

GOVERNMENT COLLEGE FOR WOMEN, HISAR

Lesson Plan July 2025 to November 2025

Name of Teacher: Mr. Amit Bansal

Class: - BSc-1st Sem

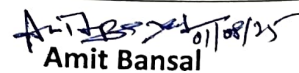
Subjects:-Computer Programming Fundamentals (Minor Course)

External Exam -35 Marks

Internal Exam : 15 Marks

Total Marks -50

Date	Week	Topics to be covered
01.08.2025 to 02.08.2025	Week 1	Overview of programming concepts,
04.08.2025 to 09.08.2025	Week 2	Computer Languages: Machine Language, Assembly Language, High Level Language
11.08.2025 to 16.08.2025	Week 3	Source code, Compiler, Interpreter, Object Code;
18.08.2025 to 23.08.2025	Week 4	Algorithm
25.08.2025 to 30.08.2025	Week 5	Flow Chart and pseudocode
01.09.2025 to 06.09.2025	Week 6	Basics of problem-solving in programming
08.09.2025 to 13.09.2025	Week 7	Debugging, Error: Types of Error
15.09.2025 to 20.09.2025	Week 8	Data types: integers, floating-point numbers, strings, and Booleans
22.09.2025 to 27.09.2025	Week 9	Variables and constants, Unit Test
29.09.2025 to 04.10.2025	Week 10	Input/output operations
06.10.2025 to 11.10.2025	Week 11	Operators and expressions
13.10.2025 to 18.10.2025	Week 12	Conditional statements: if, else if, else
27.10.2025 to 01.11.2025	Week 13	Loops: while loops
03.11.2025 to 08.11.2025	Week 14	For loops
10.11.2025 to 15.11.2025	Week 15	Control structures: break, continue
17.11.2025 to 21.11.2025	Week 16	Revision


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December 2021
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GOVERNMENT COLLEGE FOR WOMEN, HISAR

Lesson Plan July 2025 to November 2025

Name of Teacher: Mr. Amit Bansal

Class: - BSc-5th Sem

Subjects:-Computer Science (OOP using C++)

External Exam -80 Marks

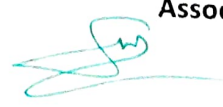
Internal Exam : 20 Marks

Total Marks -100

Date	Week	Topics to be covered
14.07.2025 to 19.07.2025	Week 1	Procedure Oriented Programming, Object-Oriented programming Paradigm, difference between Procedure Oriented Programming and Object-Oriented programming,
21.07.2025 to 26.07.2025	Week 2	Basic concepts of Object-Oriented programming, Benefits of OOP, Object Oriented Languages, and application of OOP. Structure of a C++ Program,
28.07.2025 to 02.08.2025	Week 3	Insertion operator, Extraction operator, Unformatted and Formatted I/O Operations, inline functions.
04.08.2025 to 09.08.2025	Week 4	C structure revisited, specifying a Class, Creating Objects, Defining member function, Memory allocation for objects, Scope resolution operator and its significance,
11.08.2025 to 16.08.2025	Week 5	Static Data Members, Static member functions,
18.08.2025 to 23.08.2025	Week 6	Friend Function, Friend Class. Unit Test
25.08.2025 to 30.08.2025	Week 7	Dynamic Memory Management using new and delete Operator, Constructor, type of constructors,
01.09.2025 to 06.09.2025	Week 8	Dynamic initialization of objects, Constructor overloading, Constructor with default arguments,
08.09.2025 to 13.09.2025	Week 9	Destructors, function overloading,
15.09.2025 to 20.09.2025	Week 10	Operator Overloading, Overloading unary and binary operators.
22.09.2025 to 27.09.2025	Week 11	Inheritance, Single Inheritance
29.09.2025 to 04.10.2025	Week 12	Making a private member inheritable, Multilevel Inheritance
06.10.2025 to 11.10.2025	Week 13	Multiple Inheritance, Hierarchical Inheritance,
13.10.2025 to 18.10.2025	Week 14	Hybrid Inheritance, Virtual Base Class. Abstract Classes,
27.10.2025 to 01.11.2025	Week 15	Constructors in derived classes.
03.11.2025 to 08.11.2025	Week 16	Hierarchy of Console Stream Classes, Manipulators
10.11.2025 to 15.11.2025	Week 17	Revision
17.11.2025 to 21.11.2025	Week 18	Revision


