UNIVERSITY OF DELHI

CNC-II/093/1(23)/2022-23/457
Dated: 14.03.2023

N O T I F I C A T I O N

Sub: Amendment to Ordinance V

[E.C Resolution No. 38-1/ (38-1-12) dated 08.12.2022]

Following addition be made to Appendix-II-A to the Ordinance V (2-A) of the Ordinances of the University;

Add the following:

Syllabi of Semester-II of the following vocational courses based on Undergraduate Curriculum Framework -2022 under Ramanujan College, Jesus & Mary College & Kalindi College to be implemented from the Academic Year 2022-23.

B.Voc.– Software Development
(Ramanujan College)

Category-I

B.VOC - Software Development course for Undergraduate Programme of study with Software Development as a Single Core Discipline

DISCIPLINE SPECIFIC CORE COURSE – 4: Database Management Systems

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Database Management Systems	4	2	0	2	Class XII pass with Mathematics	NIL

Learning Objectives:

1. *To introduce the fundamentals of database management system and its architecture.*
2. *Students will learn about the importance of database structure and it's designing using conceptual approach using Entity Relationship Model and formal approach using Normalization.*
3. *The course would give students hands-on practice of structured query language in a relational database management system.*

Learning Outcomes:

1. Use database management system software to create and manipulate the database.
2. Create conceptual data models using entity relationship diagrams for modeling real-life situations and designing the database schema.
3. Use the concept of functional dependencies to remove redundancy and update anomalies.
4. Apply normalization theory to get a normalized database scheme.
5. Write queries using relational algebra, a procedural language.
6. Implement relational databases and formulate queries to get solutions of a broad range of data retrieval and data update problems using SQL.

Unit I **(6 Hours)**

Introduction to Database: Purpose of database system, Characteristics of database approach, data models, database management system, database system architecture, three-schema architecture, components of DBMS, data independence, and file system approach vs. database system approach.

Unit II **(6 Hours)**

Entity Relationship Modeling: Conceptual data modeling - motivation, entities, entity types, attributes, relationships, relationship types, constraints on relationship, Entity Relationship diagram notation.

Unit III **(6 Hours)**

Relational Data Model: Update anomalies, Relational Data Model - Concept of relations, schema-instance distinction, keys, relational integrity constraints, referential integrity and foreign keys, relational algebra operators and queries.

Unit IV **(6 Hours)**

Structured Query Language (SQL): Querying in SQL, DDL to create database and tables, table constraints, update database-update behaviors, DML, aggregation functions group by and having clauses, retrieve data from the database, generate and query views. Access and manipulate databases using ODBC. Basic Database administration SQL commands.

Unit V **(6 Hours)**

Database Design: Mapping an Entity Relationship model to relational database, functional dependencies and Normal forms, 1NF, 2NF, 3NF and BCNF decompositions and desirable properties of them.

Essential/Recommended readings:

1. *Elmasri, R., Navathe, B. S. Fundamentals of Database Systems, 7th Edition, Pearson Education, 2015.*
2. *Krogh, J. W. MySQL Connector/Python Revealed: SQL and NoSQL Data Storage Using MySQL for*

Python Programmers, Apress, 2018.
3. Murach J. Murach's MySQL, 3th Edition, Pearson, 2019.

Practical Component: (60 Hours)

I. Create and use the following student-society database schema for a college to answer the given (sample) queries using the standalone SQL editor.

STUDENT	**Roll No**	**StudentName**	**Course**	**DOB**
	Char(6)	Varchar(20)	Varchar(10)	Date

SOCIETY	**SocID**	**SocName**	**MentorName**	**TotalSeats**
	Char(6)	Varchar(20)	Varchar(15)	Unsigned int

ENROLLMENT	**Roll No**	**SID**	**DateOfEnrollment**
	Char(6)	Char(6)	**Date**

Here Rollno (ENROLLMENT) and SID (ENROLLMENT) are foreign keys.

