SUMMARY OF LESSON PLAN OF COLLEGE FACULTY (Dr. Rahul Hooda)

NAME OF THE COLLEGE- GOVT. COLLEGE, Alewa ACADEMIC SESSION 2026-27 ODD SEMESTER FOR THE MONTH OF August 2026 to December 2026

Sr. NO	Name of the Assistant / Associate Professor / Class	Subject/week/ month	Topic/ Chapters to be covered
1	**Dr. Rahul Hooda**	**Computer Science**	**Major: Logical Organization of Computer**
	B.Sc 1st Sem	August	Number Systems: Binary, Octal, Hexadecimal etc. Conversions from one number system to another, BCD Number
			System. BCD Codes: Natural Binary Code, Weighted Code, Self-Complimenting Code, Cyclic Code.
			Error Detecting and Correcting Codes. Character representations: ASCII, EBCDIC and Unicode.
			Number Representations: Integer numbers - sign-magnitude, 1's & 2's complement representation. RealNumbers normalized floating point representations.
		last week of August	(I-Assignment)
		September	Binary Arithmetic: Binary Addition, Binary Subtraction, Binary Multiplication,
			Binary Division using 1's and 2's Compliment representations, Addition and subtraction with BCD representations.
			Boolean Algebra: Boolean Algebra Postulates, basic Boolean Theorems, Boolean Expressions, Boolean Functions, Truth Tables, Canonical Representation of Boolean Expressions: SOP and POS, Simplification of
			Boolean Expressions using Boolean Postulates & Theorems, Kaurnaugh-Maps (upto four variables), Handling Don't Care conditions.
		Last week of September	Assignment - II
		1st week of October	(Unit test)
		October	Logic Gates: Basic Logic Gates – AND, OR, NOT, Universal Gates – NAND, NOR, Other Gates – XOR,
			XNOR etc. Their symbols, truth tables and Boolean expressions.
			Combinational Circuits: Design Procedures, Half Adder, Full Adder, Half Subtractor, Full Subtracor,
			Multiplexers, Demultiplexers, Decoder, Encoder, Comparators, Code Converters.
		November	Sequential Circuits: Basic Flip- Flops and their working. Synchronous and Asynchronous Flip –Flops,
			Triggering of Flip-Flops, Clocked RS, D Type, JK, T type and Master-Slave Flip-Flops. State Table, State Diagram and State Equations.
			Flip-flops characteristics & Excitation Tables.Sequential Circuits: Designing registers –Serial-In Serial-Out (SISO),
			Serial-In Parallel-Out (SIPO), Parallel-In Serial-Out(PISO) Parallel-In Parallel-Out (PIPO) and shift registers.
		December	Revision
2	**Dr. Rahul Hooda**	**Computer Science**	**Data Strucutres**
	B.Sc 3rd Sem	August	Data Structure Definition, Data Type vs. Data Structure,
			Classification of Data Structures, Data Structure Operations,
			Applications of Data Structures; Algorithm Specifications:
			Performance Analysis and Measurement (Time and Space Analysis of Algorithms-Average, Best and Worst Case Analysis).
		last week of August	(I-Assignment)-DS
		September	Arrays: Introduction, Linear Arrays, Representation of Linear Array In Memory,
			Two Dimensional and Multidimensional Arrays, Sparse Matrix and its Representation,
			Operations on Array: Algorithm for Traversal, Selection, Insertion, Deletion and its implementation.

			String Handling: Storage of Strings, Operations on Strings viz., Length, Concatenation, Substring, Insertion, Deletion, Replacement.
		Last week of September	(II- Assignment)-DS
		1st week of October	(Unit test)-DS
		October	Linked List: Introduction, Array vs. linked list, Representation of linked lists in Memory,
			Traversing a Linked List, Insertion, Deletion, Searching into a Linked list, Type of Linked List.
			Stack: Array Representation of Stack, Linked List Representation of Stack, Algorithms for Push and Pop, Application of Stack:
			Polish Notation, Postfix Evaluation Algorithms, Infix to Postfix Conversion, Infix to Prefix Conversion, Recursion.
		November	Introduction to Queues: Simple Queue, Double Queue,
			Circular Queue, Priority Queue,
			Representation of Queues as Linked List and Array, Applications of Queue.
			Algorithm on Insertion and Deletion in Simple Queue and Circular Queue.
		December	Revision
3	**Dr. Rahul Hooda**	**Computer Science**	**Web Technologies**
	B.Sc 5th Sem	August	Introduction to Internet and World Wide Web (WWW); Evolution and History of World Wide Web,
			Web Pages and Contents, Web Clients, Web Servers, Web Browsers;
			Hypertext Transfer Protocol, URLs; Searching, Search Engines and Search Tools.
			Web Publishing: Hosting website; Internet Service Provider; Planning and designing website; Web Graphics Design, Steps For Developing website
		last week of August	(I-Assignment)
		September	Creating a Website and Introduction to Mark up Languages (HTML and DHTML), HTML Document Features& Fundamentals, HTML Elements, Creating Links; Headers; Text styles;
			Text Structuring; Text color and Background; Formatting text; Page layouts,
			Images; Ordered and Unordered lists; Inserting Graphics; Table Creation and Layouts;
			Frame Creation and Layouts; Working with Forms and Menus; Working with Radio Buttons; Check Boxes; Text Boxes, HTML5
		Last week of September	(II- Assignment)
		1st week of October	(Unit test)
		October	Introduction to CSS (Cascading Style Sheets): Features, Core Syntax,
			Types, Style Sheets and HTML, Style Rule Cascading and Inheritance,
			Text Properties, CSS Box Model, Normal Flow Box Layout,
			Positioning and other useful Style Properties; Features of CSS3.
		November	The Nature of JavaScript: Evolution of Scripting Languages,
			JavaScript-Definition, Programming for Non-Programmers,
			Introduction to Client-Side Programming, Enhancing HTML Documents with JavaScript.
			Static and Dynamic web pages.
		December	Revision
4	**Dr. Rahul Hooda**	**Computer Science**	**LOC Lab**
	B.Sc 1st Sem	August-	Program 1
			Program 2
			Program 3
		September	Program 4
			Program 5
			Program 6
		October	Program 7
			Program 8
			Program 9

