

Android Syllabus

PRE-REQUISITE

- C, C++ Programming
- PL SQL

MODULE 1 [Fundamentals]

- OOPS
- Software Engineering
- SQL Queries
- Basics of Designing

MODULE 2 [Learning the Language (Java)]

- Introduction to Java
- Byte codes and Java Virtual Machine
- Data types
- Loops
- Conditionals
- Operators
- Arrays
- Classes and Objects
- Encapsulation
- Constructors
- Inheritance
- Method Overriding
- Polymorphism
- Abstract Methods and classes
- Interface
- Packaging
- Exceptional Handling
- Multitasking
- Primitive Data types
- Reference Data Types

- ❖ Loops
- ❖ Conditionals
- ❖ Operators
- ❖ Arrays
 - One- dimensional
 - Two-dimensional

- ❖ Multithreading
- ❖ Synchronization
- ❖ Java I/O
- ❖ XML Parse

MODULE 3 [Android OS]

- Introduction to Android
- Introducing Development Framework
- Dalvik Virtual Machine - DVM
- Developing with eclipse
- Android Virtual Device and SDK Manager
- Android Architecture and OOPS
- Android Development Tools
- Android Debug Bridge
- Types of Android Applications
- Android Architecture and OOPS
- Activity Lifecycle
- Activity Classes
- Introduction to Application Manifest
- Installing Android
- Component Lifecycle

MODULE 4 [Building Mobile Applications with Android]

- Android Layouts
- Android UI and Advance Java
- Android GUI Architecture
- Layouts
- Android Widget Toolbox
- GridView
- Understanding Android Menus
- Intents and Processes
- Graphics Animation and Multimedia
- Bitmaps
- Introduction to Audio on Android
- Introduction to Video
- Location and maps
- Using GEOCoder
- Android Text To Speech
- Interprocess Communication
- Internet Services
- Broadcast receivers
- Using Camera
- Sensor Manager
- Bluetooth
- Network
- Wi-Fi

- XML Parsing
- JSON Parsing
- SQLite Databases
- Services and Content Providers
- Introduction to Android NDK

MODULE 5 [Database Connectivity]

- SQLite Database
- SQLite Data Types
- Cursors and Content Values
- SQLite Open Helper
- Adding, Updating and Deleting Content

MODULE 6 [Applicability to Industrial Projects]

- Project Scope
- Database Dictionary
- Flow Chart
- High Level Requirements
- Using Bluetooth and NFC in Android device
- Localization in Android
- Configuration changes.
- Security and permissions
- Web Services Integration
- Deployment

