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Mobile App Development — Complete Syllabus (Program Elective-2, Option 1)

BTEUP Diploma in Computer Science & Engineering • 5th Semester • Session 2026-27
Subject 5.3.1 (Practicum) • Total 100 Marks • 5 Credits • L 3 – P 4 • Choose this OR
Multimedia Technologies

Examination Scheme

Code	Paper	Type	L - P	Credits	Internal	External	Total
5.3	Program Elective-2: Mobile App Development	Practicum	3 - 4	5	40	Theory 60 (3 hrs)	100
Mobile App Development Total				5	40	60	100

What This Subject Aims To Do

To facilitate understanding of the Android SDK, to give a basic understanding of Android application development, and to inculcate working knowledge of the Android Studio development tool. By the end you should be able to: identify the concepts of mobile programming that make it unique from programming for other platforms; critique mobile applications on their design pros and cons; use rapid prototyping techniques to design and develop sophisticated mobile interfaces; program mobile applications for the Android operating system that use basic and advanced phone features; and deploy applications to the Android marketplace for distribution.

Unit-Wise Complete Topic List

Unit I — Introduction to Android

Topics: The Android platform; Android SDK; Eclipse installation; Android installation; building your first Android application; understanding the anatomy of an Android application; Android manifest file.

In simple words: Setting up for Android development and building your very first app, while learning what an app is made of inside.

Unit II — Android Application Design Essentials

Topics: Anatomy of an Android application; Android terminologies; application context; activities; services; intents; receiving and broadcasting intents; Android manifest file and its common settings; using intent filters; permissions.

In simple words: The core moving parts of an app: screens (activities), background work (services), and messages between parts of the system (intents), plus permissions.

Unit III — Android User Interface Design Essentials

Topics: User interface screen elements; designing user interfaces with layouts; drawing and working with animation.

In simple words: How to design screens people enjoy using: layouts, interface elements and animation.

Unit IV — Testing and Publishing

Topics: Testing Android applications; publishing Android applications; using Android preferences; managing application resources in a hierarchy; working with different types of resources.

In simple words: Making sure an app works properly, then getting it ready for real users — including settings (preferences) and resources.

Unit V — Using Common Android APIs

Topics: Using Android data and storage APIs; managing data using SQLite; sharing data between applications with content providers; using Android networking APIs; using Android web APIs; using Android telephony APIs; deploying an Android application to the world.

In simple words: The powerful built-in features: storing data, sharing data between apps, using the internet and phone features, and finally deploying your app.

Reference Books (as listed in the syllabus)

- Professional Android 2 Application Development — Reto Meier, Wiley India
- Beginning Android — Mark L. Murphy, Wiley India
- Android Application Development All-in-One For Dummies — Barry Burd

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Source: BTEUP 3rd Year curriculum (folder2627), approved in C.D.C. meeting held on 16.07.2026. Topic lists follow the official syllabus; short explanations are the author's own plain-English summaries, not syllabus text.

Please confirm with your own polytechnic for any local changes.

