

# COMPUTER APPLICATION AND PROGRAMMING

## 01.Certificate in Basic Computer Application. (Duration 03 Months.)

Introduction to Computer Applications

Course Duration: 3 Months

Week 1-2: Basic Computer Skills

### Module 1: Introduction to Computers

- Understanding the history and evolution of computers
- Identifying key components of a computer system
- Familiarity with input, output, storage devices

### Module 2: Operating Systems

- Introduction to popular operating systems (Windows, MacOS, Linux)
- File management and organization
- Basic troubleshooting and system maintenance

Week 3-4: Microsoft Office Suite

### Module 3: Microsoft Word

- Creating and formatting documents
- Working with tables and images
- Collaboration and sharing features

### Module 4: Microsoft Excel

- Introduction to spreadsheets and cells
- Basic formulas and functions
- Data visualization using charts

### Module 5: Microsoft PowerPoint

- Creating effective presentations
- Slide design and layout
- Incorporating multimedia elements

Week 5-6: Internet and Web Basics

### Module 6: Internet Fundamentals

- Navigating web browsers
- Understanding URLs and web addresses
- Using search engines effectively

### Module 7: Email and Online Communication

- Setting up and managing email accounts
- Writing professional emails
- Understanding netiquette

Week 7-8: Introduction to Programming Concepts

### Module 8: Basics of Programming

- Introduction to algorithms and pseudo code

⌚ Understanding variables and data types



Basic concepts of control structures (if statements, loops)

### **Module 9: Introduction to a Programming Language (e.g., Python)**

⌚ Writing and executing simple programs

⌚ Debugging and troubleshooting

⌚ Basics of coding best practices

### **Week 9-10: Data Management and Security**



#### **Module 10: Data Management**

⌚ Introduction to databases

⌚ Basics of data organization and retrieval

⌚ Data security and privacy



#### **Module 11: Computer Security Basics**

⌚ Understanding malware and antivirus software

⌚ Password management

⌚ Safe online practices

### **Week 11-12: Project and Practical Applications**



#### **Module 12: Practical Applications**

⌚ Applying learned skills to real-world scenarios

⌚ Group project: Developing a simple application or solving a problem using computer applications

⌚ Presentation of projects and feedback



## 02.Certificate in Advance Computer Application. (Duration 06 Months.)

### Advanced Computer Applications

Course Duration: 6 Months

#### Month 1-2: Advanced Microsoft Office Applications

##### Module 1: Advanced Microsoft Word

- Mastering styles and formatting
- Document automation with templates
- Advanced collaboration features

##### Module 2: Advanced Microsoft Excel

- Advanced formulas and functions
- Data analysis using pivot tables
- Macros and automation

##### Module 3: Advanced Microsoft PowerPoint

- Multimedia and animations
- Advanced presentation techniques
- Customizing slide shows

#### Month 3-4: Web Development Basics

##### Module 4: HTML and CSS

- Building and styling web pages
- Introduction to responsive design
- Basic web page optimization

##### Module 5: Introduction to JavaScript

- Basics of programming with JavaScript
- Interactivity and dynamic content on web pages
- Introduction to popular JavaScript libraries

##### Module 6: Basics of Web Development Tools

- Using code editors (e.g., Visual Studio Code)
- Version control
- Introduction to web development frameworks (e.g., Bootstrap)

#### Month 5-6: Database Management and Advanced Programming

##### Module 7: Relational Databases and SQL

- Designing and managing databases
- Writing complex SQL queries
- Database normalization and optimization

##### Module 8: Advanced Programming Concepts

- Object-oriented programming (OOP)
- Advanced data structures and algorithms
- Introduction to a high-level programming language (e.g., Java, C#)

##### Module 9: Software Development Lifecycle

- Understanding the software development process

- ⌚ Basics of software testing and debugging
- ⌚ Collaboration tools for software development

### Month 7-8: Advanced Web Development and Cloud Computing

#### ⌚ Module 10: Advanced Web Development

- ⌚ Server-side scripting (e.g., Node.js)
- ⌚ Building dynamic web applications
- ⌚ REST full API development