		November-December	Program 10
			Practice & Viva
5	**Dr. Rahul Hooda**	**Computer Science**	**Data Structure Lab**
	B.Sc 3rd Sem	August-	Program 1
			Program 2
			Program 3
		September	Program 4
			Program 5
			Program 6
		October	Program 7
			Program 8
			Program 9
		November	Program 10
			Practice & Viva
6	**Dr. Rahul Hooda**	**Computer Science**	**Web Technologies Lab**
	B.Sc 5th Sem	August-	Program 1
			Program 2
			Program 3
		September	Program 4
			Program 5
			Program 6
		October	Program 7
			Program 8
			Program 9
		November	Program 10
			Practice & Viva
7	**Dr. Rahul Hooda**	**Computer Science**	**Minor: Basic of Computer Science**
	B.Sc 1st Sem	August	Introduction to Computers: Definition of Computers,
			History and Generations of Computers,
			Characteristics ofcomputer, Classification of Computers.
			Fundamental Block diagram of Computer: CPU, Input & Output Unit.
		last week of August	(I-Assignment)
		September	Software: Definition of Software, Types of Software-System software,
			Application software and Utility software.
			Types of Computer Languages,
			Assemblers, Interpreters, Compiler.
		October	Introduction to OperatingSystems: Types of Operating System, Functions of Operating System.
			Windows: Introduction to Windows, Starting Windows, Desk Top, Task Bar, Opening and closing applications,
			icons- creating, renaming and removing. Date and Time setting, Working with files and folders-creating,
			deleting, opening, finding, copying, moving, and renaming.
		November	Networking: Concept, Basic Elements of a Communication System,
			Data Transmission Media, LAN, MAN, WAN.
			Introduction of Internet and WWW,
			Basic working of a Web Browser, Introduction to popular web browsers.
		December	Revision
8	**Dr. Rahul Hooda**	**Computer Science**	**MDC: Fundamentals of Computer Science**
	B.A. 1st Sem	August	Computer Fundamentals: Evolution of Computers through generations, Characteristics of Computers,
			Strengths and Limitations of Computers, Classification of Computers,

