

Course Name: Certificate Course in Computer Applications, **CCA (B01)**

Eligibility: 10+2

Duration: 6 months, 275 Hrs

Fee: Rs.7, 000

Objective:

1. Equipping students with the technical knowledge required for an IT environment to work as an Assistant Programmer.
2. Develop the skill in understanding IT applications in various corporate business sectors.
3. Understanding in brief concept of computer programming, operating systems, internet and multimedia.

Lateral Entry: ADIT/ DIT, **Second Semester**

Semester: I, Duration: 6 months, 275 Hrs

Subject Code	Subject Name	Details	T	P	Total Dur. Hrs.	Total Marks	Exam Dur.
B01- 01	Computer Fundamentals	Computer Fundamentals, Operating System: DOS, UNIX, Ms- Windows	60	40	100	100	3
B01- 02	Ms- Office	Ms- Word, Ms- Excel, Ms- Power Point	35	65	100	100	3
B01- 03	MS-Access	DBMS Concepts, Design of database, Fill exposure of MS-Access	30	45	75	100	3
		Total	125	150	275	300	

Detailed Syllabus

Paper	Subject	Syllabus	Contents	T	P
B01- 01	Computer Fundamentals	Computer Fundamentals, Operating System: DOS, UNIX, Ms- Windows	Introduction: Characteristics of Computers; The Evolution of Computers; The Computer Generations (First Generation (1942-1955), Second Generation (1955 – 1964), Third Generation (1964 – 1975), Fourth Generation (1975 – 1989), Fifth Generation (1989 – Present)).	04	-
			Basic Computer Organization: Input Unit; Output Unit; Storage Unit; Arithmetic Logic Unit; Control Unit; Central Processing Unit; The System Concept.	04	-
			Number Systems: Non-Positional Number Systems; Positional Number Systems (Binary Number System, Octal Number System, Hexadecimal Number System); Converting One number System to Another (Converting to Decimal from Another Base, Converting from Decimal to Another Base (Division-Remainder Technique), Converting from a Base Other Than 10 to a Base Other Than 10, Shortcut Method for Binary to Octal Conversion, Shortcut Method for Octal to Binary Conversion, Shortcut Method for Binary to Hexadecimal Conversion, Shortcut Method for Hexadecimal to Binary Conversion); Fractional Numbers.	06	-
			Processor and Memory: The Central Processing Unit (CPU) (The Control Unit, The Arithmetic Logic Unit (ALU), Instruction Set, Registers, Processor Speed, Types of Processors); The Main Memory (Storage Evaluation Criteria, Main Memory Organization, Main Memory Capacity, RAM, ROM, PROM and EPROM, Cache Memory).	04	-
			Secondary Storage Devices: Sequential and Direct-Access Devices; Magnetic Tape (Basic Principles of Operation, Types of Magnetic Tapes, Advantages and Limitations of Magnetic Tapes, Uses of Magnetic Disks); Optical Disk (Basic Principles of Operation, Types of Optical Disks, Advantages and Limitations of Optical Disks, Uses of Optical Disks); Mass Storage Devices (Disk Array, Automated Tape Library, CD-ROM Jukebox); Storage Hierarchy.	04	-
			Input-Output Devices: Input Devices (Keyboard Devices, Point-and-Draw Devices, Data Scanning Devices, Digitizer, Electronic Card Reader, Voice Recognition Devices, Vision-Input System); Output Devices (Monitors, Printers, Plotters, Screen Image Projector, Voice Response Systems).	04	-
			Computer Languages: Analogy with Natural Languages; Machine Language (Advantages and Limitations of Machine Language); Assembly Language (Assembler, Advantages of Assembly	06	-

		<p>Language over Machine Language, Limitations of Assembly Language, Assembly Languages with Macro Instructions); High-Level Language (Compiler, Linker, Interpreter, Advantages and Limitations of High-Level Languages); Object-Oriented Programming Languages; Some High-Level Languages (FORTRAN, COBOL, BASIC, Pascal); Some More High-Level Languages (C and C++, Java, RPG, LISP, SNOBOL); Characteristics of a Good Programming Language; Selecting a Language for Coding an Application; Subprogram.</p> <p>Application Software Packages: Word-Processing Package (What it is?, Commonly Supported Features); Spreadsheet Package (What it is?, Commonly Supported Features); Graphics Package (What it is?, Commonly Supported Features); Personal Assistance Package (What it is?, Commonly Supported Features).</p> <p>Classification of Computers: Notebook Computers; Personal Computers (PCs); Workstations; Mainframe Systems; Supercomputers; Clients and Servers.</p> <p>Operating System:</p> <p>Introduction: Machine Hardware (Traps and Interrupts, Multimode Execution); Operating System Structure (Operating System Types, Operating System Kernel, The Boot Process).</p> <p>MS-DOS: Basics of OS, functions of OS, DOS as OS, Getting started with MS-DOS, Starting PC; Booting sequence, Types of commands, Internal & external, reserve words, typing a command (Syntax of command)</p> <p>Files in MS-DOS: Naming a file, permissible characters and extensions, reserve words, creating a file with copy con <xxx>. Commands like TYPE, COPY, RENAME, DEL, DATE, TIME, ATTRIB.</p> <p>Directory Handling: MKDIR, CHDIR, RMDIR, TREE, SUBST, DELTREE, PATH, APPEND, editing files with Edit, cut, copy & Paste, search with find.</p> <p>Disk Maintenance: Format, Diskcopy, XCOPY, DISKCOPY, BACKUP RESTORE, LABEL, VOL.</p> <p>Batch File: REM, ECHO, FOR, PAUSE, IF, GOTO replacable parameters %1 to %9 & %* Autoexec.bat.</p> <p>Command: Special features: redirection and filters; piping, MORE, SORT, FIND commands.</p> <p>Config. Sys: Device Drivers, MEM managements, files Buffers, High memory area.</p>	02	-
			02	-
			02	02
			02	04
			02	04
			02	04
			01	04
			02	04
			01	02
			02	02

