

MOBILE APPLICATION DEVELOPMENT

COURSE OVERVIEW:

This course is concerned with the development of applications on mobile and wireless computing platforms. Android will be used as a basis for teaching programming techniques and design patterns related to the development of standalone applications and mobile portals to enterprise and m-commerce systems. Emphasis is placed on the processes, tools and frameworks required to develop applications for current and emerging mobile computing devices. Students will work at all stages of the software development life-cycle from inception through to implementation and testing. In doing so, students will be required to consider the impact of user characteristics, device capabilities, networking infrastructure and deployment environment, in order to develop software capable of meeting the requirements of stakeholders.

COURSE OBJECTIVES:

1. To facilitate students to understand android SDK
2. To help students to gain a basic understanding of Android application development
3. To inculcate working knowledge of Android Studio development tool

COURSE OUTCOMES:

At the end of this course, students will be able to:

1. Identify various concepts of mobile programming that make it unique from programming for other platforms,
2. Critique mobile applications on their design pros and cons,
3. Utilize rapid prototyping techniques to design and develop sophisticated mobile interfaces,
4. Program mobile applications for the Android operating system that use basic and advanced phone features, and
5. Deploy applications to the Android marketplace for distribution.

SYLLABUS

UNIT - I

Introduction to Android: The Android Platform, Android SDK, Eclipse Installation, Android Installation, Building your First Android application, Understanding Anatomy of Android Application, Android Manifest file.

UNIT - II

Android Application Design Essentials: Anatomy of an Android applications, Android terminologies, Application Context, Activities, Services, Intents, Receiving and Broadcasting Intents, Android Manifest File and its common settings, Using Intent Filter, Permissions.

UNIT - III

Android User Interface Design Essentials: User Interface Screen elements, Designing User Interfaces with Layouts, Drawing and Working with Animation.

UNIT - IV

Testing Android applications, Publishing Android application, Using Android preferences, Managing Application resources in a hierarchy, working with different types of resources.

UNIT - V

Using Common Android APIs: 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 Android Application to the World.

TEXT BOOKS:

1. T1. Lauren Darcey and Shane Conder, "Android Wireless Application Development", Pearson Education, 2nd ed. (2011)

REFERENCE BOOKS:

1. R1. Reto Meier, "Professional Android 2 Application Development", Wiley India Pvt Ltd
2. R2. Mark L Murphy, "Beginning Android", Wiley India Pvt Ltd
3. R3. Android Application Development All in one for Dummies by Barry Burd, Edition: I

