



# CMC

## COMPUTER TRAINING INSTITUTE

**Call/ WhatsApp:**

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**MADHYAMGRAM**

138 Bankim Pally (East), Ananda Villa 1st Floor, Near Madhyamgram  
Railway Station. Landmark: Madhyamgram Girls' High School.  
Email: [admin@cmcmadhyamgram.com](mailto:admin@cmcmadhyamgram.com) / [info.cmcmmg@gmail.com](mailto:info.cmcmmg@gmail.com)

## GENERAL COURSES

### **Certificate Course in Office Automation (3 Months)**

Computer Fundamentals, Windows, MS Word, Excel, PowerPoint, Internet & Email, Outlook, Practical Office Applications.

### **Certificate Course in IT & Advanced Office Management (6 Months)**

Computer Fundamentals, Operating Systems, Word, Excel, Advanced Excel, PowerPoint, Internet & Email, Google Workspace, Database Concepts, Basic Web & Graphics.

### **Certificate Course in Advanced Excel (2 Months)**

Advanced Formulas, Lookup Functions, Conditional Formatting, Pivot Table & Pivot Chart, Data Validation, Macros, Financial Functions, Dashboard & MIS Reporting, Access.

## SPOKEN ENGLISH

### **Certificate Course in Communication Skills (4 Months)**

Spoken English, Grammar, Business Communication, Email Writing, GD, Interview Skills, Presentation Skills, Resume Writing.

### **Certificate Course in Advanced Communication Skills (2 Months)**

Advanced Spoken English, Public Speaking, Group Discussion, Marketing Communication, News Presentation, Personality Development.

## SCHOOL COMPUTER COURSE

We Cover: Complete School, Computer Science & Computer Application syllabus for ISC, CBSE & West Bengal Board (WBBSE/WBCHSE), Programming (Python, Java, C++), Office, Practical Classes, Project Work, Exam Preparation, Doubt Clearing Sessions and Model Test.

# CERTIFICATE COURSE IN ARTIFICIAL INTELLIGENCE (AI) & MACHINE LEARNING (ML)

**9**  
Months

## **STAGE – I :** **PYTHON PREREQUISITES**

Python Introduction, Variables, Data Types, Operators, Conditional Statements, Loops, Functions & Scope, Lists, Tuples, Sets, Dictionaries, String Handling, File Handling, Exception Handling, Object-Oriented Programming (Classes & Objects), Basic Programming Logic, Hands-on Programming Exercises.

## **STAGE – II :** **DATA SCIENCE & PREPROCESSING**

Introduction to Data Science, NumPy for Numerical Computing, Pandas for Data Analysis, Data Wrangling, Data Visualization with Matplotlib & Seaborn, Data Cleaning, Missing Value Treatment, Outlier Detection, Feature Scaling, Feature Encoding, Data Normalization, Exploratory Data Analysis (EDA), Dataset Preparation for Machine Learning.

## **STAGE – III :** **MACHINE LEARNING WITH PYTHON**

Introduction to Machine Learning, Supervised Learning, Linear Regression, Logistic Regression, Decision Trees, Random Forest, Support Vector Machine (SVM), K-Nearest Neighbors (KNN), Unsupervised Learning, K-Means Clustering, Principal Component Analysis (PCA), Clustering Techniques, Model Evaluation Metrics, Cross Validation, Hyperparameter Tuning, Grid Search, Overfitting & Underfitting, Model Optimization, Real-World Machine Learning Projects.

### **TOOLS**

Scikit-learn, Jupyter Notebook, MLflow (Introduction).

## **STAGE – IV :** **DEEP LEARNING & AI**

Introduction to Artificial Intelligence, Perceptron & Activation Functions, Forward Propagation, Backward Propagation, Artificial Neural Networks (ANN), TensorFlow, Keras, Convolutional Neural Networks (CNN), Image Processing with CNN, Recurrent Neural Networks (RNN), Long Short-Term Memory (LSTM), Natural Language Processing (NLP), Transfer Learning, Introduction to Transformers, Computer Vision with OpenCV, Hugging Face Transformers, AI Model Development, Deep Learning Projects.

### **TOOLS**

TensorFlow, Keras, PyTorch, OpenCV, Hugging Face



# DATA ANALYTICS

## Certificate Course in Data Analytics

(6 Months)

Topics: Excel for Analytics, Power Query, Power BI, Data Cleaning, Data Modeling, DAX, Dashboard Design, Business Intelligence, Mini Projects.

## Certificate Course in Power BI

(3 Months)

Topics: Power BI Desktop, Power Query, Data Modeling, DAX, Interactive Dashboards, Report Publishing, Power BI Service.