1. Retrieve names of students enrolled in any society.
2. Retrieve all society names.
3. Retrieve students' names starting with letter 'A'.
4. Retrieve students' details studying in courses 'computer science' or 'chemistry'.
5. Retrieve students' names whose roll no either starts with 'X' or 'Z' and ends with '9'
6. Find society details with more than N TotalSeats where N is to be input by the user
7. Update society table for mentor name of a specific society
8. Find society names in which more than five students have enrolled
9. Find the name of youngest student enrolled in society 'NSS'
10. Find the name of most popular society (on the basis of enrolled students)
11. Find the name of two least popular societies (on the basis of enrolled students)
12. Find the student names who are not enrolled in any society
13. Find the student names enrolled in at least two societies
14. Find society names in which maximum students are enrolled
15. Find names of all students who have enrolled in any society and society names in which at least one student has enrolled
16. Find names of students who are enrolled in any of the three societies 'Debating', 'Dance' and 'Sashakt'.
17. Find society names such that its mentor has a name with 'Gupta' in it.
18. Find the society names in which the number of enrolled students is only 10% of its capacity.
19. Display the vacant seats for each society.
20. Increment Total Seats of each society by 10%
21. Add enrollment fees paid ('yes'/'No') field in the enrollment table.
22. Update date of enrollment of society id 's1' to '2018-01-15', 's2' to current date and 's3' to '2018-01-02'.
23. Create a view to keep track of society names with the total number of students enrolled in it.
24. Find student names enrolled in all the societies.

25. Count number of societies with more than 5 student enrolled in it
26. Add column Mobile number in student table with default value '9999999999'
27. Find the total number of students whose age is > 20 years.
28. Find names of students who are born in 2001 and are enrolled in at least one society.
29. Count all societies whose name starts with 'S' and ends with't' and at least 5 students are enrolled in the society.
30. Display the following information:

Society name, Mentor name, Total Capacity, Total Enrolled, Unfilled Seats

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

DISCIPLINE SPECIFIC CORE COURSE – 5: Programming in JAVA

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Programming in JAVA	**4**	**2**	**0**	**2**	**Class XII pass with Mathematics**	**DSC -1**

Learning Objectives:

1. *To develop structured as well as object-oriented programming skills using JAVA Programming.*
2. *The course provides a complete understanding of the object-oriented programming features, namely Encapsulation, Abstraction, Inheritance and Polymorphism.*

Learning Outcomes:

1. *Implement Exception Handling and File Handling.*
2. *Implement multiple inheritance using Interfaces.*
3. *Logically organize classes and interfaces using packages.*
4. *Use AWT and Swing to design GUI applications.*

Unit I **(4 Hours)**

Review of Object Oriented Programming and Java Fundamentals: Structure of Java programs, Classes and Objects, Data types, Type Casting, Looping Constructs.

Unit II **(6 Hours)**

Interfaces Interface basics; Defining, implementing and extending interfaces; Implementing multiple inheritance using interfaces Packages Basics of packages, Creating and accessing packages, System packages, Creating user defined packages

Unit III **(4 Hours)**

Exception handling using the main keywords of exception handling: try, catch, throw, throws and finally; Nested try, multiple catch statements, creating user defined exceptions

Unit IV **(4 Hours)**

File Handling Byte Stream, Character Stream, File I/O Basics, File Operations.

Unit V **(6 Hours)**

AWT and Event Handling: The AWT class hierarchy, Events, Event sources, Event classes, Event Listeners, Relationship between Event sources and Listeners, Delegation event model, Creating GUI applications using AWT.

Unit VI **(6 Hours)**

Swing Introduction to Swing, Swing vs. AWT, and Hierarchy for Swing components, Creating GUI, Applications using Swing.

