DAYANAND COLLEGE, HISAR

Add-on Courses
Syllabus

Basic Computer Education

Course Title: Basic Computer Education Certification
Course Code: DC-18-BCE

Structure of the Course

Unit-I

Computer: Definition, Characteristics. Applications, Components of Computer System, Input/Output Devices, Concept of Memory, Magnetic and Optical Storage Devices.
Operating System- Windows: Definition & Functions of Operating System, Basic Components of Windows, Exploring Computer, Icons, taskbar, desktop, managing files and folders, Control panel

Unit-II

MS- Word: Word Processing: Introduction to Word Processing, Menus, Creating, Editing & Formatting Document. Spell Checking, Printing, Views, Tables, Word Art, Mail Merge, Macros.

Unit-III

Spread Sheet: Elements of Electronics Spread Sheet Applications, Creating and Opening of Spread Sheet. Menus, Manipulation of cells Enter texts numbers and dates, Cell Height and Widths. Copying of cells, Mathematical, Statistical and Financial function, Drawing different types of charts.

Unit-IV

Computer Communication: Internet and its applications, Surfing the Internet using web browsers, Creating Email Id, Viewing an E-Mail, Sending an E-Mail to a single and multiple users, Sending a file as an attachment.

DIGITAL MARKETING AND WEB DESIGNING

Course Title: Digital marketing and Web Designing
Course Code: CC-DMWD-19

Structure of the Course

Unit-I

Introduction to Digital Marketing and Web Designing: Basics of Digital Marketing, Understanding Web Designing principles, Overview of SEO and its importance, Introduction to Content Marketing. Analyzing target audience and market research.

Unit-II

Web Development and Design: HTML, CSS, and JavaScript fundamentals, Responsive Web Design and Mobile Optimization. User Interface (UI) and User Experience (LX) design principles, Web layout and wire-framing, Introduction to graphic design tools (e.g. Adobe Photo-shop, Sketch)

Unit-III

Digital Marketing Strategies: Social Media Marketing and Advertising, Search Engine Marketing (SEM) and Google Ads, Email Marketing and Automation, Content Creation and Marketing, Analytics and Data-driven decision-making

Unit-IV

Advanced Topics: Advanced SEO techniques and strategies, Conversion Rate Optimization (CRO), Web Analytics and Google Analytics, E-commerce and Online Sales, Digital Marketing Campaign Management.

PROGRAMMING WITH PYTHON

Course Title: Programming with Python
Course Code:CC-PWP-20

Structure of the Course

Unit 1: Getting started with PYTHON

Features, Advantages & Limitations of PYTHON, Installing PYTHON, Interacting with PYTHON; Python Shell, Command Line Interaction, Python Editor Window (Working in Script Mode), PYTHON Character Set, Tokens & Keywords, Variables & Data Types (Mutable & Immutable), Expressions & Operators, Indentation in PYTHON, User defined Functions Selections, Filling & stroking Layers, Rules and Conventions for writing PYTHON Programs, Comments & Debugging (Syntax, Run-time & Logical Errors)

Unit 2: Conditional & Looping Constructs

Types of Statements in PYTHON, Program Control Flow, Conditional Statements (if, if-else, if-elif-else statements), Iteration (for loop, while loop & Nested Loops), Jump Statements (break, continue & pass statement)

Unit 3: Strings & Lists

Creating Strings & Accessing Characters (Indexing) in a string, Traversing a String, Special String Operations (Concatenating & Replicating), Membership Operators, Comparison Operators, String Operators, String Methods & Built - in Functions, Declaring/Creating/Initializing LIST, Indexing (Accessing List Elements), Traversing a List, Aliasing, Comparing Lists, Operators on Lists (Concatenation/Repetition/Replication, Membership Testing, Indexing, Slicing), Nested Lists, Copying Lists, Deletion Operation, Built-in Functions/Manipulating Lists, Sorting Lists

Unit 4: Tuples, Dictionary & Modules

Creating, Accessing & Traversing a Tuple, Nesting of Tuples, Tuple Operations (Tuple Slicing, Addition/Concatenation, Multiplication/Repetition, Membership Operator ‘in’ & ‘not in’, Comparing Tuples, Deleting a Tuple, Dictionary in PYTHON, Methods to Create Dictionary, Accessing Elements in Dictionary, Traversing a Dictionary, Appending Values to a Dictionary, Updating & Removing Elements in Dictionary, Common Dictionary Functions & Methods, Importing PYTHON Modules, Retrieving Objects from Module, Module Aliasing, Member Aliasing, Locating Modules, Standard Built-in PYTHON Modules & Functions.