# DIPLOMA IN DATA ANALYSIS WITH MIS

**12**  
Months

## **SEMESTER – I [6 Months]** **CERTIFICATE COURSE IN** **IT AND ADVANCED EXCEL WITH DBMS**

### **OFFICE AUTOMATION**

Fundamentals of Computer Systems, Hardware & Software, Input & Output Devices, File & Folder Management, Creating, Organizing, Deleting & Restoring Files, Internet & Email Operations, Gmail Account Creation, Email Management with Attachments, Downloading Images, Screenshot Capture, File Conversions, Microsoft Word Document Creation & Formatting, Tables, Pictures, Mail Merge, Printing, Microsoft PowerPoint Presentation Design, Text, Images, Themes, Transitions, Animations, Slide Shows, Document Password Protection, Practical Office Productivity Skills.

### **ADVANCED EXCEL WITH VBA**

Data Entry & Worksheet Management, Formatting & Text Formatting, Basic Formulas, Chart Creation, Workbook Protection, Sorting, Filtering, Conditional Formatting, Data Validation, IF, Nested IF, AND, OR Functions, Text Functions, Date Functions, SUMIFS, COUNTIFS, AVERAGEIFS, MAXIFS, MINIFS, VLOOKUP, XLOOKUP, INDEX & MATCH, Database Functions, Financial Functions, CONCATENATE, SUBSTITUTE, DATEDIF, Pivot Tables, Pivot Charts, Advanced Charts, Dashboards, What-If Analysis, Goal Seek, Forecasting, Trend Analysis, Data Import, Data Transformation, Data Cleaning, Query Merging, VBA Editor, Programming Basics, Variables, Data Types, Loops, Macros, Working with Worksheets & Ranges, User Forms, Form Controls, Data Validation.

### **DBMS**

Database Creation, Table Design, Queries, Forms, Reports, Relationships, Database Management Using Microsoft Access.

## **SEMESTER – II [6 Months]** **CERTIFICATE COURSE IN BUSINESS INTELLIGENCE**

### **POWER BI FOR DATA ANALYSIS**

Introduction to Power BI Desktop, Power BI Desktop Installation, Connecting Data Sources (Excel, CSV, Web, SQL), Data Transformation, Power Query Editor, Filtering, Sorting, Removing Duplicates, Merging Queries, Appending Queries, Column Splitting, Data Formatting, Creating Custom Columns, Table Relationships, Primary Keys, Foreign Keys, Star Schema, Snowflake Schema, Data Modeling, Calculated Columns, Measures, Introduction to DAX, DAX Functions, Time Intelligence Functions, Dashboard Creation, Charts, Maps, Tables, Slicers, Conditional Formatting, Filters, Drill Through, Custom Visuals from Marketplace, Sales Data Analysis, Financial KPI Analysis, HR & Employee Data Insights, HR Analytics Dashboard, Sales Dashboard.

### **DATABASE MANAGEMENT USING MySQL**

Introduction to Databases, MS Access, MySQL, Data Types, Constraints, Primary Key, Foreign Key, Creating Tables, Altering Tables, Inserting Data, Updating Records, Deleting Records, SELECT Queries, WHERE Clause, Comparison Operators, Logical Operators, LIKE Operator, Aggregate Functions (SUM, AVG, MIN, MAX, COUNT), GROUP BY, HAVING Clause, Subqueries, Table Joins, INNER JOIN, OUTER JOIN, LEFT JOIN, RIGHT JOIN, UNION, String Functions, SUBSTR, LEN, UPPER, LOWER, CONCAT.

### **BUSINESS CONCEPTS**

Report Making, MIS Fundamentals, Business Data Management, Business Data Analysis, Management Information System (MIS), Business Reporting Techniques, Data Interpretation, Decision-Making Using MIS.

# ADVANCED DIPLOMA IN DATA ANALYTICS

**18**  
Months

## **SEMESTER – I [6 Months]**

### **CERTIFICATE COURSE IN**

### **IT & ADVANCED EXCEL WITH DBMS**

#### **INTRODUCTION TO INFORMATION TECHNOLOGY**

Computer Hardware, Software, Input & Output Devices, File & Folder Management, Creating, Organizing, Deleting & Restoring Files, Internet Operations, Downloading Images, Gmail Account Creation, Email Management with Attachments, Screenshot Capture, File Conversions, Practical Office Productivity Skills.

#### **DOCUMENT CREATION USING MICROSOFT WORD**

Text & Document Formatting, Tables, Pictures, Mail Merge, Page Setup, Printing Documents.

#### **PRESENTATION DEVELOPMENT USING MICROSOFT POWERPOINT**

Text, Images, Themes & Designs, Transitions, Animations, Slide Shows, Presentation Management, Password Protection, Practical Presentation Skills.

