Shastri III Year-VI Semester

GENERIC COURSE 6 (GE-6)

Course Name: - ANDROID PROGRAMMING

Introduction: This syllabus introduces Android programming, delving into the development of mobile applications for the Android platform, and covering key concepts and tools.

Objective: The objectives of this Android programming syllabus are to familiarize students with the Android development environment, and foster an understanding of best practices in Android app development.

Learning Outcomes: Students will exhibit the ability to publish and distribute Android apps, along with understanding fundamental principles of mobile app design and user experience.

Theory	**:** 60Marks
Internal Assessment	**:** 40 Marks

unit	Content	Hours	Credits
Unit - 1	What is Android? Features of Android, Dalvik Virtual Machine & .apk file extension, Steps to Install Android Studio, creating a Project in Android, Android Virtual Device (AVD), Creating AVD in Android Studio, Android API levels (versions & version names).	15	01
Unit - 2	Fundamentals: Basic Building blocks - Activities, Services, Broadcast Receivers & Content providers, UI Components - Views & notifications, Components for Communication -Intents & Intent Filters.	15	01
Unit - 3	User Input Controls, Menus, Screen Navigation, Recycler View, Drawable, Themes and Styles, Material design, providing resources for adaptive layouts, Async Task and Async Task Loader, connecting to the Internet, Broadcast receivers, Services, Notifications, Alarm managers, Transferring data efficiently	15	01
Unit - 4	Data saving, retrieving, and loading: Overview to storing data, Shared preferences, SQLite primer, storing data using SQLite database, Content Providers, loaders to load and display data, Permissions, performance, and security.	15	`01

Reference Text Books:

1. Beginning Android 4 Application Development by Wei-Meng Lee; Wiley India

2. "Beginning Android 4 Application Development", Wei-Meng Lee, March 2012, WROX.

3. Head First Android Development: A Brain-Friendly Guide, by David Griffiths and Dawn Griffiths, O'Reilly