WEB DESIGNING WITH HTML

Course Title: Web Designing with HTML
COURSE CODE: CC-WDH-23

Structure of the Course

Unit-I

Introduction to Internet and World Wide Web; Evolution and History of Word Wide Web; Basic features; Web Browsers; Web servers; Hypertext Transfer Protocol; URLs; Searching and Webcasting Techniques; Search Engines and Search Tools;

Unit-II

Steps for developing Your site; Choosing the contents; Home page; Domain Names; Internet Services provider; Planning and designing your Web Site; Creating Website

Unit-III

Web Publishing: Hosting your Site; Introduction to HTML; Hypertext and HTML; HTML Document Features; HTML Tags; Header; Title, Body, Paragraph, Ordered/unordered line, Creating Links; Text styles; Text Structuring; Text colors and Borders, Text Background; Formatting text; Page layouts;

Unit-IV

Images; Types of Images; Insertion of Images, Movement of Images, Ordered and Unordered lists; Inserting Graphics; Table Handling Functions like Columns Rows, Width, Colors; Frame Creation and layouts; Working with Forms and menus; Working with Radio buttons; Checks Boxes

MICROSOFT CERTIFICATION

Course Title: Microsoft Certification
Course Code:CC-MC-23

Structure of the Course

Unit-I

Basics of computer: Organization of computer, Software and hardware, Input/output devices, Concept of memory, Magnetic and Optical Storage Devices.
Microsoft Windows: Operating System-Definition & functions, basic components of windows, exploringcomputer, managing files and folders, copying and moving files and folders.

Unit-II

MS- Word: Creating and Managing Documents, Customizing options and views for the document, Printing and saving the document. Inserting Paragraphs and Texts, Formatting Paragraphs and Texts, Ordering and Grouping Paragraphs and Texts, Creating a Table, Modifying a Table, Creating and Modifying a List, Mail Merge and Macros.

Unit-III

MS-Excel: Introduction to Spreadsheets & Office Automation, Inserting, Deleting, Copying, Moving, Renaming Worksheets. Inserting ClipArt, Word Art, Pictures, Objects, symbols, equations, hyperlinks etc. Using Formulas and Functions. Creating, Editing and Printing Charts.

Unit-IV

MS PowerPoint: Starting PowerPoint & Understanding of Screen Elements, Creating, Copying, Moving & Deleting a Slide with in a PPT, Using Shapes, Word Art, Charts and Graphs, Applying transition effects,Adding sound and animation effects to a PPT, Setting up slide show and looping slide show.

COMPUTER NETWORKING

Course Title: Computer Networking
Course Code:CC-CN-23

Structure of the Course

Unit-I

Introduction to Data Communications and Computer Networks; Uses of Computer Networks; Types of Computer Networks and their Topologies; Network Hardware Components: Connectors, Transceivers, Repeaters, Hubs, Network Interface Cards and PC Cards, Bridge, Switches, Routers, Gateways;

Uses of computer networks: Networks for companies, Networks for people, Social Issues: Classification of networks; Based on transmission technology, Based on the their scale,

Network Software: Network Design issues and Protocols; Connection-Oriented and Connectionless Services; OSI Reference Model, TCP/IP Model Comparison of the OS1 & the TCP/IP Reference Model;

Networking Models: Distributed Systems, Client/Server Model, Peer-to-Peer Model, Web-Based Model and Emerging File-Sharing Model;

Unit-II

Analog and Digital Communications, data and signals Concepts: Analog and Digital data and signals; Bandwidth and Data Rate, Capacity, Baud Rate; Guided and Wireless Transmission Media Communication Satellites; Switching and Multiplexing; Modems and modulation techniques; ADSL and Cable Modems;

Data transmission modes: Serial & Parallel, Simplex Hall duplex & full duplex; Synchronous & Asynchronous transmission;

Network topologies: Linear Bus Topology, Ring Topology, Star Topology, Hierarchical or Tree Topology, Topology Comparison, Considerations when choosing a Topology;

Unit-III

Data Link Layer Design issues Error Detection and Correction; Sliding Window Protocols: One-bit. Go Back N and Selective Repeat, Media Access Control: ALOHA, Slotted ALOHA, CSMA, Collision free protocols Introduction to LAN technologies: Ethernet, Switched Ethernet, Fast Ethernet, Gigabit Ethernet;Token Ring; Introduction to Wireless LANs and Bluetooth; VLANs

Unit-IV

Routing Algorithms: Flooding, Shortest Path Routing, Distance Vector Routing, Link State Routing, Hierarchical Routing; Congestion Control; Traffic shaping; Choke packets Load shedding: Elements of Transport Protocols; Application Layer: Introduction to DNS, E-Mail and WWW service Network Security Inc Security attacks: Encryption methods; Digital Signature; Digital Certificate.