#### **ADVANCED EXCEL WITH VBA**

Data Entry, Worksheet Management, Formatting, Basic Formulas, Chart Creation, Workbook Protection, IF, Nested IF, AND, OR Functions, Text Functions, Date Functions, Sorting, Filtering, Conditional Formatting, Data Validation, SUMIFS, COUNTIFS, AVERAGEIFS, MAXIFS, MINIFS, VLOOKUP, HLOOKUP, XLOOKUP, INDEX & MATCH, Database Functions, Financial Functions, CONCATENATE, SUBSTITUTE, DATEDIF, Pivot Tables, Pivot Charts, Advanced Charts, Dashboards, What-If Analysis, Goal Seek, Forecasting, Trend Analysis, Data Import, Data Transformation, Data Cleaning, Query Merging, VBA Editor, Programming Basics, Variables, Data Types, Loops, Macros, Working with Worksheets & Ranges, User Forms, Form Controls, Validation.

#### **DATABASE MANAGEMENT SYSTEM (DBMS) USING MS ACCESS**

Database Creation, Table Design, Queries, Forms, Reports, Relationships, Data Management Using Microsoft Access.

## **SEMESTER – II [6 Months]**

### **CERTIFICATE COURSE IN BUSINESS INTELLIGENCE**

#### **POWER BI FOR DATA ANALYSIS**

Introduction to Power BI Desktop, Power BI Desktop Installation, Connecting Data Sources (Excel, CSV, Web, SQL), Power Query Editor, Data Transformation, Filtering, Sorting, Removing Duplicates, Merging Queries, Appending Queries, Column Splitting, Data Formatting, Creating Custom Columns, Table Relationships, Primary Keys, Foreign Keys, Star Schema, Snowflake Schema, Data Modeling, Calculated Columns, Measures, DAX Fundamentals, DAX Functions, Time Intelligence, Interactive Dashboards, Charts, Maps, Tables, Slicers, Conditional Formatting, Filters, Drill Through, Custom Visuals, Sales Analytics, Financial KPIs, HR Analytics, Employee Insights, Sales Dashboard Development.

#### **DATABASE MANAGEMENT USING MySQL**

Introduction to Databases, MS Access, MySQL, Data Types, Constraints, Primary Key, Foreign Key, Creating & Altering Tables, Inserting, Updating & Deleting Records, SELECT Queries, WHERE Clause, Comparison & Logical Operators, LIKE Operator, Aggregate Functions (SUM, AVG, MIN, MAX, COUNT), GROUP BY, HAVING Clause, Subqueries, INNER JOIN, OUTER JOIN, LEFT JOIN, RIGHT JOIN, UNION, String Functions, SUBSTR, LEN, UPPER, LOWER, CONCAT.

#### **BUSINESS CONCEPTS**

Report Making, MIS Fundamentals, Business Data Management, Business Data Analysis, Management Information System (MIS), Business Reporting, Data Interpretation, Decision-Making Using MIS.

# ADVANCED DIPLOMA IN DATA ANALYTICS

## **SEMESTER – III [6 Months]**

### **CERTIFICATE COURSE IN DATA ANALYTICS USING PYTHON**

#### **PYTHON FOR DATA ANALYTICS**

Python Introduction & Fundamentals, Data Types, Variables, Operators, Conditional Statements, Iterative Statements, Lists, Tuples, Sets, Dictionaries, Strings, Functions & Scope, Object-Oriented Programming (Classes, Objects, Constructors, Inheritance, Polymorphism, Encapsulation, Abstraction), Modules & Packages, Math, Random, Datetime, OS, JSON, Requests, URLLib, File Handling, JSON File Processing, NumPy Arrays & Statistical Operations, Pandas DataFrames, Data Cleaning, Filtering & Statistical Analysis, Data Visualization with Matplotlib, SciPy, Seaborn (Heatmaps, Pair Plots, Distribution Plots), SQL Database Programming, MongoDB Integration, Descriptive Statistics (Mean, Median, Mode, Variance, Standard Deviation, Correlation), Machine Learning Fundamentals with Scikit-learn, Jupyter Notebook, TensorFlow, Hugging Face, AI Fundamentals, Real-World Data Analytics Projects.



# FINANCIAL ACCOUNTING

## **Certificate Course in Business Accounting (2 Months)**

Accounting Fundamentals, Company Creation, Ledger, Voucher Entry, Trial Balance, Financial Statements, Cost & Inventory Accounting.

## **Certificate Course in Advanced Accounting (3 Months)**

FA, GST, TDS, Payroll, Inventory, Banking, BRS, Manufacturing, Ratio Analysis, Income Tax Basics.