Amit Bansal 14/07/25

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Lesson Plan July 2025 to November 2025

Name of Teacher: Mr. Amit Bansal

Class: - BSc-5th Sem

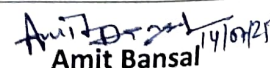
Subjects:-Data Analytics

External Exam -80 Marks

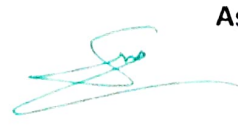
Internal Exam : 20 Marks

Total Marks -100

Date	Week	Topics to be covered
14.07.2025 to 19.07.2025	Week 1	Data Analytics: Introduction to Data Analytics, Business Intelligence (BI) for better decisions, Decision types
21.07.2025 to 26.07.2025	Week 2	BI tools, BI skills, BI applications. Data warehousing: Introduction to Data warehousing (DW), Design considerations for DW, DW development approaches, DW architecture.
28.07.2025 to 02.08.2025	Week 3	Data Mining: Introduction to Data mining, Data cleaning and preparation, outputs of Data mining,
04.08.2025 to 09.08.2025	Week 4	Evaluation of data mining results, Data Mining Techniques.
11.08.2025 to 16.08.2025	Week 5	Decision Trees: Introduction to Decision tree, Decision tree problem, Decision tree construction,
18.08.2025 to 23.08.2025	Week 6	Lessons from constructing trees, Decision tree algorithms.
25.08.2025 to 30.08.2025	Week 7	Regression: Introduction, Correlations and Relationships, Visual Look at Relationships, Logistic regression, Advantages and disadvantages of regression models.
01.09.2025 to 06.09.2025	Week 8	Artificial Neural Networks: Introduction, business applications of ANN, Design principles of an ANN, Representation of a neural network, Architecting a neural network, Developing an ANN, Advantages and disadvantages of using ANN.
08.09.2025 to 13.09.2025	Week 9	Cluster analysis: Introduction, Applications of cluster analysis, Definition of a cluster, Representing clusters, Clustering techniques, K-means algorithm for clustering, Selecting the number of clusters. Unit Test
15.09.2025 to 20.09.2025	Week 10	Association rule Mining: Introduction, Business applications of association rules, Representing association rules,
22.09.2025 to 27.09.2025	Week 11	Algorithms for association rule, Apriori algorithm, Creating association rules.
29.09.2025 to 04.10.2025	Week 12	Web Mining: Introduction, Web content mining, Web structure mining, Web usage mining
06.10.2025 to 11.10.2025	Week 13	Web mining algorithms.
13.10.2025 to 18.10.2025	Week 14	Big data: Introduction, Defining big data, Big data landscape, Business implications of big data, Technology implications of big data, Big data technologies, Management of big data.
27.10.2025 to 01.11.2025	Week 15	Naïve-base analysis: Introduction, Probability, Naïve base model, Text classification example.
03.11.2025 to 08.11.2025	Week 16	Support vector machines: Introduction, SVM model, The kernel method
10.11.2025 to 15.11.2025	Week 17	Revision
17.11.2025 to 21.11.2025	Week 18	Revision


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GOVERNMENT COLLEGE FOR WOMEN, HISAR

Lesson Plan July 2025 to November 2025

Name of Teacher: Mr. Amit Bansal/ Mr. Vipin Babbar

Class: - BA/BSc in Life Sciences/BA with Major in Geography -1st Sem (SEC)

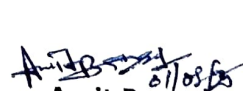
Subjects:- Office Tools (SEC)

