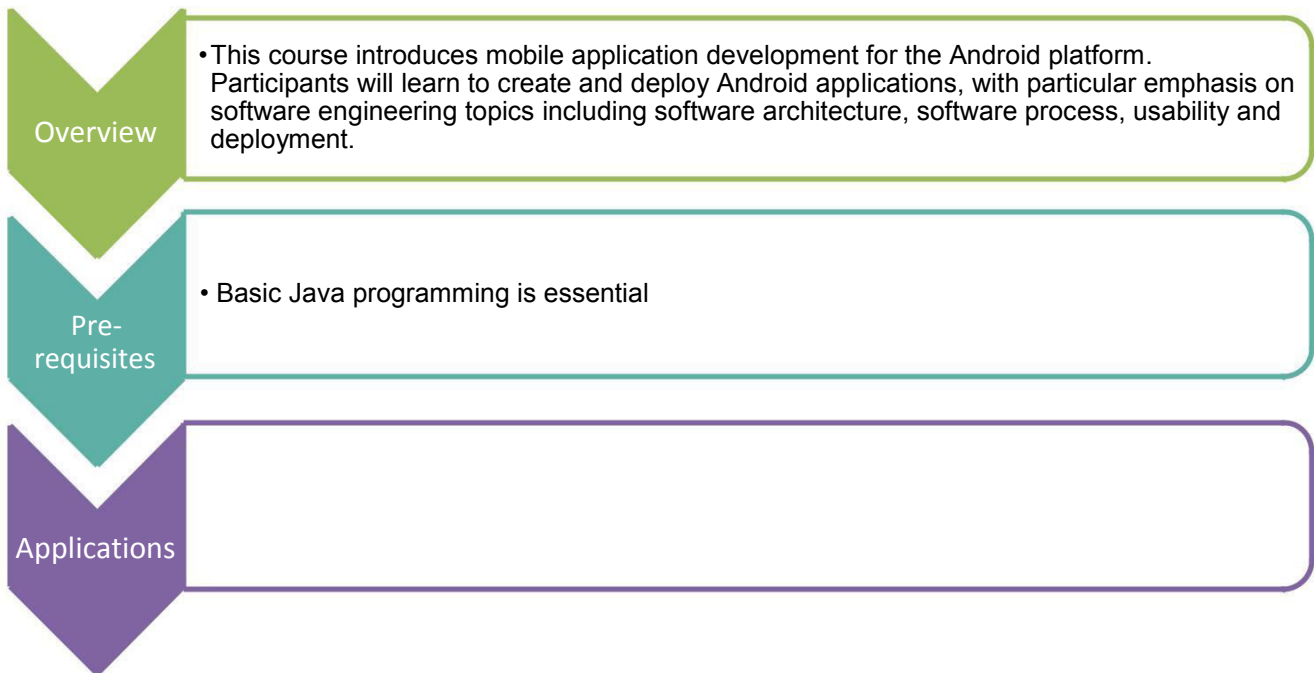


# Course Brochure



## COURSE CONTENTS

### Introduction

- ❖ Mobile Application Development
- ❖ Android Introduction
- ❖ History & Versions of Android
- ❖ Android Features
- ❖ Dalvik Virtual Machine
- ❖ Android Architecture
- ❖ Application Building Blocks
- ❖ Build Process of an Android Application

### Android Installation

- ❖ Java & JDK
- ❖ Eclipse IDE
- ❖ Android SDK
- ❖ Eclipse – ADT Plugin
- ❖ Creating Android Virtual Device
- ❖ **Android Studio Setup**
- ❖ Developing an Android Application
- ❖ R.java
- ❖ Android Manifest file
- ❖ Toast Notifications
- ❖ Localization
- ❖ Case Studies

### Android Application

- ❖ Activities
- ❖ Activity Lifecycle
- ❖ Intents
- ❖ Linking Activities using Intents
- ❖ Passing Data using an Intent
- ❖ Returning data from Activity
- ❖ Calling Built-in Applications using Intent
- ❖ Explicit Intents
- ❖ Implicit Intents
- ❖ Intent Filters
- ❖ Resources in an Android Application