			<p>UNIX Overview: Unix Architecture; Kernal, process, Time sharing, Shell, files and directories creation of file, file security, peripheral devices as files, inodes.</p> <p>Unix Editor: Ed editor, vi editor</p> <p>File Handling Utilities: File handling Commands, ls, cp, mv, rm, cat lp, grep, mail, sed etc.</p> <p>Shell Script: Bourne shell, C shell, Shell variables, Shell Scripts, if a case statements, for while until loops.</p> <p>The Internet: Definition (What it is?); Brief History; It's Basic Services (Electronic Mail, File Transfer Protocol, Telnet. Usenet News, The World Wide Web); WWW Browsers; Uses of the Internet.</p>	04	02
				02	04
				02	04
				02	04
			Total	60	40
B01-02	Ms- Office	Ms- Word, Ms- Excel, Ms- Power Point	<p>Microsoft Office 2000/XP Introduction; Microsoft Word 2000/XP; Microsoft Excel 2000/XP; Microsoft Access 2000/XP; Microsoft PowerPoint 2000/XP, Microsoft Outlook 2000/XP; Internet Explorer 5.0; Microsoft FrontPage 2000/XP; Microsoft Publisher 2000; Microsoft PhotoDraw 2000/XP; Microsoft Office Bar; Using the Mouse (To Click, To double-click, To select, To drag, To scroll, To choose from a menu, To move a window, To resize a window, To minimize a window, To restore a minimized window, To maximize a window, To switch windows, To close a window, Remember); Microsoft Office 2000/XP and Web (Microsoft Word 2000/XP, Microsoft Excel 2000/XP, Microsoft Access 2000, /XP Microsoft PowerPoint 2000/XP, Microsoft Outlook 2000/XP, Microsoft FrontPage 2000/XP); Common Keyboard Commands.</p> <p>Creating Your Document in Word 2000/XP: Introduction; Saving the file; Formatting the text, Alignment of Text; Applying Fonts; Spell Checking; Consulting Thesaurus; Assign Character Styles (Assign a Character Style, Create a character style); Borders and Shading (Apply Borders and Shading); Closing of the File; Save as option; Open File (From File menu, From Open Icon); Printing Your Document.</p> <p>Proofing Your Document in Word 2000/XP: Introduction; Editing Tools; AutoCorrect (Add AutoCorrect Entries Without Formatting, Add New AutoCorrect Entries with Formatting); Auto Text (Creating an AutoText Entry, AutoComplete Option); AutoFormat (AutoFormat as You Type, AutoFormat on Command, AutoFormatting Text); Find and Replace; Find; Replace Text; Page Numbering; Header and Footer (Adding a Header or Footer in Your Document); Footnotes and Endnotes (Add a Footnote or Endnote).</p> <p>Getting Started : Staring, Menu system, tabbed dialog bxes, workbooks, worksheets within workbooks, Cells : cell reference, active cell toolbar: (displaying, hiding, getting popout tool explanantions, controlling size, moving tool bars, drop down palettes) using online help.</p>	06	04
				02	06
				04	08
				02	04