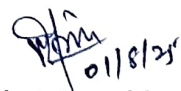
External Exam -35 Marks

Internal Exam : 15 Marks

Total Marks -50

Date	Week	Topics to be covered
01.08.2025 to 02.08.2025	Week 1	Operating System - Definition, Functions, Types of Operating System, Basics of Popular Operating Systems,
04.08.2025 to 09.08.2025	Week 2	The User Interface, Exploring Computer, Icons, taskbar, desktop, Using Menu and Menu-selection,
11.08.2025 to 16.08.2025	Week 3	managing files and folders,
18.08.2025 to 23.08.2025	Week 4	Control panel – display properties, add/remove software and hardware, Common utilities.
25.08.2025 to 30.08.2025	Week 5	Word Processing - Introduction to Word Processing, Menus, Creating, Editing &
01.09.2025 to 06.09.2025	Week 6	Formatting Document, Spell Checking, Printing, Views, modifying page setup,
08.09.2025 to 13.09.2025	Week 7	applying document themes, applying document style sets, Inserting headers and footers
15.09.2025 to 20.09.2025	Week 8	Tables,
22.09.2025 to 27.09.2025	Week 9	Spread Sheet: Elements of Electronics Spread Sheet, Applications, Creating and Opening of Spread Sheet,
29.09.2025 to 04.10.2025	Week 10	Menus, Manipulation of cells: Enter texts numbers and dates, Cell Height and Widths, copying of cells,
06.10.2025 to 11.10.2025	Week 11	Mathematical, Statistical and Financial function,
13.10.2025 to 18.10.2025	Week 12	Drawing different types of charts,
27.10.2025 to 01.11.2025	Week 13	Sort and Filter Data
03.11.2025 to 08.11.2025	Week 14	Creating Presentation, Type of presentation views.
10.11.2025 to 15.11.2025	Week 15	Using sound, Animation, Working with Objects, and Printing.
17.11.2025 to 21.11.2025	Week 16	Revision


01/08/25


01/08/25

Amit Bansal and Vipin Babbar

Associate Professor of Computer Science

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GOVT. COLLEGE FOR WOMEN HISAR

Lesson Plan

Class:- B.Sc -1st Sem. Physical Sc. Session 2025-26 (Odd Semester)

Subject:- Computer Fundamentals and Programming in C

Date	Topics
17/07/25 to 19/07/25	Introduction to Computers, Definition, components of Computer
24/07/25 to 26/07/25	Components of Computer, Characteristics of computers, Input Devices introduction, Keyboard, Mouse, Joystick, Track ball, light Pen, OMR, OCR, MICR
31/07/25 to 02/08/25	Scanners, Web Camera etc., Output Device introduction, Printer introduction, Character Printers, Line printers, Page printers, Plotters, Monitor
07/08/25 to 09/08/25	Introduction to memory, Memory Hierarchy, Types of Main memory, RAM
14/08/25 to 16/08/25	ROM, Cache Memory, Introduction to secondary storage devices, Magnetic disk, Magnetic Tape, Floppy Disk.
	Introduction to windows, desktop, icon, My Computer, My Document, Recycle Bin
21/08/25 to 23/08/25	Optical Disk, CD, DVD, Comparison between different memories.
	Start Button, Display Properties, Manage files and folders
28/08/25 to 30/08/25	Introduction to modern CPU and processors, Revision and doubts of students, Test
	Accessories, Installing/uninstalling a printer and other software
04/09/25 to 06/09/25	History & Importance of C, Structure of a C Program, C character set, identifiers and keywords, Data types, Constants and Variables, Assignment statement, Symbolic constant
11/09/25 to 13/09/25	Unformatted & formatted I/O function, Input functions (scanf(), getch(), getche(), getchar(), gets()).
18/09/25 to 20/09/25	Output functions (printf(), putchar(), puts()).
25/09/25 to 27/09/25	Arithmetic, relational, logical operator.
02/10/25 to 04/10/25	Bitwise, unary, assignment, conditional operators and special operators.
09/10/25 to 11/09/25	Arithmetic expressions, evaluation of arithmetic expression, type casting and conversion, operator hierarchy & associativity.
16/10/25 to 18/10/25	Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, goto statement.
23/10/25 to 25/10/25	Diwali holidays
30/10/25 to 01/11/25	Class Test and doubt classes
06/11/25 to 08/11/25	For, while, and do-while loop, jumps in loops, break, continue statement. Test
13/11/25 to 15/11/25	Functions: Definition, prototype, passing parameters, recursion.
20/11/25 to 21/11/25	Storage classes in C: auto, extern, register and static storage class, their scope, storage, & lifetime. Arrays: Definition, types, initialization, processing an array.

Submitted By:-

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Lesson Plan

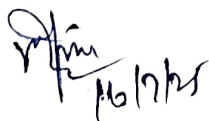
Session 2025-26 (Odd Semester)

Class:- B.Sc -3rd Sem. Physical Sc.

