

Semester 1: Computer Fundamentals & Office Tools

- Introduction to computers: hardware, software, operating systems
- File management and system utilities
- **MS Office Suite**
 - MS Word: advanced formatting, templates, mail merge
 - MS Excel: formulas, functions, charts, pivot tables, macros
 - MS PowerPoint: slide design, animations, transitions, presentations
- Internet basics: browsing, email, cloud storage, online collaboration

Semester 2: Programming & Database Management

- **Programming Fundamentals**
 - Logic building, flowcharts, pseudocode
 - Basics of C / Python programming
 - Control structures, functions, arrays
- **Database Management Systems (DBMS)**
 - Introduction to databases
 - SQL queries (create, insert, update, delete, select)
 - MS Access / MySQL practicals
- Data security and backup concepts

Semester 3: Web Design & Development

- **HTML & CSS**
 - Structure of web pages, formatting, multimedia integration
 - Styling with CSS, responsive design basics
- **JavaScript Basics**
 - Variables, operators, events, DOM manipulation
- Introduction to Bootstrap framework
- Building simple static websites

Semester 4: Advanced Applications

- **Computerized Accounting**
 - Introduction to Tally ERP / QuickBooks
 - Recording transactions, GST/VAT basics
 - Generating financial reports
- **Advanced Excel for Business**
 - Data analysis, dashboards, automation with macros
- **Multimedia & Graphics**
 - Basics of Photoshop / Canva
 - Image editing and design for web

Semester 5: Networking & IT Concepts

- Networking fundamentals (LAN, WAN, Internet)
- Network devices (routers, switches, hubs)
- IP addressing and configuration basics
- Cybersecurity fundamentals (firewalls, antivirus, safe practices)
- Cloud computing basics

Semester 6: Projects & Internship

- Create a business report in Word
- Build a financial dashboard in Excel
- Develop a database project in MySQL
- Design a personal portfolio website (HTML, CSS, JS, Bootstrap)
- Final project: Complete business application or website
- Internship / industry training

Learning Outcomes

By the end of the ADCA course, students will:

- Gain strong knowledge of computer fundamentals and office tools
- Develop programming and database management skills
- Design and build websites using HTML, CSS, JS, and Bootstrap
- Apply accounting software for business tasks
- Understand networking and cybersecurity basics
- Create real-world projects and prepare for IT careers