- ❖ Debugging in Android Applications
- ❖ Dalvik Debug Monitor Server - DDMS
- ❖ LogCat

### Basic Android User Interface

- ❖ View Hierarchy
- ❖ How Android draws Views?
- ❖ Common Layout Objects
- ❖ FrameLayout
- ❖ LinearLayout
- ❖ TableLayout
- ❖ RelativeLayout
- ❖ AbsoluteLayout
- ❖ GridLayout
- ❖ Scroll View
- ❖ Text Controls
- ❖ Button Controls
- ❖ Other Common UI Components
- ❖ Handling User interaction Events

### Advanced User Interface

- ❖ List Controls
- ❖ Custom List Controls
- ❖ Day & Time Pickers
- ❖ Selection Components
- ❖ Spinner
- ❖ Adapters
- ❖ Card View, Web View
- ❖ Grid View, Gallery View, RecyclerView
- ❖ Drawer Layout
- ❖ TabHost
- ❖ Canvas & Paint
- ❖ Progress Bar
- ❖ Supporting Multiple Screens & Devices
- ❖ Styles & Themes
- ❖ Custom Themes

## COURSE CONTENTS

### Animations & Graphics

- ❖ Frame by Frame Animations
- ❖ Tween Animations
- ❖ Programmatically creating Animations
- ❖ Drawing Graphics in Android

### Menus & Dialogs

- ❖ Creating Menus
- ❖ Options Menu
- ❖ Context Menu
- ❖ Popup Menus
- ❖ Action Menus
- ❖ Alert Dialog
- ❖ Progress Dialog
- ❖ Date Picker Dialog
- ❖ Time Picker Dialog
- ❖ Status Bar Notifications

### Custom Components

- ❖ Custom Dialogs
- ❖ Custom Views
- ❖ Custom Adapters
- ❖ Custom ListView

### Multimedia

- ❖ MediaPlayer : Audio
- ❖ VideoView : Video
- ❖ Recording Media

### Preferences & Data Storage

- ❖ Shared Preferences
- ❖ Internal Storage
- ❖ External Storage
- ❖ Database Storage

### SQL ITE Databases

- ❖ Introducing SQLite
- ❖ SQLiteOpenHelper
- ❖ Creating a Database
- ❖ Opening and Closing a Database
- ❖ Creating Tables
- ❖ Create, Insert, Update & Delete data
- ❖ Working with Cursors
- ❖ Cursor Adapters
- ❖ Pre-creating a Database using SQLite Browser

### Android Services

- ❖ Overview of Services in Android
- ❖ Implementing a Service
- ❖ Service Lifecycle
- ❖ How to start and Stop a Service
- ❖ Threads for Service
- ❖ AsyncTask

### Web services

- ❖ XML
- ❖ XML Parsing
- ❖ JSON
- ❖ Exploring HttpURLConnection
- ❖ Thread & Runnable
- ❖ Using AsyncTask to Fetch & Parse JSON
- ❖ **Using Retrofit to Fetch & Parse JSON**
- ❖ Implementing SOAP Services
- ❖ Consuming a Web Service
- ❖ Android App working with PHP Web App

### Location based Services & GPS

- ❖ Working with Location Manager
- ❖ Fetch Users Current Location
- ❖ Reverse Geocoding using Geocoder
- ❖ Map Fragment

## COURSE CONTENTS

- ❖ Showing Current Location on Map
- ❖ Showing Markers on Map
- ❖ Exploring different Map Types
- ❖ Animated Zooming using Camera

### **Fragments**

### **Networking**

### **SMS & Email**

### **Picasso for Image Loading**

### **Butter Knife for Injecting Views**

### **Palette for extracting colors from images**

### **Times Square for showing Calendar View**

### **Cupboard for ORM**

### **Facebook Integration**

### **Google Drive Integration**

### **Dropbox Integration**

### **Broadcast Receivers**

### **Sensors**

### **WiFi**

### **Camera**

### **Telephony Manager**

### **Bluetooth**

### **Content Providers**

### **Publishing Android Applications**