## **Certificate Course in GST (2 Months)**

GST Fundamentals, GST Registration, GST Invoicing, Input Tax Credit, GST Returns (GSTR-1, GSTR-3B, GSTR-9), E-Way Bill.

## **Certificate Course in E-Filing (3 Months)**

Income Tax Return (ITR), PAN Services, Form 26AS, AIS/TIS, TDS, Refund Status, DSC, Online Tax Filing.





# DIPLOMA IN FINANCIAL ACCOUNTING

**12**  
Months

## **SEMESTER – I [6 Months]**

### **CERTIFICATE COURSE IN IT & ADVANCED EXCEL WITH DBMS**

#### **OFFICE AUTOMATION**

Fundamentals of Computer Systems, Hardware & Software, Input & Output Devices, File & Folder Management, Creating, Organizing, Deleting & Restoring Files, Internet & E-mail Operations, Gmail Account Creation, Email Management with Attachments, Downloading Images, Screenshot Capture, File Conversions, Microsoft Word Document Creation & Formatting, Tables, Pictures, Mail Merge, Printing, Microsoft PowerPoint Presentation Design, Text, Images, Themes, Transitions, Animations, Slide Shows, Document Password Protection, Practical Office Productivity Skills.

#### **ADVANCED EXCEL WITH VBA**

Data Entry, Worksheet Management, Document & Text Formatting, Basic Formulas, Chart Creation, Workbook Protection, IF, Nested IF, AND, OR Functions, Text Functions, Date Functions, Sorting, Filtering, Conditional Formatting, Data Validation, SUMIFS, COUNTIFS, AVERAGEIFS, MAXIFS, MINIFS, VLOOKUP, HLOOKUP, XLOOKUP, INDEX & MATCH, Database Functions, Financial Functions, CONCATENATE, SUBSTITUTE, DATEDIF, Pivot Tables, Pivot Charts, Advanced Charts, Dashboards, What-If Analysis, Goal Seek, Forecasting, Trend Analysis, Data Import, Data Transformation, Data Cleaning, Query Merging, VBA Editor, Programming Basics, Variables, Data Types, Loops, Macros, Working with Worksheets & Ranges, User Forms, Form Controls, Validation.

#### **DATABASE MANAGEMENT SYSTEM (DBMS)**

Database Creation, Table Design, Queries, Forms, Reports, Relationships, Database Management Using Microsoft Access.

## **SEMESTER – II [6 Months]**

### **CERTIFICATE COURSE IN BUSINESS ACCOUNTING – TAXATION & GST**

#### **CERTIFICATE COURSE IN BUSINESS ACCOUNTING**

Essentials of Accounting, Company Creation, Backup, Restore & Alteration, Ledger & Group Creation, Voucher Entry, Adjustment Entries, Depreciation, Cost Allocation, Trial Balance, Cash Flow Statement, Financial Statements, Stock Item Creation, Inventory Management, Purchase, Sales, Purchase Returns, Sales Returns, Discounts, Free Gift Transactions, Balance Sheet, Profit & Loss Account, Budget Reports, Day Book, Cash Flow & Fund Flow Reports, Stock Summary, Invoice Printing.

#### **CERTIFICATE COURSE IN ADVANCED ACCOUNTING**

TDS Entry & Adjustment, TCS Entry & Adjustment, Payroll Voucher Entry, Pay Head Creation & Entry, Pay Slip Generation, Cheque Printing, Bank Reconciliation Statement (BRS), Bank Reconciliation Adjustment Entries, Order Processing, Debit Note & Credit Note, Stock Journal, Manufacturing Journal, Post-Dated Voucher, Ratio Analysis, Statutory Reports, Income Tax Return (ITR), VAT Entry.

#### **CERTIFICATE COURSE IN GST**

Introduction to GST, Types of GST Registration, Stock Item Creation Using HSN Code & GST Rate, GST-Based Supply & Invoicing, Input Tax Credit (ITC), Net Tax Calculation, GST Set-Off, GST Returns, Types of GST, Job Work, Return Filing (GSTR-1, GSTR-3B & GSTR-9) Using Offline Tool.

# ADVANCED DIPLOMA IN FINANCIAL ACCOUNTING AND FINANCIAL DATA ANALYSIS

**18**  
Months

## **SEMESTER – I [6 Months]**

### **CERTIFICATE COURSE IN IT & ADVANCED EXCEL WITH DBMS**

#### **INTRODUCTION TO INFORMATION TECHNOLOGY**

Computer Hardware, Software, Input & Output Devices, File & Folder Management, Creating, Organizing, Deleting & Restoring Files, Internet Operations, Downloading Images, Gmail Account Creation, Email Management with Attachments, Screenshot Capture, File Conversions, Practical Office Productivity Skills.