Essential/Recommended readings:

1. *Schildt, H. (2018). Java: The Complete Reference. 10th edition. McGraw-Hill Education.*
2. *Horstmann, C. S. (2017). Core Java - Vol. I – Fundamentals (Vol. 10). Pearson Education.*

List of Practical(60 Hours)

1. Design a class Complex having a real part (x) and an imaginary part (y). Provide methods to perform the following on complex numbers:
    a. Add and Multiply two complex numbers.
    b. toString() method to display complex numbers in the form: x + i y
2. Create a class TwoDim which contains private members as x and y coordinates in package P1. Define the default constructor, a parameterized constructor and override toString() method to display the co-ordinates. Now reuse this class and in package P2 create another class ThreeDim, adding a new dimension as z as its private member.

Define the constructors for the subclass and override toString() method in the subclass also. Write appropriate methods to show dynamic method dispatch. The main() function should be in a package P.

3. Define an abstract class Shape in package P1. Inherit two more classes: Rectangle in package P2 and Circle in package P3. Write a program to ask the user for the type of shape and then using the concept of dynamic method dispatch, display the area of the appropriate subclass. Also write appropriate methods to read the data. The main() function should not be in any package.
4. Create an exception subclass UnderAge, which prints “Under Age” along with the age value when an object of UnderAge class is printed in the catch statement. Write a class exceptionDemo in which the method test() throws UnderAge exception if the variable age passed to it as argument is less than 18. Write main() method also to show working of the program.
5. Write a program to implement stack. Use exception handling to manage underflow and overflow conditions.
6. Write a program that copies content of one file to another. Pass the names of the files through command-line arguments.
7. Write a program to read a file and display only those lines that have the first two characters as '//' (Use try with resources).
8. Write a program to create an Applet. Create a frame as a child of applet. Implement mouseClicked(), mouseEntered( ) and mouseExited( ) events for applet. Frame is visible when mouse enters applet window and hidden when mouse exits from the applet window.
9. Write a program to display a string in frame window with pink color as background.
10. Write a program to create an Applet that has two buttons named “Red” and “Blue”. When a button is pressed the background color of the applet is set to the color named by the button’s label.
11. Create an applet which responds to KEY_TYPED event and updates the status window with message (“Typed character is: X”). Use adapter class for other two events.
12. Create an applet with two buttons labeled ‘A’ and ‘B’. When button ‘A’ is pressed, it displays your personal information (Name, Course, Roll No, and College) and when button ‘B’ is pressed, it displays your CGPA in previous semester.
13. Write a program that creates a Banner and then creates a thread to scrolls the message in the banner from left to right across the applet’s window.
14. Rewrite the applet programs using Swing.

DISCIPLINE SPECIFIC CORE COURSE – 6: Mathematics for Computing - II

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Mathematics for Computing - II	**4**	**3**	**1**	**0**	**Class XII pass with Mathematics**	**DSC - 3**

Learning Objectives:

1. *To study the fundamental concepts and topics of probability and statistics.*
2. *The study of this course is important for students to learn machine learning and similar courses in later semesters.*

Learning Outcomes:

1. Use probability theory to evaluate the probability of real-world events.
2. Describe discrete and continuous probability distribution functions and generate random numbers from the given distributions.
3. Find the distance between two probability distributions
4. Define and quantify the information contained in the data.
5. Perform data analysis in a probabilistic framework.
6. Visualize and model the given problem using mathematical concepts covered in the course.

Unit I **(9 Hours)**

Basic Probability: Introduction to the notion of probability, Random experiment, Sample space and Events, Probability defined on events, Algebra of events. Conditional probabilities, independent events, Bayes' theorem.

Unit II **(12 Hours)**

Random Variables: Introduction to Random Variables, Probability mass/density functions, Cumulative distribution functions. Discrete Random Variables (Bernoulli, Binomial, Poisson, Multinomial and Geometric). Continuous Random Variables (Uniform, Exponential and Normal). Expectation of a Random Variable, Expectation of Function of a Random Variable and Variance. Markov inequality, Chebyshev's inequality, Central Limit Theorem, Weak and Strong Laws of Large Numbers.