		August	Functional Components of a Computer System, Applications of computers in Various Fields.
			Types of Software: System software, Application software, Utility Software.
		last week of August	(I-Assignment)
		September	Memory Systems: Concept of bit, byte, word, nibble, storage locations and addresses, measuring units of storage capacity, access time, concept of memory hierarchy. Primary Memory - RAM, ROM, PROM, EPROM.
			Secondary Memory - Types of storage devices, Magnetic Tape, Hard Disk, Optical Disk, Flash Memory.
			I/O Devices: I/O Ports of a Desk Top Computer, Device Controller, Device Driver. Input Devices: classification and use, keyboard, pointing devices - mouse, touch pad and track ball,
			joystick, magnetic stripes, scanner, digital camera, and microphone Output Devices: speaker, monitor, printers: classification, laser, ink jet, dot-matrix. Plotter.
		October	Introduction to Operating System: Definition, Functions, Features of Operating System, Icon,
			Folder, File, Start Button, Task Bar, Status Buttons,
			Folders, Shortcuts, Recycle Bin, Desktop,
			My Computer, My Documents, Windows Explorer, Control Panel.
		November	The Internet: Introduction to networks and internet, history, Internet,
			Working of the Internet, Modes of Connecting to Internet.
			Electronic Mail: Introduction, advantages and disadvantages, User Ids, Passwords, e-mail addresses,
			message components, message composition, mailer features. Browsers and search engines.
		December	Revision
9	**Dr. Rahul Hooda**	**Computer Science**	**SEC: Basic IT Tools**
	B.Sc/B.Com 1st Sem	August-September	Introduction to Computer: Computer and Latest IT gadgets, Evolution of Computers & its applications,
			Basics of Hardware and Software, Application Software, Systems Software, Utility Software. Central Processing Unit,
			Input devices, Output devices, Computer Memory & storage, Mobile Apps.
			Introduction to Operating System, Functions of the Operating system, Operating Systems for Desktop and Laptop, Operating Systems for Mobile Phone and Tablets,
		last week of August	(I-Assignment)
		October	User Interface for Desktop and Laptop, Task Bar, Icons & shortcuts, Running an Application, Operating System Simple Setting,
			Changing System Date and Time, Changing Display Properties, To Add or Remove Program and Features, Adding, Removing & Sharing Printers, File and Folder Management.
			Introduction to Internet and World Wide Web, Basic of Computer Networks, Local Area Network (LAN), Wide Area Network (WAN),
			Network Topology, Internet, Applications of Internet, Website Address and URL,
		November	Popular Web Browsers (Internet Explorer/Edge, Chrome, Mozilla Firefox, Opera etc.), Popular Search Engines, Searching on the Internet.
			E-mail: Using E-mails, Opening Email account, Mailbox: Inbox and Outbox, Creating and Sending a new E-mail,
			replying to an E-mail message, forwarding an E-mail message, searching emails, Attaching files with email, Email Signature.
			Social Networking: Facebook, Twitter, LinkedIn, Instagram, Instant Messaging (WhatsApp, Facebook Messenger, Telegram), Introduction to Blogs, Digital Locker.
		December	Revision
10	**Dr. Rahul Hooda**	**Computer Science**	**Minor: Presentation Tools**
	B.Sc 3rd Sem	August	Creating New Presentations: Creating a Presentation, Choosing a Template/Theme,
			Changing the Template/Theme, Adding Slides, Typing in Slide, Choosing a Slide Layout,
			Changing the Slide Layout, Adding Text & Outline, Adding Text Bulleted, Numbered Lists,

			Adding & Editing Text with Outline, View Outline, View Keystrokes.
		last week of August	(I-Assignment)
		September	Pictures & Graphics: Placing Pictures into Placeholders, Cropping Photos,
			Sizing Graphics, Fixing Stretched/Squished Photos, Photos Crop to Shape,
			Aspect Ratio Adjustment, Photos & Graphics Picture Adjustments (converting to Black & White),
			Picture Border, Layered Objects, Placeholder, Aligning Evenly, Distributing, Grouping, Reordering Layered Objects.
		October	SmartArt: Creating SmartArt, Adding Text Layouts, Styles, Shapes,
			Converting Text into SmartArt, SmartArt with Picture, Adding Shapes,
			Adding Lines, Styling Shapes, Adding Text, Shapes Resizing, Moving,
			Rotating Shapes, Connector Lines, Text Boxes.
		November	Tables: Creating Tables in PowerPoint, Typing in Table,
			Data Designing, Table Layout, Sizing Tables, Columns/Rows Alignment,
			Spacing In a Table, Adding or Removing Rows/Columns, Merging Cells, Copying & Pasting Charts,
			Importing Excel data to a Chart, Updating the Chart Data when the Excel File Changes.
		December	Revision
11	**Dr. Rahul Hooda**	**Computer Science**	**MDC: IT Tools**
	B.A 3rd Sem	August	Introduction to Internet & Computer: Concept, application and uses of Internet, Internet services, search engines, concepts of data, information, information system,
			effects of IT on business, Characteristics of Computers, Input, Output, Storage units, Central Processing Unit, Processor Speed, Cache Memory, RAM, ROM,
			Secondary Storage Devices: Hard Disks, Optical Disks CD-ROM, DVD, Input Devices - Keyboard, Mouse, joystick, Scanner, web cam,
			Output Devices- Monitors, Printers – Dot matrix, inkjet, laser, Computer Software- Relationship between Hardware and Software; System Software, Application Software, Compiler
		last week of August	(I-Assignment)
		September	Operating System: An overview of different versions of Windows, Basic Windows elements, File management through Windows.
			Using essential accessories: System tools; Disk clean-up, Disk defragmenter, Calculator,
			Notepad, Paint, and WordPad, Application Management: Installing, uninstalling, running applications,
			Windows control panel- keyboard, mouse, file explorer, font ,region, network settings
		October	Word processing concepts: saving, closing, Opening an existing document, Editing text,
			Finding and replacing text, printing documents, creating and Printing Merged Documents,
			Character and Paragraph Formatting, Page Design and Layout.
			Editing and Profiling Tools: Checking and correcting spellings. Handling Graphics, Creating tables.
		November	Application of information Technology in Railways, Airlines, Banking, Insurance,
			Inventory Control, Financial systems, Hotel Management, Education,
			Video games, Mobile phones, Information kiosks, special effects in Movies.
			Revision
		December	Revision