#### **DOCUMENT CREATION USING MICROSOFT WORD**

Text & Document Formatting, Tables, Pictures, Mail Merge, Page Setup, Printing Documents.

#### **PRESENTATION DEVELOPMENT USING MICROSOFT POWERPOINT**

Text, Images, Themes & Designs, Transitions, Animations, Slide Shows, Presentation Management, Password Protection, Practical Presentation Skills.

#### **ADVANCED EXCEL WITH VBA**

Data Entry, Worksheet Management, Document & Text Formatting, Basic Formulas, Chart Creation, Workbook Protection, IF, Nested IF, AND, OR Functions, Text Functions, Date Functions, Sorting, Filtering, Conditional Formatting, Data Validation, SUMIFS, COUNTIFS, AVERAGEIFS, MAXIFS, MINIFS, VLOOKUP, HLOOKUP, XLOOKUP, INDEX & MATCH, Database Functions, Financial Functions, CONCATENATE, SUBSTITUTE, DATEDIF, Pivot Tables, Pivot Charts, Advanced Charts, Dashboards, What-If Analysis, Goal Seek, Forecasting, Trend Analysis, Data Import, Data Transformation, Data Cleaning, Query Merging, VBA Editor, VBA Programming Basics, Variables, Data Types, Loops, Macros, Working with Worksheets & Ranges, User Forms, Form Controls, Validation.

#### **DATABASE MANAGEMENT SYSTEM (DBMS) USING MS ACCESS**

Database Creation, Table Design, Queries, Forms, Reports, Relationships, Data Management Using Microsoft Access.

## **SEMESTER – II [6 Months]**

### **CERTIFICATE COURSE IN BUSINESS INTELLIGENCE POWER BI FOR DATA ANALYSIS**

Introduction to Power BI Desktop, Power BI Desktop Installation, Connecting Data Sources (Excel, CSV, Web, SQL), Power Query Editor, Data Transformation, Filtering, Sorting, Removing Duplicates, Merging Queries, Appending Queries, Column Splitting, Data Formatting, Creating Custom Columns, Table Relationships, Primary Keys, Foreign Keys, Star Schema, Snowflake Schema, Data Modeling, Calculated Columns, Measures, DAX Fundamentals, DAX Functions, Time Intelligence, Interactive Dashboards, Charts, Maps, Tables, Slicers, Conditional Formatting, Filters, Drill Through, Custom Visuals, Sales Analytics, Financial KPIs, HR Analytics, Employee Insights, Sales Dashboard Development.

#### **DATABASE MANAGEMENT USING MySQL**

Introduction to Databases, MS Access, MySQL, Data Types, Constraints, Primary Key, Foreign Key, Creating & Altering Tables, Inserting, Updating & Deleting Records, SELECT Queries, WHERE Clause, Comparison & Logical Operators, LIKE Operator, Aggregate Functions (SUM, AVG, MIN, MAX, COUNT), GROUP BY, HAVING Clause, Subqueries, INNER JOIN, OUTER JOIN, LEFT JOIN, RIGHT JOIN, UNION, String Functions, SUBSTR, LEN, UPPER, LOWER, CONCAT.

#### **BUSINESS CONCEPTS**

Report Making, MIS Fundamentals, Business Data Management, Business Data Analysis, Management Information System (MIS), Business Reporting, Data Interpretation, Decision-Making Using MIS.

# ADVANCED DIPLOMA IN FINANCIAL ACCOUNTING AND FINANCIAL DATA ANALYSIS

## **SEMESTER – III [6 Months]**

### **CERTIFICATE COURSE IN BUSINESS ACCOUNTING, TAXATION & GST BUSINESS ACCOUNTING**

Essentials of Business & Accountancy, Company Creation, Group Creation, Ledger Creation, Voucher Entry, Trial Balance, Depreciation, Financial Statements, Cost Accounting, Inventory Accounting, Balance Sheet, Profit & Loss Account, Day Book, Cash Flow & Fund Flow, Accounting Vouchers, Order Vouchers, Stock Summary, Invoice Printing.

### **ADVANCED ACCOUNTING & TAXATION**

TDS Entry & Adjustment, TCS Entry & Adjustment, Payroll Voucher Entry, Pay Head Creation & Entry, Pay Slip Generation, Cheque Printing, Bank Reconciliation Statement (BRS), Debit Note, Credit Note, Stock Journal, Manufacturing Journal, Post-Dated Voucher, Ratio Analysis, Statutory Reports, Income Tax Return (ITR), VAT Entry.

