Getting Dates and Times from Users, Event handling and listeners, Dialogs and Toasts, Using Indicators to Display Data to Users,	6
4	**Structure and Working with Menus and Multimedia** Structure of Android Application, Define Menu, types of Menus, Capturing images using the camera, displaying images and animations, Playing audio and video files	6
5	**Database** Android Internal Storage, File, read-write in file, Data - saving, retrieving, and loading: Overview to storing data in file, Shared preferences, SQLite primer, store data using SQLite database, Crud (Create, read, delete and update) in database. Publish your app	6

Practical Content:

List of practical specified by the subject teacher based on above mentioned topics

Text Books:

1	**Beginning Android Application Development** By Wei-Meng Lee, Wrox Publication

Reference Books:

1	**Unlocking Android Developer's Guide** By Frank Ableson and Charlie Collins and Robi Sen,Manning Publication Co.
2	Master Android App Development eBOOK By AbhiAndroid

Web References / MOOC / Certification Course

1	https://developer.android.com/courses/android-basics-kotlin/course
2	https://www.my-mooc.com/en/categorie/android-development
3	https://onlinecourses.nptel.ac.in/noc20_cs52/preview

Question Paper Scheme:	
End Semester Examination Duration: (2 Hours Theory Examination) **Note for Examiner:** - Q-1 Any Five out of Seven (25 Marks) Q-2 Any Two out of Three (06 Marks) Q-3 Mandatory question (05 Marks) Q-4 Any Two out of Three (08 Marks) Q-5 Any Two out of Three (06 Marks) *The question paper must comprehensively address all Course Outcomes (COs), align Taxonomy levels, and ensure complete syllabus coverage.*	
4	https://www.coursera.org/learn/aadcapstone
5	https://www.mooclab.club/resources/java-fundamentals-for-android-development.1218/