Govt. College, Aharwala (Bilaspur)
Lesson Plan (2021-22) [Even Semester]

Name of Associate / Assistant Professor :	Amit Kapoor
Department :	Computer Science
Class & Section:	Bcom (CAV) IV Sem
Subject Name and Code:	BC(Voc)-406 Advanced Computer Applications
Semester Duration (Tentative)	TDC-I & II: 1st April 2022 to 15th July 2022 (Week 1 to Week 14)

Week 1
Topics to be covered: Networking: fundamentals, LAN/MAN/WAN, topologies,

Week 2
Topics to be covered: transmission media, ISDN, B-ISDN, internet services;

Week 3
Topics to be covered: Protocols- TCP/IP, OSI, ATM

Week 4
Topics to be covered: Hardware and Software requirements for internet;

Week 5
Topics to be covered: browsers- internet explorer, mozilla firefox, opera, google chrome; search engines; webpage.

Week 6
Topics to be covered: Information technology application in business, E-business,

Week 7
Topics to be covered: net banking; online purchasing and selling;

Week 8
Topics to be covered: online banking, electronic payment systems- an overview.

Week 9
Topics to be covered: E-governance - concept and examples

Week 10
Topics to be covered: digitalization of services – income tax, digital lockers, etc.

Week 11
Topics to be covered: E-disha, etc., linking AADHAR to service – issues and impact.

Week 12
Topics to be covered: Social and ethical aspects of IT. Cyber Laws – IT Act 2000

Week 13
Topics to be covered: impact of IT on other laws concerning business;

Week 14
Topics to be covered: cyber security – threats, anti-virus software, firewalls, etc.

Note:-
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Govt. College, Aharwala (Bilaspur)
Lesson Plan (2021-22) [Even Semester]

Name of Associate / Assistant Professor :	Amit Kapoor
Department :	Computer Science
Class & Section:	Bcom (CAV) IV Sem
Subject Name and Code:	BC(Voc)-405 Programming in Java
Semester Duration (Tentative)	TDC-I & II: 1st April 2022 to 15th July 2022 (Week 1 to Week 14)

Week 1

Topics to be covered: Introduction to Java, features of Java, object oriented concepts, data types, variables, arrays

Week

Topics to be covered: operators, control statements in Java

Week 3

Topics to be covered: Input and Output :- scanner and system class, print(), printIn(), printf() methods; Class & Objects, Constructors

Week 4

Topics to be covered: overloading method, access control- static and fixed methods, inner classes, string class

Week 5

Topics to be covered: - Inheritance in Java

Week 6

Topics to be covered: Layout Managers – Flow layout, Borderlayout, Gridlayout

Week 7

Topics to be covered: Graphics and Java 2D-Graphics contexts and Graphics objects,

Week 8

Topics to be covered: Color control, Font Control

Week 9

Topics to be covered: Drawing Lines, Rectangles and Ovals, Jslider, Using menus with frames

Week 10

Topics to be covered: GUI components- common GUI event types and listener interfaces

Week 11

Topics to be covered: Joptionpane, Jlabel, JtextField, Jbutton, JcheckBox, Jtextarea

Week 12

Topics to be covered: JcomboBox, Jlist, Jpannel

Week 13

Topics to be covered: Mouse Event Handling

Week 14

Topics to be covered: Adapter Classes, Key Event Handling.

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Govt. College, Aharwala (Bilaspur)
Lesson Plan (2021-22) [Even Semester]

Name of Associate / Assistant Professor :	Amit Kapoor
Department :	Computer Science
Class & Section:	BCA IV Sem
Subject Name and Code:	BCA – 244: Relational Database Management System
Semester Duration (Tentative)	TDC-I & II: 1st April 2022 to 15th July 2022 (Week 1 to Week 14)

Week 1
Topics to be covered: Relational Model Concepts, Codd's Rules for Relational Model

Week 2
Topics to be covered: Relational Algebra:-Selection and Projection, Set Operation, Renaming, Join and Division,

Week 3
Topics to be covered: Relational Calculus: Tuple Relational Calculus and Domain Relational Calculus.

Week 4
Topics to be covered: Functional Dependencies and Normalization:-Purpose, Data Redundancy and Update Anomalies

Week 5
Topics to be covered: Functional Dependencies:-Full Functional Dependencies and Transitive Functional Dependencies, Characteristics of Functional Dependencies

Week 6
Topics to be covered: Decomposition and Normal Forms (1NF, 2NF, 3NF & BCNF).

Week 7
Topics to be covered: SQL: Data Definition and data types, SQL Operators, Basic DDL, DML and DCL commands in SQL

Week 8
Topics to be covered: Specifying Constraints in SQL, Simple Queries, Nested Queries, Tables,

Week 9
Topics to be covered: Views, Indexes, Aggregate Functions, Clauses

Week 10
Topics to be covered: PL/SQL architecture, PL/SQL and SQL*Plus, PL/SQL Basics, Advantages of PL/SQL

Week 11
Topics to be covered: The Generic PL/SQL Block: PL/SQL Execution Environment, PL/SQL Character set and Data Types,

Week 12
Topics to be covered: Control Structure in PL/SQL

Week 13
Topics to be covered: Cursors in PL/SQL, Triggers in PL/SQL,

Week 14
Topics to be covered: Programming using PL/SQL

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Govt. College, Aharwala (Bilaspur)
Lesson Plan (2021-22) [Even Semester]

Name of Associate / Assistant Professor :	Amit Kapoor
Department :	Computer Science
Class & Section:	BCA II Sem
Subject Name and Code:	BCA – 125 Structured System Analysis and Design
Semester Duration (Tentative)	TDC-I & II: 1st April 2022 to 15th July 2022 (Week 1 to Week 14)

Week 1
Topics to be covered: System Concept: Definition, Characteristics, Elements of system

Week 2
Topics to be covered: Physical and abstract system, open and closed system, man-made information systems

Week 3
Topics to be covered: System Development Life Cycle: Various phases of system development, Considerations for System planning and control for system success

Week 4
Topics to be covered: Role of system analyst, System Planning: Bases for planning in system analysis: Dimensions of Planning

Week 5
Topics to be covered: Initial Investigation: Determining user's requirements and analysis

Week 6
Topics to be covered: Fact finding process and techniques, Tools of structured Analysis: Data Flow diagram, pseudo codes, Flow charts

Week 7
Topics to be covered: Decision tree, decision tables, Data dictionary, IPO and HIPO charts, Gantt charts

Week 8
Topics to be covered: Feasibility study: Technical, Operational & Economic Feasibilities

Week 9
Topics to be covered: Cost/Benefit Analysis: Data analysis cost and benefit analysis of a system,

Week 10
Topics to be covered: Input/ Output and Form Design

Week 11
Topics to be covered: File Organization and database design: Introduction to files and database, File structures and organization, objectives of database design, logical and physical view of data.

Week 12
Topics to be covered: System testing: Introduction, objectives of testing, test planning, testing techniques

Week 13
Topics to be covered: Quality assurance: Goal of quality assurance, levels of quality assurance

Week 14
Topics to be covered: System implementation and software maintenance: primary activities in maintenance, reducing maintenance costs

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