Teaching Plan for Academic Year 2023-24 (Even Semester)

Faculty Name	Course Name	Paper Name	Semester	Section	Month	Topics/Unit	course planned %	Course Completion (%)	ICT TOOLS USED	Remarks
Mr. Rakesh Yadav	B.Sc (Physical Science) with CS	Operating Systems	IV		Jaunary	Introduction O S dedifinition and its purpose. OS structure, OS Operations Dual and Multi mode . OS as resource manager	10	10	PROJECTOR	
					Feburary	Device Management . information maintenance . System programs . types of OS structures . Process management . process life cycle . scheduling algorithms . types. Critical Section problem	35	35	PROJECTOR	
					March	physical address space, contiguous memory allocation. MFT MVT , first fit best fit and worst fit algorithms. Non contigous memory	30	30	PROJECTOR	
					April	File system concepts, file attributes, file access Methods Directory structure , single,two and tree structure. Acyclic graphs Directories. Mass storage structure, magnetic disks and magnetic	20	20	PROJECTOR	
Ms. Preeti Sharma	B.Sc Physical Science with CS	Data Structures	II		January	Definition of ADT,Arrays definition and operations, Stacks and Queues	20	20	Programmiz Online Compiler	
					Feburary	Sorting Methods - Insertion, Selection, Quicksort,Mergesort, - Time Complexity Analysis	30	30		
					March	Linked lists, Linked Stacks and Queues,Deque,	20	20	Online Comiler	
					April	Growth of Functions,Recurrence Relations	30	30	Kahoot	

Ms. Abha Vasal	B.Sc Physical Science with CS (DSE)	Data Exploration & Visualization	IV		January	Introduction to data analysis. Creating and Manipulating NumPy arrays: creating arrays, indexing and slicing, mathematical operations with NumPy arrays	20	20	Projector/ Presentations / Google Colab	
					Feburary	Data Manipulation with Pandas: Series and DataFrame objects: importing and exporting data from various file formats into pandas DataFrame; Data selection and filtering-indexing, slicing, conditional filtering using boolean indexing	30	30	Projector/ Presentations / Google Colab	
					March	Data Cleaning- handling missing data in Pandas and outlier detection.Data Manipulation-sorting, reshaping, merging. Grouping and Aggregation with Panda	25	25	Projector/ Presentations / Google Colab	
					April	Data Visualization with Matplotlib, Seaborn and Plotly:Plots - Line plots, scatter plots, and bar plots, Visualizing distributions using histogram and box plots,	25	25	Projector/ Presentations / Google Colab	
Ms. Abha Vasal	GE	Data Analysis & Visualization Using Python	ii		January	Introduction to basic statistics and analysis: Fundamentals of Data Analysis, Numpy	20	20	Projector/ Presentations / Google Colab	
					Feburary	Data Manipulation using Pandas: Data Structures in Pandas: Series, Data Frame, Index objects, loading data into Panda's data frame, Working with Data Frames: Arithmetics, Statistics	25	25	Projector/ Presentations / Google Colab	
					March	Handling missing data, Hierarchical indexing, Data wrangling	25	25	Projector/ Presentations / Google Colab	
					April	Using Matplotlib , Seaborn library to plot data: Lines, bar, Scatter plots, histograms, stacked bars, Heatmap	30	30	Projector/ Presentations / Google Colab	Case study was demonstrated

Ms. Abha Vasal	SEC	Basic IT Tools	II		January	Introduction to MS Word	20	10	using Projector	
					Feburary	Tables, Mail Merge and introduction to MS Excel	30	35	Demonstartion using Projector	
					March	Formulas, Pivot charts , conditional formatting in Excel. Introduction to powerpoint presenation	30	35	Demonstartion using Projector	
					April	Creating database using MS Access- creating form and reports in access	20	20	Demonstartion using Projector	
Dr. K.K.S. Gautam	GE	Data Analysis & Visualization Using Python	II		January	Unit 1 Introduction to basic statistics and analysis: Fundamentals of Data Analysis, Statistical foundations for Data Analysis, Types of data, Descriptive Statistics, Correlation and covariance, Linear Regression, Statistical	20	20	LCD Projector, Online Compiler/Simulator , Power Point Presentation,	
					Feburary	Unit 2 Array manipulation using Numpy: NumPy array: Creating NumPy arrays, various data types of NumPy arrays Indexing and slicing, swapping axes,	30	30	LCD Projector, Online Compiler/Simulator , Power Point	
					March	Structures in Pandas: Series, Data Frame, Index objects, loading data into Panda's data frame, Working with Data Frames: Arithmetics,	25	25	Online Compiler/Simulator , Power Point	
					April	Unit 4 Plotting and Visualization: Using Matplotlib to plot data: figures, subplots, markings, color and line styles, labels and legends, Plotting functions in Pandas: Lines,	25	25	LCD Projector, Online Compiler/Simulator , Power Point	
Ms. Yogesh Kumari	B.Sc Physical Science with CS (SEC)	PhP Programming	VI		January	Introduction to three tier web application development, software requirements, PHP in web applications, basics of PHP, variables, operators	20	20	PowerPoint Presentation, Projector	
					Feburary	expressions, decision making based on conditions, loops, operator precedence, scope of variables, local, global and superglobal variables, functions and objects, passing arguments	30	30	Projector, PowerPoint	
					March	forms, get and post method, processing of data , use of regular expressions	25	25	Projector, PowerPoint	
					April	connecting PHP and DBMS, accessing data stored in table	25	25	Projector, PowerPoint	

Ms. Yogesh Kumari	GE	Introduction to Web Programming	IV		January	Introduction to HTML, planning a website, WWW, web browsers, DNS, tags in HTML, links, table	20	20	online websites, Projector	
					Feburary	frames, adding images, CSS, internal and external linking, website layout, class attributes, ID selectors	30	30	Projector, PowerPoint, websites	
					March	Javascript Document object Model, logical opertors in Javascript	25	25	Projector, PowerPoint	
					April	JavaScript event handlers, Jquery and Json	25	25	Projector, PowerPoint	
Mr. Pawan Kumar	B.Sc (Physical Science) with CS	Computer Networks	VI		January					
					Feburary	communications and networking, use of Computer Networks, classification of networks, OSI model, function of the layers, TCP/IP Protocol suite. Network Topologies: Bus, star, ring, mesh, tree, hybrid topologies with their features, advantages and disadvantages of each type.	30	30	Projector and Power Point Presentations	
					March	Transmission Modes: simplex, half duplex and full duplex.,Transmission Media: Guided Media (Wired) (Twisted pair, Coaxial Cable, Fiber Optics. Unguided Media (Radio Waves, Infrared, Micro-wave, Satellite). Data Communication and Switching Techniques: Framing, flow control, error control, circuit switching, message switching, packet	35	35	Projector, Power Point Presentations and DEV CPP	
					April	Switching Devices: Repeaters, hubs, switches, bridges, routers, gateways. Multiplexing: (FDM, WDM, TDM), Internet: Internet Service Providers (ISP), internet addressing system: IP address with their classification and notation, application layer protocols: (DNS, URL, WWW, FTP, SMTP,	35	35	Projector, Power Point Presentations, Notepad++ and DEV CPP	
Mr. Pawan Kumar	SEC	Basic IT Tools	I		January					
					Feburary	MS Excel: Introduction to Spreadsheets, data analysis techniques in spreadsheets	40	40	Projector and MS Excel	
					March	Complete Word Processing	30	30	Projector and MS Word	
					April	Databsese: MS Access	30	30	Projector and MS Access	