

Diploma in Computer Application (DCA) Syllabus

Total Duration: 180hrs

Module 1: Core Computer Applications & Digital Skills

Chapter 1: Computer Fundamentals & Operating Systems

- Evolution & Generations of Computers
- Types of Computers (Analog, Digital, Hybrid)
- Functional Components: Input, Output, CPU, Storage
- Hardware vs Software
- Number Systems (Binary, Decimal, Octal, Hexadecimal)
- Operating Systems:
 - Windows Interface and File Management
 - Basic Linux Overview (Ubuntu GUI)
- Control Panel Usage
- Introduction to System Maintenance & Troubleshooting

Chapter 2: MS Word – Professional Document Creation

- Word Interface: Ribbon, Menus, Shortcuts
- Creating & Saving Documents
- Paragraph Styling, Indents, Line & Page Breaks
- Table Creation, Formatting, and Layout
- Inserting Images, Charts, Hyperlinks
- Mail Merge for Bulk Letters & Labels
- Header, Footer, Page Numbering, Watermark

- Review Tab: Spelling, Grammar, Comments, Track Changes
- Page Setup, Print Settings, Export to PDF

Chapter 3: MS Excel – Data Analysis & Reporting

- Spreadsheet Navigation, Worksheets, and Ranges
- Cell Referencing: Relative, Absolute, Mixed
- Formatting Cells: Numbers, Date, Currency
- Basic & Advanced Formulas: SUM, IF, COUNTIF, VLOOKUP
- Charts & Graphs: Bar, Pie, Line, Column
- Data Tools: Sort, Filter, Remove Duplicates, Flash Fill
- Conditional Formatting & Data Validation
- Pivot Tables & Dashboards (Intro)
- Printing, Page Layout, Export Options

Chapter 4: Database Management (MS Access)

- Understanding databases: fields, records, tables
- Creating and saving a database
- Creating tables with different data types
- Designing forms for data entry
- Querying data using Select and Parameter queries
- Creating simple reports
- Sorting and filtering records
- Relationships and referential integrity
- Importing/exporting data from Excel

- Basics of macros and database security add this chapter in this

Chapter 5: MS PowerPoint – Presentations for Business & Education

- Creating New Presentations and Slide Layouts
- Applying Themes, Templates & Backgrounds
- Adding Multimedia: Images, Video, Audio
- Transitions & Animations
- Hyperlinks, Action Buttons, Interactive Navigation
- Rehearsed Timings & Slide Show Settings
- Exporting to Video, PDF, or Handouts

Chapter 6: Internet, Email & Digital Services

- Internet Basics: IP, Domain, Web Servers
- Web Browsers: Chrome, Firefox, Edge
- Search Techniques (Operators, Filters)
- Creating & Managing Email (Gmail/Outlook)
- Using Google Tools: Drive, Docs, Sheets, Forms
- Online Utilities: Ticket Booking, Bill Payment, Net Banking
- Introduction to Digital Wallets and UPI
- Cyber Safety:
 - Strong Passwords
 - Phishing, Malware
 - Social Media Awareness
 - Digital Footprint

Module 2: Elective Specialization

(Choose Any One Based on Interest or Career Path)

Option A: Adobe Photoshop – Image Editing & Graphic Design

- Photoshop Interface and Workspace Setup
- Working with Layers, Masks, and Selections
- Image Retouching & Color Correction
- Text Effects, Filters & Blending Modes
- Designing Posters, Certificates, Social Media Creatives
- Exporting for Print and Web Use

Option B: CorelDRAW – Vector Graphic Design

- CorelDRAW Interface & File Types
- Drawing Tools: Lines, Shapes, Curves
- Working with Layers and Pages
- Text Design and Typography
- Logo, Brochure & Business Card Design
- Export Formats for Web and Print

Option C: Programming in C

- Structure of a C Program
- Variables, Data Types, and Operators
- Input/Output Functions
- Conditional Statements: if, else, switch

- Loops: for, while, do-while
- Arrays: 1D & 2D
- Functions and Recursion
- Simple Programs (Calculator, Student Record, etc.)

Option D: Programming in C++ (OOP Concepts)

- C++ Syntax and Structure
- Data Types, Operators, and I/O Functions
- Control Structures: if, switch, loops
- Functions, Arrays, Pointers
- Classes & Objects
- Constructors and Destructors
- Inheritance and Polymorphism (Basic Concepts)
- File Handling in C++
- Mini OOP-Based Project (Banking System, Library Mgmt)

Option E: Web Designing with HTML & CSS

- HTML Basics: Tags, Elements, Structure
- Media Embedding: Images, Audio, Video
- Tables, Forms, and Input Fields
- CSS: Selectors, Box Model, Styling
- Responsive Layout (Intro to Flexbox/Grid)
- Hosting a Website on Free Platforms (Netlify, GitHub Pages)
- Final Mini Web Project: Personal Portfolio or Static Website

Option F: Python Programming (Beginner Level)

- Python Installation and IDE Setup
- Data Types, Variables, Operators
- Conditional Logic and Loops
- Lists, Tuples, Dictionaries
- Functions and Modules
- Basic File Handling
- Final Mini Project (To-Do App, Billing System)

Option G: Tally .ERP9 with GST & Payroll

- Creating Company and Configuration
- Ledgers, Groups, and Voucher Entry
- GST Setup: CGST, SGST, IGST
- GST Billing, Reporting, Return Filing
- Inventory Management: Items, Stock Groups, Units
- Payroll: Salary Structures, PF, ESI, Payslips
- Financial Reports: Day Book, Trial Balance, P&L, Balance Sheet