### **GOODS & SERVICES TAX (GST)**

Introduction to GST, GST Supply & Invoicing, Input Tax Credit (ITC), GST Returns, Types of GST Returns (GSTR-1, GSTR-3B & GSTR-9), Input Service Distributor (ISD), GST Compliance & Filing Procedures.

# SOFTWARE PROGRAMMING

## **Certificate Course in C & C++**

**(3 Months)**

Programming Fundamentals, Variables & Data Types, Operators, Control Statements, Functions, Arrays, Pointers, File Handling, Object-Oriented Programming (OOP), Mini Projects.

## **Certificate Course in C Programming**

**(2 Months)**

C Fundamentals, Variables, Loops, Functions, Arrays, Pointers, Structures, File Handling, Problem Solving.

## **Certificate Course in C++**

**(1.5 Months)**

OOP Concepts, Classes & Objects, Constructors, Inheritance, Polymorphism, File Handling, STL Basics.





## **Certificate Course in Core Java (2 Months)**

Core Java, OOP, Exception Handling, Multithreading, Collections, AWT, Applets, File Handling.

## **Certificate Course in Advanced Java (2 Months)**

JDBC, Servlets, JSP, Swing, Reflection API, MVC Concepts, Database Connectivity, Mini Project.

## **Certificate Course in Database Concepts (2 Months)**

DBMS, SQL, DDL, DML, TCL, Joins, Views, Stored Procedures, Triggers, Functions.

## **Certificate Course in Python (2 Months)**

Python Basics, Data Types, Functions, OOP, Lists, Tuples, Dictionaries, File Handling, Modules, Mini Project.

## **Certificate Course in PHP & MySQL (2 Months)**

PHP Basics, Variables, Forms, Sessions, Cookies, CRUD Operations, MySQL Database, Authentication, Dynamic Website Development.

## **Certificate Course in Information Technology (6 Months)**

Computer Architecture, Operating Systems, MS Office, Algorithms, C Programming, C++, Linux Basics, Command Line, Email Management.

## **Certificate Course in Web Design & Development (6 Months)**

HTML5, CSS3, Bootstrap, JavaScript, jQuery, Responsive Design, PHP, MySQL, Website Hosting, Live Project.

## **Certificate Course in Java Programming (6 Months)**

Core Java, Advanced Java, JDBC, Servlets, JSP, Java EE, Database Programming, Project Development.

## **Certificate Course in Python with Database Programming (6 Months)**

Python Programming, OOP, File Handling, NumPy, Pandas, MySQL, MongoDB, GUI Basics, API Integration, Live Project.

# ADVANCED DIPLOMA IN SOFTWARE DEVELOPMENT

**24**  
Months

## **SEMESTER – I [6 Months]**

### **CERTIFICATE COURSE IN INFORMATION TECHNOLOGY**

#### **INFORMATION TECHNOLOGY & PROGRAMMING FUNDAMENTALS**

Introduction to Information Technology, Microsoft Word, Microsoft PowerPoint, Basic Excel, Advanced Excel, Algorithms & Programming Concepts, Programming in C, Variables, Data Types, Operators, Conditional Statements, Iterative Statements (Loops), Functions, Pointers, Object-Oriented Programming with C++, Classes & Objects, Constructors & Destructors, Functions & Recursion, File Handling Using C++, Standard Template Library (STL), Vector, Linked List, Map. Using Microsoft Access.

## **SEMESTER – II [6 Months]**

### **CERTIFICATE COURSE IN FULL-STACK WEB DEVELOPMENT**

#### **FULL-STACK WEB DEVELOPMENT**

HTML5, CSS3, Responsive Web Design, Bootstrap, Tailwind CSS, jQuery, JavaScript (ES6+), DOM Manipulation, Git & GitHub Version Control, React.js Components, React Hooks, React Router, Node.js, Express.js, REST API Development & Integration, MySQL Database, MongoDB Database, Authentication Using JWT & OAuth, Full-Stack Application Development, Website Deployment & Hosting, Search Engine Optimization (SEO), Digital Marketing, Website Indexing, Live Project Development (Social Media Platform / E-Commerce Application).

## **SEMESTER – III [6 Months]**

### **CERTIFICATE COURSE IN JAVA PROGRAMMING**

#### **JAVA PROGRAMMING**

Core Java Programming, Variables & Data Types, Conditional Statements, Iterative Statements, Arrays & Array Manipulation, Strings & String Manipulation, Functions & Recursion, Object-Oriented Programming (OOP), Inheritance, Polymorphism, Encapsulation, Abstraction, Threads & Multitasking, Collections Framework, ArrayList, LinkedList, HashMap, List, Exception Handling, File I/O, MySQL Database Programming, JDBC Database Connectivity, Servlets, JSP, Java EE.

