

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

NAME OF THE COLLEGE- GOVT. COLLEGE, Alewa ACADEMIC SESSION 2025-26 EVEN SEMESTER FOR THE MONTH OF 22nd January to 13th May 2026

Sr. NO	Name of the Assistant / Associate Professor / Class	Subject/week/month	Topic/ Chapters to be covered	
1	Dr. Rahul Hooda B.Sc 2nd Sem	Computer Science	Major: Problem Solving through C	
			Jan /Feb	Overview of C: History, Importance, Structure of C Program, Character Set, Constants and Variables, Identifiers and Keywords,
				Data Types, Assignment Statement, Symbolic Constant. Input/output: Formatted I/O Function-, Input Functions viz.
				scanf(), getch(), getche(), getchar(), gets(), output functions viz. printf(), putchar(), puts().
			Operators & Expression: Arithmetic, Relational, Logical, Bitwise, Unary, Assignment, Conditional Operators and Special Operators Operator Hierarchy;.	
		1st week of March	(I-Assignment)	
		March	Arithmetic Expressions, Evaluation of Arithmetic Expression, Type Casting and Conversion.	
			Decision making with if statement, if-else statement, nested if statement, else-if ladder, switch and break statement, goto statement, Looping Statements: for, while, and do-while loop, jumps in loops.	
			Arrays: One Dimensional arrays - Declaration, Initialization and Memory representation; Two Dimensional arrays -Declaration,	
			Initialization and Memory representation. Functions: definition, prototype, function call, passing arguments to a function: call by value; call by reference, recursive functions.	
		4th week of March	Unit Test	
		April	Strings: Declaration and Initialization, String I/O, String Manipulation Functions: String Length, Copy, Compare, Concatenate etc.	
			User defined data types: Structures - Definition, Advantages of Structure, declaring structure variables, accessing structure members, Structure members initialization, Array of Structures;	
			Unions – Union definition; difference between Structure and Union.	
		May	Revision	
2	Dr. Rahul Hooda B.Sc 4th Sem	Computer Science	Object Oriented Programming with C++	
			Jan/Feb	Basic concept of OOP, Comparison of Procedural Programming and OOP, Benefits of OOP,
				C++ compilation, Difference between C and C++. Elements of C++ Language - Tokens and identifiers: Character set and symbols, Keywords, C++ identifiers; Datatypes in C++, Operators ,Types of operators in C++, Precedence and associativity of operators,
				function: prototype, function call, definition, passing arguments, inline function, function overloading.
			Object-oriented features of C++: Class and Objects, Data hiding & encapsulation, abstraction, Data Members and Member Functions,	
		1st week of March	(I-Assignment)-C++	
		March	accessing class members, empty class, local class, global class, Scope Resolution Operator and its Uses, Static Data Members, Static Member Functions,	
			Structure vs Class, Friend function and friend class. Constructors and Destructors: Constructors, Instantiation of objects, Default constructor,	
			Parameterized constructor, Copy constructor, Destructors,	
			Operator Overloading: Overloading unary and binary operators: arithmetic operators, manipulation of strings using operators.	
3rd week of March	(II- Assignment)-C++			
4th week of March	(Unit test)-C++			
April	Inheritance: Derived class, base class, Accessing the base class member, Inheritance: multilevel, multiple, hierarchical, hybrid			
	Virtual base class, Abstract class. Virtual Functions, pure virtual functions;			

			April	Polymorphism & its types. Exception Handling in C++: exception handling model, exception handling constructs - try, throw, catch, Order of catch blocks, Catching all exceptions.
			May	Revision
	3	Dr. Rahul Hooda	Computer Science	Operating System
		B.Sc 6th Sem		Introductory Concepts: Operating System, Functions and Characteristics, Historical Evolution of Operating Systems, Operating System Structure.
			Jan/Feb	Types of Operating System: Real time, Multiprogramming, Multiprocessing, Batch processing.
				Operating System Services, Operating System Interface, Service System Calls, System Programs.
				Process Management: Process Concepts, Operations on Processes, Process States and Process Control Block. Inter- Process Communication.
			1st week of March	(I-Assignment)
			March	CPU Scheduling: Scheduling Criteria, Levels of Scheduling, Scheduling Algorithms, Multiple Processor Scheduling, Algorithm Evaluation.
				Synchronization: Critical Section Problem, Semaphores, Classical Problem of Synchronization, Monitors. Deadlocks: Deadlock Characterization,
				Methods for Handling Deadlocks, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection and Recovery.
				Memory Management Strategies: Memory Management of Single-User and Multiuser Operating System, Partitioning, Swapping,
			3rd week of March	(II- Assignment)
			4th week of March	(Unit test)
			April	Contiguous Memory Allocation, Paging and Segmentation; Virtual Memory Management: Demand Paging, Page Replacement Algorithms, Thrashing.
				Implementing File System: File System Structure, File System Implantation, file operations,
				Type of Files, Directory Implementation, Allocation Methods, and Free Space Management.
				Disk Scheduling algorithm- SSTF, Scan, C- Scan, Look, C-Look.SSD Management.
			May	Revision
	4	Dr. Rahul Hooda	Computer Science	C Programming Lab
		B.Sc 2nd Sem		Program 1
			Jan/Feb	Program 2
				Program 3
			March	Program 4
				Program 5
				Program 6
				Program 7
			April	Program 8
				Program 9
				Program 10
			May	Practice & Viva
	5	Dr. Rahul Hooda	Computer Science	C++ Programming Lab
		B.Sc 4th Sem		Program 1
			Jan/Feb	Program 2
				Program 3
			March	Program 4
				Program 5
				Program 6
				Program 7
			April	Program 8
				Program 9
				Program 10