		<p>Workbooks, Worksheets & Windows Workbooks: Creating new workbooks, opening existing ones, opening more than one workbooks, saving closing.</p> <p>Worksheets with in Wbs: Activating Wks, scrolling tabs, printing Wks, inserting, deleting, copying/moving, manipulation of Multiple files. Creating a Worksheet: Introduction; Copying Formula.</p>	02 02	04 06
		<p>Advanced Techniques of Excel 2000/XP: Introduction; Auditing a Workbook (To Trace the Precedents for a Formula); Comment Inserting (To Insert a Comment); Formulas That Make Decisions (How the If function works); Headers and Footers; Merging Workbooks (To merge workbooks); Outlines (Outline a Worksheet Automatically, Clear Entire Outline, Show or Hide Outline Symbols, Group Rows or Columns in an Outline, Ungroup Rows or Columns in an Outline, Remove Group from Outline, Set Outline Options); Printing Column and Row Labels on Every Page; Protecting a Workbook (To unlock cells so that others can edit the cell contents, To protect a workbook, To share a workbook); Ranges, Naming (To name a range); References (Absolute references, Mixed references); Seeking Goals (To seek a goal); Sheets Naming (To Name a Sheet); Working with Workbooks (Copying Entries Between Workbooks, Moving Sheets Between Workbooks, Deleting Sheets).</p>	06	12
		<p>Power Point Basic: Creating Presentation Using AutoContent Wizard, Creating New Presentation, Introduction; Changing views. OLE Tips for Power point, Terminology, Color Schemes, PowerPoint Templates, Getting Started, Views.</p>	02	04
		<p>Creating Presentations the Easy Way: Auto Content Wizard, The Pick A Look Wizard, Masters, Adding Slides.</p>	01	03
		<p>Working with Text in Power Point : Editing and Moving Text, Working in Outline View, Spell-Checking, Finding and Replacing Text, Adding Removing Periods in Sentences, Formatting Text, Aligning Text, Word Tables Power Point.</p>	01	04
		<p>Working with Graphics in Power Point: Importing Images from the Outside World, The CLIP PART Gallery, Drawing in Power Point, Creating Organizational Charts, Inserting Photos in Your PowerPoint Presentation.</p>	01	04
		<p>Showtime: If we can put a man on the Moon..., Arranging, Previewing and Rehearsing, Transition and Build Effects, Showing Slides Out of Order, Deleting Slides, Printing Presentation Elements, Creating Overhead Transparencies, Obtaining Colour 35mm Slides, Sharing Presentation Files with others.</p>	01	04
		Total	35	65

B01- 03	MS-Access	DBMS Concepts, Design of database, Fill exposure of MS-Access	Introduction to Databases, DBMS and RDBMS : Introduction, Information, Quality of Information, Information Processing, What is a Database?, Why a Database?, Characteristics of Data in a Database, What is a Database Management System (DBMS)?, Need for DBMS, Types of DBMS, Relational Database Management Systems (RDBMS), RDBMS Terminology, Relational Data Structure, Relational Data Integrity	04	-
				02	-
			Access 2000 Basics: Introduction, Starting Access 2000, Opening an existing database, Opening the sample north window database, What is a database?, Managing database objects Access Startup Dialog Box, Menus and Toolbars, Using Toolbar Buttons, Arranging Buttons on the Toolbar, Viewing Data, Creating an Access 2000 Database and Tables, Database Properties, Modifying Tables, Creating Forms, Entering and Updating Data Using Forms, Navigating between Records in a Form, Finding, Editing and Deleting Data in a Form, Using Access 2000 Help, Using Answer Wizard, Using the Contents Tab to Get Help, Using the Index Tab to get Help, Exercises.	04	08
			UNDERSTANDING DATABASES: Why store data, You use tables to store data, Terminology time, Why use multiple tables?	02	01
			CREATING DATABASES: Introduction, Database is not a table, Creating a blank database, Using the file new database dialog box,	02	01
			CREATING TABLES: Using the table wizard, Object naming rules, Planning a table from scratch, Creating a table without using a wizard, Defining a tables fields, Choosing appropriate data types, Defining field properties, Setting a primary key, Defining indexes, Saving a table structure, Switching between design and datasheet views, Changing properties, About lookup fields	02	05
			ADDING, EDITING AND VIEWING DATA: Datasheet view and form view, Changing the datasheet appearances, Navigating forms and datasheets, Changing data in a table, Deleting data, Copying and moving data, Special techniques for memo fields, Duplicate key message, Null value in index, Validation rule, Changing the table design from datasheet view, Creating a table from a blank datasheet	02	05
			SORTING: Introduction, Quick and easy sorting, Sorts within sorts, Filtering out unwanted records, Using advanced filter/sort, Creating complex filters, Specifying selection criteria, Specifying 'and/or' criteria, Sample filters, Saving a filter as a query	02	02
			Queries: Introduction, What queries let you do, Types of queries, Creating a query, Viewing the dynaset, Running an action query, Refining your query, Changing field properties, Creating crosstab	02	06

		queries, Creating action queries, Update queries, Make table queries Sorting and Filtering Records, Creating and Printing Reports, Creating and Using Queries.		
		Introduction to Structured Query Language (SQL): Introduction, Characteristics of SQL, Advantages of SQL, Types of SQL Tables, Create Table, NULLS, Data Manipulation, Update Operations, SQL in Access., SELECT Queries in QBE, Make-Table Query, DELETE Query, UPDATE Query, APPEND Query	04	06
		CREATING FORMS: Creating forms with form wizards, Making hierarchical forms work properly, Charts, Pivot tables, Using wizards, Saving a form, Opening and using a form, Getting around in hierarchical forms, Changing the style	02	06
		CREATING REPORTS: Introduction, Kinds of reports, Groups, totals and summary reports, When the report wizard needs your help, Charts, Using wizards to create a report, Creating mailing labels, Formatting postal codes and phone numbers, Saving a report, Opening a report, Removing a filter and sort order, Changing the style for a report	02	05
		Total	30	45