## **SEMESTER – IV [6 Months]**

### **CERTIFICATE COURSE IN PYTHON WITH DATABASE PROGRAMMING**

#### **PYTHON PROGRAMMING**

Python Syntax, Data Types, Variables, Operators, Functions, Conditional Statements, Iterative Statements, Lists, Tuples, Sets, Dictionaries, Lambda Functions, Exception Handling (Try, Except, Finally), Object-Oriented Programming in Python, Modules, Math, Date & Time, JSON, Regular Expressions, File Handling, NumPy, Pandas, SciPy, Data Visualization with Matplotlib, MySQL Database Integration, MongoDB Integration, Graphics Programming, Final Project Development.

# MULTIMEDIA TECHNOLOGY

## **Certificate Course in Graphic Design (6 Months)**

Types of Graphics, Logo Design, Branding, Social Media Design, Photo Editing, Print Media Design, Packaging Design, AI Tools.

## **Certificate Course in Web Design & Development (6 Months)**

Topics: HTML5, CSS3, Bootstrap, JavaScript, jQuery, PHP, MySQL, Responsive Website Design, WordPress, Live Project.

## **Certificate Course in Audio Video Composition (4 Months)**

Video Edit, Motion Graphics, Color Grading, Color Correction, Green Screen, Transition, Effects, Sound Editing, YouTube Editing, Reels Editing, AI Video Tools.

## **Certificate Course in Digital Marketing (2 Months)**

SEO, Google Ads, Social Media Marketing, Content Marketing, Email Marketing, YouTube SEO, Google Analytics, AI Marketing Tools, Freelancing.

## **Certificate Course in Desktop Publishing (DTP) (3 Months)**

Logo Design, Visiting Card, Banner, Brochure, Magazine Layout, Printing Techniques.



# ADVANCED DIPLOMA IN MULTIMEDIA TECHNOLOGY

**18**  
Months

## **SEMESTER – I [6 Months]**

### **CERTIFICATE COURSE IN GRAPHICS DESIGN WITH AI TOOLS**

#### **GRAPHICS DESIGN WITH AI TOOLS**

Introduction to Graphic Design, Design Principles, Typography, Color Theory, Layout Composition, Raster Graphics, Vector Graphics, Logo Design, Branding Concepts, Print Design (Posters, Flyers, Business Cards), Social Media Post Design, Banner Design, Photo Editing, Photo Retouching, Image Manipulation, Packaging Design, Product Mockup Design, Multi-page Layout Design, Latest AI Tools for Graphic Design, Portfolio Development, Live Project Work, Freelancing Guidelines, Job Preparation.

## **SEMESTER – II [6 Months]**

### **CERTIFICATE COURSE IN WEB DESIGN & DEVELOPMENT WITH AI TOOLS**

#### **WEB DESIGN & DEVELOPMENT WITH AI TOOLS**

Introduction to Web Design & Development, UI & UX Fundamentals, Static & Dynamic Websites, HTML5, Semantic Tags, Forms, Multimedia, CSS3, Flexbox, CSS Grid, Media Queries, Responsive Web Design, Figma, Canva, Web Mockup Design, Banner Design, Bootstrap 5, Grid System, Components, Customization, JavaScript, DOM Manipulation, Events, jQuery, Plugins, Event Handling, WordPress, Themes, Plugins, Page Builders, PHP Basics, Variables, Forms, Loops, MySQL Database, CRUD Operations, Personal Portfolio Website Development, Responsive Business Website, Blog Website, AI-Based Website Creation, Website Hosting & Deployment.

## **SEMESTER – III [6 Months]**

### **CERTIFICATE COURSE IN VIDEO EDITING & DIGITAL MARKETING WITH AI TOOLS**

#### **VIDEO EDITING (4 MONTHS)**

Introduction to Video Editing, Video Formats, Interface & Workspace, Timeline Management, Editing Tools, Importing & Organizing Media, Trimming, Cutting, Transitions, Audio Editing, Voice-over Recording, Background Music, Color Correction, Color Grading, Text & Title Animation, Lower Thirds, Visual Effects, Presets, Green Screen (Chroma Key), Motion Graphics, AI Video Creation, Export Settings for YouTube, Instagram & Reels, Reel Editing, Vlogging, YouTube Video Production, Final Video Editing Portfolio Project.