			May	Practice & Viva
	6	Dr. Rahul Hooda	Computer Science	SQL and PL/SQL
		B.Sc 4th Sem		
			Jan/Feb	Program 1
				Program 2
				Program 3
			March	Program 4
				Program 5
				Program 6
				Program 7
			April	Program 8
				Program 9
				Program 10
			May	Practice & Viva
	7	Dr. Rahul Hooda	Computer Science	Minor: Word Processing
		B.Sc 2nd Sem		
			Jan/Feb	Introduction to Word Processing, Development of the Word Processor, Design considerations for word processed documents,
				Creating, opening and closing documents, working with multiple documents,
				Saving documents, Save an existing file under another name, Save different Versions
				Formatting Documents, Text Formatting, Paragraph Formatting,
			1st week of March	(I-Assignment)
			March	Text alignment, Tabs and its types, placing text at the tab position, Paragraph spacing,
				Working with lists, Paragraph borders and shading, Creating and Applying Styles
				Adding tables, Adding data to a table, Deleting a table,
				Add and delete columns and rows, Modifying columns and rows,
			April	Images, Inserting images, Modifying images, Resize an image and charts
				Mail Merge, Preparing the documents,
				Creating the main document, Creating the data source,
				Document formatting
			May	Revision
	8	Dr. Rahul Hooda	Computer Science	MDC: Digital Tools
		B.A. 2nd Sem		
			Jan/Feb	Introduction to internet: concept, application and uses of Internet,
				Internet services, search engines, Information Technology and Business:
				concepts of data, information and information system, effects of IT on business
				Types of information system: Transaction Processing System (TPS),
			1st week of March	(I-Assignment)
			March	Management Information System (MIS). Introduction to E-commerce;
				e-commerce and world wide web; e-commerce application services;
				Ecommerce models: B2B, B2C, C2C;
				electronic data interchange: benefits, components of EDI,
			April	EDI implementation.
				Security issues in e-commerce,
				M-commerce and e-governance,
				difference m-commerce and e-commerce
			May	Revision
	9	Dr. Rahul Hooda	Computer Science	SEC: Basic IT Tools
		B.A. 2nd Sem		
			Jan/Feb	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,
			1st week of March	(I-Assignment)
			March	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,
			April	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.
			May	Revision
	10	Dr. Rahul Hooda	Computer Science	Minor: Web Designing
		B. Sc 6th Sem	Jan/Feb	Introduction to Internet and World Wide Web; Evolution and History of World Wide Web; Basic Features; Web Browsers;
				Web Servers; Hypertext Transfer Protocol; URLs;
				Searching and WebCasting Techniques; Search Engines and Search Tools Steps for Developing Website; Choosing the Contents; Home Page; Domain Names;
			1st week of March	(I-Assignment)
			March	Internet Service Provider; Planning and Designing Web Site;
				Creating a Website; Web Publishing: Hosting Site;
				Introduction to HTML; Hypertext and HTML; HTML Document Features; HTML Tags; Header, Title, Body, Paragraph, Ordered/Unordered Line, Creating Links;
			April	Headers; Text Styles; Text Structuring; Text Colors and Background; Formatting Text; Page layouts; Insertion of Text, Movement of Text
				Images: Types of Images, Insertion of Image, Movement of Image, Ordered and Unordered lists;
				Inserting Graphics; Table Handling Functions like Columns, Rows, Width, Colours;
				Frame Creation and Layouts; Working with Forms and Menus; Working with Buttons like Radio, Check Box;
			May	Revision