### Advance Diploma in Computer Application (ADCA)

#### **Course Duration:**

6 Months

#### **Eligibility:**

10th Grade or Equivalent

#### **Tools & Software Used:**

Windows 7/10, MS Paint, WordPad, Notepad, MS Word, MS Excel, MS PowerPoint, Web Browsers (Chrome, Firefox), Email Clients

#### **Learning Mode:**

Practical sessions with hands-on assignments and internet activities

## Module 1: Fundamentals of Computers, Operating Systems, and Basic Software

- Introduction to Computers: Overview of Computer Systems, Basic Computer Components, Types of Computers (Desktop, Laptop, Mobile Devices)
- Input and Output Devices: Keyboard, Mouse, Monitor, etc.
- Operating Systems: Introduction to Operating Systems, Basics of Windows 7/10, File Management (Explorer), Control Panel, User Accounts and Permissions
- Disk Operating System (DOS): Introduction to DOS, DOS Commands, File
  Management Using DOS Commands
- Basic Applications: MS Paint (Drawing Tools, Shapes, Brushes, Image Editing), Notepad (Text Editing), WordPad (Document Creation and Formatting)

## Module 2: Microsoft Office Suite and Visual Basic Programming

- Microsoft Word: Creating, Editing, and Formatting Documents, Using Tables, Graphics, Mail Merge, Page Layout and Printing
- Microsoft Excel: Data Entry, Cell Formatting, Basic Functions (SUM, AVERAGE, COUNT), Advanced Functions (VLOOKUP, IF, Pivot Tables), Charts and Graphs
- Microsoft PowerPoint: Creating Presentations, Using Layouts, Transitions, Animations, Multimedia, and Presentation Tools
- Internet & Email Essentials: Browsing the Web, Searching with Search Engines, Creating and Sending Emails, Email Etiquette
- Introduction to Cloud Services: Google Drive, OneDrive
- Visual Basic Programming: Basics of VB Syntax, Creating Forms, Writing Programs, Loops, Conditional Statements, Event Handling

# Module 3: Database Management, Graphic Design, and Web Development

- Microsoft Access: Database Concepts, Creating Databases, Tables,
  Queries, Forms, Reports, SQL Queries, Relational Databases
- Graphic Design: Introduction to Graphic Design Tools (Adobe Photoshop), Image Manipulation, Working with Layers, Filters, Color Theory, Design Principles
- Web Development with HTML & CSS: Introduction to Web Technologies, HTML Structure, Formatting Text and Images, CSS for Styling, Web Layout with Flexbox and Grid, Responsive Web Design, Forms, Tables

# Module 4: Advanced Visual Basic Programming & Application Development

- Advanced VB Programming: Control Structures, Arrays, Collections, File Handling, Debugging, Object-Oriented Programming (OOP) Concepts
- Developing Windows Applications: Designing Forms, User Inputs,
  Multiple Forms, Menus, Toolbars, Finalizing Applications

### ○ Module 5: Cloud Computing, Networking, and IT Security

- Cloud Computing: Introduction to Cloud Technologies, Cloud Storage,
  Google Drive, OneDrive, Cloud-based Collaboration Tools
- Networking Basics: IP Addresses, Subnets, DNS, Routers, Switches,
  Network Configuration
- IT Security Essentials: Cyber Security, Antivirus, Encryption, Online Safety, Firewalls

### **Learning & Certification**

- Proficiency in Microsoft Office applications (Word, Excel, PowerPoint, Access)
- Confident handling of Windows OS and everyday computer tasks
- Ability to create and format documents, spreadsheets, and presentations
- Basic understanding of databases and graphic design
- Skills in web technologies (HTML, CSS) for basic web development
- Application development using Visual Basic
- Knowledge of IT security and cloud computing tools