#### **DIGITAL MARKETING (2 MONTHS)**

Introduction to Digital Marketing, Search Engine Optimization (SEO), On-Page SEO, Off-Page SEO, Google Search Console, Google Analytics, Search Engine Marketing (SEM), Google Ads, Social Media Marketing (Facebook, Instagram & LinkedIn), Content Marketing, Hashtag Strategy, Email Marketing with Mailchimp, WhatsApp Marketing, SMS Marketing, YouTube Channel Setup, YouTube SEO, Canva for Social Media Design, AI Tools for Digital Marketing, Live Campaign Demonstration (Facebook Ads / Google Ads), Freelancing & Career Opportunities in Digital Marketing.



# HARDWARE & NETWORKING

## Certificate Course in

### PC Assembling & Troubleshooting

(6 Months)

Computer Hardware, PC Assembly, Windows Installation, Driver Installation, BIOS, Antivirus, LAN Setup, Internet Configuration, Troubleshooting.

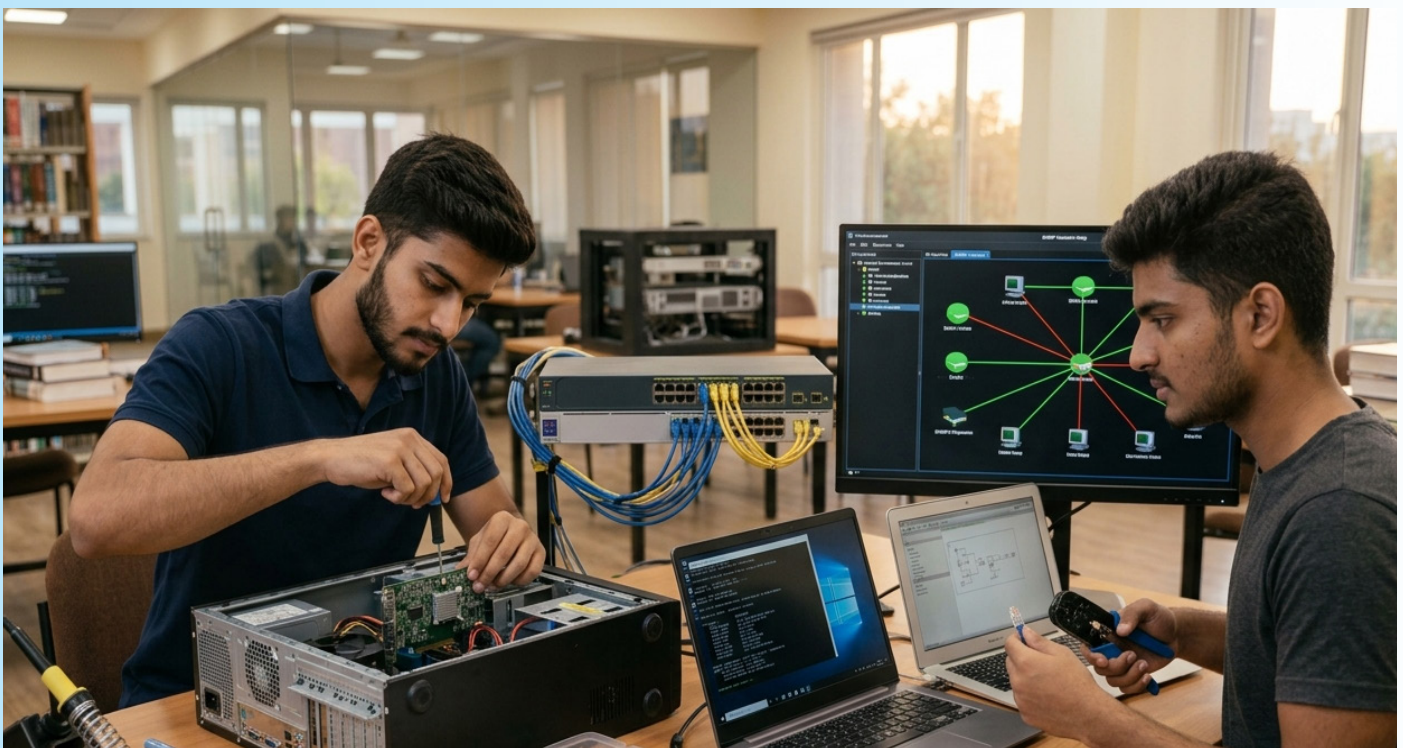
## Certificate Course in Networking

(6 Months)

Networking Fundamentals, IP Addressing, LAN/WAN, Active Directory, Windows Server, Network Administration, File Sharing, Security Basics.

## Certificate Course in Advanced Networking (6 Months)

CCNA Basics, Routing & Switching, IP Addressing, Linux Administration, RHEL, Network Security, Server Configuration, VLAN, RIP.





# THANK YOU