Subject:- DBMS

Date	Topics
17/07/25 to 19/07/25	Basic Concepts – Data, Information, Records and files. Traditional file –based Systems-File Based Approach-Limitations of File Based Approach,
24/07/25 to 26/07/25	Database Approach-Characteristics of Database Approach, Database Management System (DBMS), Components of DBMS Environment,
31/07/25 to 02/08/25	DBMS Functions and Components, Advantages and Disadvantages of DBMS. Roles in the Database Environment - Data and Database Administrator, Database Designers, Applications Developers and Users.
07/08/25 to 09/08/25	Database System Architecture – Three Levels of Architecture, External, Conceptual and Internal Levels, Schemas, Mappings and Instances.
14/08/25 to 16/08/25	Data Independence – Logical and Physical Data Independence. Classification of Database Management System, Centralized and Client Server architecture to DBMS.
21/08/25 to 23/08/25	Data Models: Records- based Data Models, Object-based Data Models, Physical Data Models and Conceptual Modeling.
28/08/25 to 30/08/25	Entity-Relationship Model – Entity Types, Entity Sets,
04/09/25 to 06/09/25	Attributes Relationship Types, Relationship Instances and ER Diagrams.
11/09/25 to 13/09/25	Basic Concepts of Hierarchical and Network Data Model
18/09/25 to 20/09/25	Relational Data Model:-Brief History, Relational Model Terminology,Relational Data Structure, Database Relations, Properties of Relations,
25/09/25 to 27/09/25	Keys, Domains, Integrity Constraints over Relations,
02/10/25 to 04/10/25	Base Tables and Views.
09/10/25 to 11/09/25	Relational Database design: functional dependencies, Normal forms (1 NF, 2 NF, 3 NF and BCNF). Decomposition, types of decomposition, properties of decomposition.
16/10/25 to 18/10/25	SQL: Introduction, Data Types; DDL-Create, Alter and Drop table Commands. DML-SELECT/ FROM/WHERE, INSERT INTO/VALUES, UPDATE/SET/WHERE/ORDER BY/HAVING, DELETE, Commands.
23/10/25 to 25/10/25	Diwali holidays
30/10/25 to 01/11/25	Revision of DBMS Functions and Components, Advantages and Disadvantages of DBMS.Roles in the Database Environment - Data and Database Administrator, Database Designers, Applications Developers and Users.
06/11/25 to 08/11/25	Basic Concepts of Hierarchical and Network Data Model
13/11/25 to 15/11/25	Revision of Database Approach-Characteristics of Database Approach, Database Management System (DBMS), Components of DBMS Environment,
20/11/25 to 21/11/25	Revision of DBMS Functions and Components, Advantages and Disadvantages of DBMS.Roles in the Database Environment - Data and Database Administrator, Database Designers, Applications Developers and Users.

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Lesson Plan

Class:- B.Sc -5th Sem. Physical Sc. Session 2025-26 (Odd Semester)

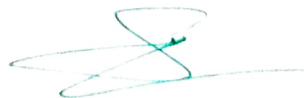
Subject:- Cloud Computing (SEC)

Date	Topics
July 21, 22	Cloud computing, what is cloud, advantages and disadvantages of Cloud service, Cloud computing ,advantages, Cloud computing disadvantages ,
July 28,29	client server computing ,what is client server, model categories of client server computing ,benefits of client server computing,
August 4,5	difference between client and server, peer to peer computing ,characteristics of PEER to PEER computing, advantages of Peer to peer computing ,disadvantage of pear to peer computing, distributed computing
August 11,12	Functions of cloud computing, types of cloud services, types of cloud, advantages disadvantages of SAS ,
August 18,19	platform as a service advantages of platform as a service disadvantages of platform as a service infrastructure as a service advantages and disadvantages of infrastructure as a service
August 25,26	Cloud architecture, logical and service oriented, front end back end ,Cloud service provider companies
September 1,2	Class Test
September 8,9	Amazon Web service, Microsoft Azure, features of Microsoft Azure, Google cloud platform, and its features ,IBM Cloud service ,features of IBM cloud
September 15,16	VMware, features of VMware cloud features of Oracle cloud
September 22,23	Red hat features of Red hat this ocean and features of digital ocean private public and hybrid cloud
September 29,30	Applications of cloud computing ,Google app for education ,
October 6,7	AWS in education social media platforms desktop and device using cloud computing
October 13,14	DaaS desktop as a service in cloud computing
October 20,21	Diwali holidays
October 27,28	what is email what is cloud email advantages of cloud email disadvantages of cloud email
November 3,4	Revision of Unit-I
November 10,11	Revision of Unit-II
November 17,18	Revision of Unit-III
November 21	Revision of Unit-IV

