

## **Detailed Syllabus - Application Development Using Android**

**Duration: 288 Hrs.**

- Module 1: Computer Basics and Internet**
- Module 2: Introduction to Programming with C++**
- Module 3: Java Programming**
- Module 4: Introduction to Database with SQL Server**
- Module 5: Android Programming**
- Module 6: Basic Communication Skills**

### **Module 1: Computer Basics and Internet**

- Introduction to Computer
- Characteristics & Application of computer
- Generation & Classification of Computers
- Components of Computer
- Computer Memory
- Hardware and Software Concepts
- Operating System – Introduction, Types and Functions
- Working with Windows
- Managing files and folders
- Control Panel
- Window Accessories
- Compression utilities (winrar, winzip)
- Basic Troubleshooting
- Internet and E-mail

### **Module 2: Introduction to Programming with C++**

- Introduction to Programming Techniques
- Basic Concepts of Object Oriented Programming

- Object Oriented Languages
- Applications of Object Oriented Programming
- Beginning with C++
- Token Expressions & Control Structures
- Functions in C++, Classes & Objects
- Constructors & Destructors, Operator Overloading, Inheritance
- Pointers, Virtual Functions & Polymorphism
- Working with Files
- Exception handling

### **Module 3: Java Programming**

- What is Java?
- Features of Java
- OOPs Concepts
- JVM & JDK
- Data types, Variables, Operators & Control Structures
- Object & Classes
- Abstract, Static, Inner & Wrapper Classes
- Inheritance, Interfaces & Packages
- Access Control
- Exception Handling
- IO Package
- Multi- Threading
- Arrays & Strings
- Java AWT & Applets
- Swings
- Java JDBC

### **Module 4: Introduction to Database with SQL Server**

- Introduction to SQL Server
- Creating database and tables
- Data types in SQL Server
- Querying and modifying data
- Sub queries & Joins
- Views and Derived tables
- Introduction to programming with transact-SQL
- Introduction to Stored Procedures and Triggers

## **Module 5: Android Programming**

- Introduction to Android
- Architecture of Android
- Installing Android
- Software Development Kit & Android Virtual Device( Emulator)
- Create Simple Android Application
- understand the project structure of Android Application
- Dalvik Virtual Machine (DVM)
- UI Widgets & Event Handling
- Styles and Themes
- Activity, Intent & Fragment
- Android Menu & Service
- Android Notifications
- Android Storage
- Android SQLite
- XML and JSON
- Android Multimedia
- Android Speech & Telephony
- Device Connectivity
- Location Based Services
- Packaging and Deployment
- Android based Project

## **Module 6: Basic Communication Skills**

- Communication and its importance, Principal of effective communication
- Types of communication
- Body language
- Listening Skills - Importance of Effective Listening
- Difference between Hearing and Listening
- Measures to improve listening
- Employment skills- Contents of good Resume
- Guidelines for writing Resume
- Facing interviews
- Do's & Don'ts for an interview.