Enc-1

Course Title	**Fundamentals of App Development**
Credit	**2**
Teaching per Week	**2 Hrs**
Minimum Week per Semester	**16 (Including Classwork, Examination, Practical, etc.)**
Purpose of course:	**This Course provide Practical knowledge of Android Application Development and some advanced discussion regarding publishing App on Play Store**
Objective:	• **To understand Android Mobile App Development** • **Understand UI Design and Implementation in Android** • **Creating Basic App in Android**
Pre-requisites	• **Basic knowledge of programming** • **Database Management and SQL Queries**
Course Content:	Unit 1: Basics of Java • Introduction to Object Orientation with Java • Classes, Objects, Methods, constructors. • Working with Inheritance and Interfaces • Working with Packages Unit 2: Android Fundamentals and Design • Android Basics with History and Versions • Installation of Android Studio, Emulator and other tools • Working with Layouts (Relative, Linear, Grid, TabLayout,) • Widgets (Textview, ImageView, Button, Toast, ImageButton, Checkbox, RadioButton, DatePicker, Progressbar) • Working with Intent • Multiple Activities Unit 3: Advanced Controls of Android • ListView, Recycler View • Dialogs (AlertDialog, CustomDialog, Rating Dialog). • Working with Fragments • Master/Details Design • Menu Design (Navigation Drawer) • Designing Sample App Unit 4: Working with Data • SQLite database (CRUD Operation) • API Calling (JSON Parsing, Volley library). • Shared Preferences Unit 5: Working with Android Services • Firebase(Firebase Auth, Firebase Database, Firebase Storage) • Notification, Call, Message Services • Deploying App

	• Publishing Apk file on PlayStore • Case Study
Reference Books:	**1) Android 9 Development Cookbook: Author - Rick Boyer, Publisher- Packt Publishing, ISBN - 978-1788991216** **2) Android Application Development (With Kitkat Support), Author: Pradeep Kothari, Publisher:DreamTech Press.,ISBN:978-9351194095** **3) Android Programming for Beginners - Second Edition, Author:John Horton, Publisher: Image Short ISBN: 978-1789538502** **4) Android 9 Development Cookbook, Author: Rick Boyer, Publisher: Packet Publishing, ISBN:978-1788991216** **5) Android Cookbook, 2e: Problems and Solutions for Android Developers, Author- Ian F. Darwin, Publisher – O'Reilly, 978-1449374433**
Teaching Methodology	• **Classwork** • **Discussion** • **Seminar** • **Self-Study** • **Practical Work** • **Lab Sessions**