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Class:- B.Sc -3rd Sem. Physical Sc.(with chemistry) Session 2025-26 (Odd Semester)

Subject:- E-Commerce (Minor)

Date	Topics
July 14-16	Introduction to Internet, Application of Internet,
July 21-23	Uses of Internet, DNS, IP Address, URL, Internet services E-mail, WWW and websites
July 28-30	Communication of Internet, Newsgroups, FTP, Telnet, Other Internet services like Gopher, veronica etc.
August 4-6	Concept of Data and information, Characteristics of Information, Concept of System, Characteristics of System, Information system, Computer Based Information System, Advantages and Disadvantages of CBIS,
August 11-13	Transaction Processing System, Management Information System, Decision Support System , EIS, Expert System, Office Automation System
August 18-20	Internet Practical work, search engine, Communication through Internet.
August 25-27	Introduction to E-Commerce, Elements of E-Commerce, Benefits of E-Commerce, Limitation of E-Commerce, Framework of E-Commerce
Sept. 1-3	E-commerce and WWW, Architectural Framework of E-commerce, E-commerce Application Services, E-Commerce Models B2B, B2C, C2C
Sept. 8-10	research using online sources-survey, research on social networking sites
Sept. 15-17	EDI Introduction, EDI Vs Traditional Method, Benefits of EDI, Drawbacks of EDI, Components of EDI, EDI implementation
Sept. 22-24	Class Test
Sept 29,30,Oct1	Practical of EPS and Netbanking
Oct 6-8	Need of security in E-Commerce, Essential Security Requirement, Security Solutions- Encryption, Digital Signature, Security Certificate, Protocols –SSL, SHTTP, Secure Electronic Transaction security Requirement, SET Components or Entities, Steps of SET Transactions, Advantages of Set
Oct 13-15	e-governance initiation such as E-disha, digital locker, etc.
Oct 20-22	Risk of Using Internet, Internet Security Measures – Content Filter, Internet Security Measures – Firewall, Legal Aspects of E-Commerce
Oct 27-29	Introduction to M-Commerce and its Applications, Advantages and Disadvantages of M-Commerce, Introduction to E-Governance, EdI in Governance, Models of E-Governance, Advantages of E-Governance
Nov 3-5	Revision of Unit I
Nov 10-12	Revision of Unit II
Nov 17-19	Revision of Unit III
Nov 21	Revision of Unit IV

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Lesson Plan

Class:- B.A-1st Sem

Session 2025-26 (Odd Semester)

Subject:- Office Tools (SEC)

Date	Topics
July 16-19	Windows: Basics of Windows. Windows History, Basic components of windows, icons, types of icons, taskbar
July 23-26	activating windows, using desktop, title bar, running applications, Windows explorer,
July 30- Aug 02	managing files and folders, Configuring System devices. Control panel , using windows accessories.
Aug 6-9	Documentation Using Word - Introduction to Office Automation, Creating & Editing Document, Formatting Document, Auto-text, Autocorrect
Aug 13-16	Spelling and Grammar Tool, Document Dictionary, Page Formatting
Aug 20-23	Bookmark, Advance Features of MS-Word-Mail Merge, Macros
Aug 27-30	Tables, File Management, Printing, Styles, linking and embedding objec
Sept 3-6	Electronic Spread Sheet using Excel - Introduction to MS-Excel, Creating & Editing Worksheet, Formatting and Essential Operations
Sept 10-13	Formulas and Functions, Charts, Advance features of MS-Excel-Pivot table & Pivot Chart,
Sept 17-20	Linking and Consolidation,
Sept 24-27	Database Management using Excel-Sorting, Filtering, Table,
Oct 1-4	Class test
Oct 8-11	Validation, Goal Seek, Scenario
Oct 15-18	Macro
Oct 22-25	Diwali holidays
Oct 29- Nov1	Theory VIVA for internal assessment
Nov 5-8	Theory VIVA for internal assessment
Nov 11-15	Preparation of practical file for final exam
Nov 19-22	Presentation using PowerPoint: Presentations, Creating Manipulating & Enhancing Slides, Organizational Charts, Sounds, Inserting Animated Pictures or Accessing through Object

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