#### ⌚ Module 11: Cloud Computing Basics

- ⌚ Introduction to cloud platforms (e.g., AWS, Azure)
- ⌚ Cloud storage and services
- ⌚ Deploying applications on the cloud

#### ⌚ Module 12: Final Project

- ⌚ Individual or group project leveraging advanced skills learned
- ⌚ Application development, web development, or database management project
- ⌚ Project presentation and feedback






### 03. Certificate in Computer Application & Office Management. (Duration 12 Months.)

**Computer Application & Office Management**




**Course Duration: 12 Months**

**Module 1-2: Introduction to Computer Applications and Office Environment**




#### **Week 1-4: Computer Fundamentals**

-  Introduction to computer hardware and software
-  Operating system basics
-  File management and organization

#### **Week 5-8: Microsoft Office Suite Basics**




-  Word processing (Microsoft Word)
-  Spreadsheet basics (Microsoft Excel)
-  Creating presentations (Microsoft PowerPoint)

#### **Week 9-12: Office Management Essentials**




-  Communication skills in the workplace
-  Time management and organizational skills
-  Introduction to office protocols and etiquette

**Module 3-4: Advanced Microsoft Office Applications**




#### **Week 13-16: Advanced Word Processing**

-  Advanced document formatting and styles
-  Mail merge and automation
-  Collaboration features in Microsoft Word

#### **Week 17-20: Advanced Spreadsheet Techniques**




-  Advanced Excel functions and formulas
-  Data analysis using pivot tables and charts
-  Excel data validation and protection

#### **Week 21-24: Advanced Presentation Skills**




-  Multimedia and animations in PowerPoint
-  Creating interactive presentations
-  Design principles for effective communication

**Module 5-6: Business Communication and Professional Development**

#### **Week 25-28: Effective Business Writing**

-  Writing professional emails and memos
-  Business report writing
-  Communication strategies in a business environment

#### **Week 29-32: Professional Development Skills**

-  Resume writing and job search strategies
-  Interview skills and techniques
-  Networking and building a professional online presence

**Module 7-8: Database Management and Record Keeping**

#### **Week 33-36: Database Management**

-  Introduction to databases and data modeling

🕒	Structured Query Language (SQL)
🕒	Database administration basics
🕒	<b>Week 37-40: Record Keeping and Information Management</b>
🕒	Importance of record keeping
🕒	Electronic filing systems
🕒	Data security and privacy
	<b>Module 9-10: Project Management and Collaboration Tools</b>
🕒	<b>Week 41-44: Project Management Basics</b>
🕒	Introduction to project management principles
🕒	Using project management tools (e.g., Trello, Asana)
🕒	Team collaboration and coordination
🕒	<b>Week 45-48: Virtual Collaboration Tools</b>
🕒	Introduction to virtual collaboration platforms
🕒	Online meetings and document collaboration
🕒	File-sharing and version control
	<b>Module 11-12: Office Technology Trends and Final Project</b>
🕒	<b>Week 49-52: Office Technology Trends</b>
🕒	Overview of emerging technologies in the workplace
🕒	Automation and artificial intelligence in office tasks
🕒	Adaptation to remote work and flexible office setups
🕒	<b>Week 53-56: Final Project and Presentation</b>
🕒	Culminating project incorporating learned skills
🕒	Presentation of the final project
🕒	Feedback and evaluation
	<b>Assessment and Evaluation:</b>
🕒	Continuous assessment through assignments and quizzes
🕒	Mid-term and final exams
🕒	Evaluation of project work and presentations
🕒	Participation and engagement in class activities

## 04.Certificate in Financial Accounting. (Duration 06 Months.)

### Financial Accounting

Course Duration: 6 Months

#### Module 1: Introduction to Financial Accounting (Week 1-4)

##### Week 1-2: Basics of Accounting

- Understanding the accounting equation
- Types of accounts: assets, liabilities, equity, income, and expenses
- Principles of double-entry accounting

##### Week 3-4: Financial Statements

- Preparation and interpretation of financial statements
- Income statement, balance sheet, and cash flow statement
- Analysis of financial performance

#### Module 2: Recording Financial Transactions (Week 5-8)

##### Week 5-6: Journal Entries and General Ledger

- Recording transactions in journals
- Posting to the general ledger
- Trial balance and adjusting entries

