# सरकार मान्य





Advance Diploma In Software Engineering



A diploma in software engineering is a specialized educational Program that provides students with practical skills and knowledge In the field of software development and engineering. This type of Diploma typically focuses on teaching students the fundamentals of Software design, development, testing, and maintenance.

**Course Duration: - 18 MONTHS** 

#### Sem - 1: Web Programming

#### HTML 5

- Intro To Html
- Html Elements
- Text Formatting
- Lists In Html
- Img Tag
- Marquee Tag
- · Iframe Tag & Frameset Tag
- Html Table Tag
- · Internal And External Hyperlink In Html
- · Image Mapping

#### CSS 3

- **Css Properties**
- Css Styling
- Working With Block Elements And Objects
- **Css Class Selectors**
- Div Tags, Id Selectors, And Basic Page Formatting
- Borders, Border-radius, Border Images, Backgrounds Background Size Background-origin, Text Effects,
- · Transition Animation In Css

#### Javascript

- What is JavaScript?
- · History of JavaScript
- Variables
- Operators Expressions
- Statements
- Functions
- · What are objects? · Array iteration Sem - 2: Core Programming

- · Creating objects
- Accessing object properties Pages
- · What are arrays?
- · Creating arrays
- Accessing array elements
- · String properties
- Array methods
  - jQuery Syntax

## J-query & Xml

- What is jQuery ? What is markup?
- (Markup = Tagging) · Adding the jQuery Library to Your What are the
  - similarities between HTML and XML
  - Is XML is Replacement for
  - нтмі What are the differences

## C Language

- Programming Languages
- · Types of software
- Constants
- Data Types
- Variable Declaration
- · Variable Assignment
- · Arithmetic expressions
- Evaluation of expressions
- Relational operators
- · Logical operators

#### Sem - 3: Java Specialist

#### SQL

- · Learn Database models
- · Overview of SQL Server Management Studio and Transact-SQL language
- Master writing simple and complex queries that retrieve data from the database
- Calculate information across result sets using aggregate gueries (sum. min. max, avg, etc.)
- Insert, update, and delete data
- Retrieve data from tables

#### Core Java

- Introduction to Java and OOPS
- Java Tokens- Comments, Identifiers, Keywords, Separators
- Working with Java Editor Softwares -Editplus, NetBeans, Eclipse
- Packages with static imports
- Working with jar
- Modifiers File level, Access level and Non-access level
- Datatypes, Literals, Variables, Type Conversion, Casting & Promotion

#### Advance Java

- About Java Platforms
- Applications of Java
- About API (Application Programming Interface)
- Static Blocks
- · Introduction to interfaces
- · Runtime Polymorphism
- · Conditional operators
- File management system
- Disadvantages of File management
- Approch-2 X/Open standards

- Introduction to C++
- · Different paradigms of problem solving
- POP vs OOP
- Constants
- Variables
- Keywords
- · Data types
- · Declaration of Variables
- · Output Stream (cout) & Manipulators
- Input Stream (cin)

#### **⟨Sem - 4: Development ⟩**

#### PHP

- · Learn Database models
- · Overview of SQL Server Management Studio and Transact-SQL language
- Master writing simple and complex queries that retrieve data from the database
- · Calculate information across result sets using aggregate queries (sum, min, max, avg, etc.)
- · Insert, update, and delete data

# My SQL

- · Introduction to Java and OOPS
- Java Tokens- Comments, Identifiers, Keywords, Separators
- Working with Java Editor Softwares -Editplus, NetBeans, Eclipse
- Packages with static imports
- Working with jar
- Modifiers File level, Access level and Non-access level
- Datatypes, Literals, Variables, Type Conversion, Casting & Promotion
- Reading runtime values from

#### Advance Java

- · About Java Platforms
- · Applications of Java
- · About API (Application Programming Interface)
- Static Blocks
- · Introduction to interfaces
- · Runtime Polymorphism
- Conditional operators · File management system
- · Disadvantages of File management system

#### C#

- · Learn the fundamentals of C# programming in Visual Studio.
- · Using .Net Framework
- · Working with variables, data types
- · Work with standard programming skills
- Exception Handling in C#
- · Object oriented programming in C#
- · Object oriented techniques
- · Working with Arrays
- Create Generic classes and methods.
- Asymptotic Notations And Analysis, Divide And Conquer Strategy, Greedy Methods, Dynamic Programming, Basic Graph Algorithms, Np-completeness, And Approximation Algorithms.

Sad (System Analysis & Design)

Functions

Basic jQuery

Downloading

Alternatives to

Downloading

Example

jQuery

- · Using Multiple Libraries
- Jquery Noconflict() Method
- · Systems Analysis
- · Conceptual Design

#### Sem - 5: Android Developer

#### Introduction Of Android

- · Overview of Android
- · Java Editions and comparison with Android
- · Android Apps Design, Vendor, Behavioral Classification · Use Android SDK's Emulator to test
- and debug applications · Construct user interfaces with built-in
- views and layouts

#### · Define custom view and layout Android Web Development

- · Understanding Web Services
- · Web Services Architecture
- · Building Server side components · Publishing web services
- · REST based web services
- · Accessing Web Services
- · Overview of networking · Checking the network status and web
- service status · Working with HTTP to access the web services Publishing content providers

## Building the User Interface

- Creating the Activity
- · XML versus Java UI
- · Selection Widgets, Using fonts
- · Common UI components
- · Handling UI events: a bit about

· Material properties and Styling /

· What is material?

Animations

 Material Patterns · Overview of Android Resources

- · Activity: A screen that represents the
- user interface
- · Service: A component • Broadcast Receiver: A component that can respond to a broadcast message
- sent by a client
- · Content Provider: A component
- Adapters
- Complex UI components · Menus and Dialogs
- Tabbed Activities

#### Navigation Drawer Appwidget Data Handling Android

- Working with Intents
- · Explicit and implicit intents
- · Using Intents as messaging objects · Intents to start components expecting
- results
- · Storage Model selection criteria
- Shared preferences Internal Storage – Files
- External Storage SD Card

#### · Testing the created files, tools **Background Services**

- · Overview of Android services
- · Service lifecycle
- Declaring a service
- · Registering a service · Starting and stopping a service
- · Threads and other concurrency considerations with services
- · Bound versus unbound services
- · Remote versus local services
- · Using Location Manager, Location Provider

# Android Components