##### Week 7-8: Accrual Accounting

- Understanding accruals and deferrals
- Adjusting entries for accruals and deferrals
- Accrual vs. cash basis accounting

#### Module 3: Accounting for Merchandising Businesses (Week 9-12)

##### Week 9-10: Inventory Valuation

- Methods of inventory valuation
- FIFO, LIFO, and weighted-average methods
- Impact of inventory valuation on financial statements

##### Week 11-12: Revenue Recognition and Cost of Goods Sold

- Recognizing revenue and matching expenses
- Calculating cost of goods sold (COGS)
- Merchandising business financial statements

#### Module 4: Internal Controls and Fraud Prevention (Week 13-16)

##### Week 13-14: Internal Control Systems

- Importance of internal controls
- Components of an internal control system
- Monitoring and improving internal controls

##### Week 15-16: Fraud Prevention and Detection

- Types of fraud in accounting
- Red flags and indicators of fraud
- Fraud prevention and detection measures

#### Module 5: Budgeting and Management Accounting (Week 17-20)

##### Week 17-18: Budgeting Basics

- Purpose and importance of budgeting
- Types of budgets: operating, financial, and master budgets



⌚ Budget preparation and analysis

⌚ **Week 19-20: Management Accounting**

⌚ Cost behavior and classification

⌚ Break-even analysis

⌚ Variance analysis and performance measurement

**Module 6: Financial Statement Analysis and Reporting (Week 21-24)**

⌚ **Week 21-22: Ratio Analysis**

⌚ Interpreting financial ratios

⌚ Liquidity, solvency, profitability ratios

⌚ Benchmarking and industry comparisons

⌚ **Week 23-24: Financial Reporting**

⌚ Corporate financial reporting requirements

⌚ Analysis and interpretation of annual reports

⌚ Communicating financial information to stakeholders





## 05.Certificate in Web & Logo Designing. (Duration: 06 Months.)

### Web & Logo Designing

Course Duration: 6 Months

#### Module 1-2: Introduction to Design Principles (Week 1-4)



##### Week 1-2: Basics of Design



Understanding design elements: color, shape, line, space



Introduction to typography



Principles of design: balance, contrast, emphasis, and unity



##### Week 3-4: Introduction to Web and Logo Design



Basics of web design principles



Basics of logo design and branding



Tools and software introduction (e.g., Adobe Photoshop, Illustrator)

#### Module 3-4: Basic Web Design (Week 5-8)



##### Week 5-6: HTML and CSS Basics



Understanding HTML tags and structure



Introduction to CSS for styling



Building a simple static webpage



##### Week 7-8: Responsive Web Design



Principles of responsive design



Media queries and flexible layouts



Testing and optimizing for various devices

#### Module 5-6: Advanced Web Design (Week 9-12)



##### Week 9-10: JavaScript for Web Designers



Basics of JavaScript for interactivity



Implementing simple animations and effects



Introduction to popular JavaScript libraries (e.g., jQuery)



##### Week 11-12: User Experience (UX) Design



Understanding user behavior and psychology



Wireframing and prototyping



Conducting usability testing

#### Module 7-8: Logo Design and Branding (Week 13-16)



##### Week 13-14: Logo Design Principles



Elements of a successful logo



Color psychology in logo design



Typography and symbolism



##### Week 15-16: Branding and Visual Identity



Developing a cohesive visual brand identity



Application of logos across different media



Case studies of successful branding

#### Module 9-10: Graphic Design Software (Week 17-20)



##### Week 17-18: Adobe Photoshop for Design



Basics of image editing and manipulation



Creating graphics for web and print



Introduction to layers and filters



### **Week 19-20: Adobe Illustrator for Vector Graphics**



Creating vector illustrations and logos



Working with paths and shapes



Exporting graphics for various applications

### **Module 11-12: Project Work and Portfolio Development (Week 21-24)**



#### **Week 21-22: Web Design Project**



Design and develop a complete website



Incorporating learned principles and techniques



Usability testing and feedback



#### **Week 23-24: Logo Design and Branding Project**



Designing a logo and creating a visual brand identity



Developing a brand style guide



Portfolio development and presentation