Unit III **(12 Hours)**

Joint Distributions: Jointly distributed Random Variables, Joint distribution functions, Independent Random Variables, Covariance of Random Variables, Correlation Coefficients, Conditional Expectation.

Unit IV **(12 Hours)**

Markov Chain and Information Theory: Introduction to Stochastic Processes, Chapman–Kolmogorov equations, Classification of states, Limiting and Stationary Probabilities. Random Number Generation, Pseudo Random Numbers, Inverse Transformation Method, Rejection Method, Uncertainty, Information and Entropy, Mutual Information, KL Divergence.

Essential/Recommended readings:

1. *Sheldon Ross, Introduction to Probability Models, 12th Edition, Elsevier, 2019.*
2. *K.S. Trivedi, Probability and Statistics with Reliability, Queuing and Computer Science Applications, 2nd Edition, Wiley, 2015.*
3. *Marc Peter Deisenroth, A. Aldo Faisal and Cheng Soon Ong, Mathematics for Machine Learning, 1st Edition, Cambridge University Press, 2020.*
4. *Ian F. Blake, "An Introduction to Applied Probability", John Wiley.*

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

POOL OF GENERIC ELECTIVE

GENERIC ELECTIVE – 2: Database Management Systems

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Database Management Systems	**4**	**2**	**0**	**2**	**12th Pass**	**NIL**

Learning Objectives:

1. *To introduce the fundamentals of database management system and its architecture.*
2. *Students will learn about the importance of database structure and it's designing using conceptual approach using Entity Relationship Model and formal approach using Normalization.*
3. *The course would give students hands-on practice of structured query language in a relational database management system.*

Learning Outcomes

1. Identify the basic concepts and various data model used in database design.
2. Use relational database management software to create and manipulate the database.
3. ER modelling concepts and architecture use and design queries using SQL.
4. Create conceptual data models using entity relationship diagrams for modelling real-life situations and map it to corresponding relational database schema.
5. Use the concept of functional dependencies to remove redundancy and update anomalies.
6. Implement relational databases and formulate queries for data retrieval and data update problems using SQL.
7. *Use of PHP to connect with database and understand how to design web applications.*

Unit-1: (6 Hours)

Introduction and applications of DBMS, Basic Concepts: DBMS Architecture, Data Independence, Data modelling for a database, abstraction and data integration, three level architecture of a DBMS, Database users and DBA.

Unit-2: (6 Hours)

Database Design: Entities and attributes, Entity types, Entity set, Attribute and keys, Defining the E-R diagram, Concept of Generalization, Aggregation and Specialization.

Unit-3: (6 Hours)

Relational Model: Relational Data Manipulations: Relation, conversion of ER diagrams to relations, integrity constraints, Functional dependencies and Normalization.

Unit-4: **(6 Hours)**

Structured Query Language: DDL, DML, DDL queries like create database, drop database, create table, drop table, alter table.

DML Queries like inserting into a table, update a table, delete data from table, and filter data. Create relationships between tables, SQL sub queries, SQL clauses, SQL aggregate functions, SQL Joins.

Unit-5: **(6 Hours)**

PHP with MYSQL: PHP MYSQL Database, PHP Connecting to Database, PHP Creating Records, PHP Selecting Records, PHP Deleting Records, PHP Updating Records, PHP Limit Data, PHP Insert Multiple.

Essential/recommended readings:

1. R. Elmasri, S.B. Navathe Database Systems Models, Languages, Design and application Programming, 7th Edition, Pearson Education.

2. R. Ramakrishnan and J. Gehrke, Database Management Systems, 3rd Edition, McGraw Hill, 2014.

3. A. Silberschatz, H. Korth and S. Sudarshan, Database System Concepts, 6th Edition, McGraw Hill, 2014.

4. Robin Nixon, Learning PHP, MYSQL, JavaScript, CSS & HTML5 3ed: A Step-by-Step Guide to Creating Dynamic Websites, O'Reilly.

Practical component: 60 Hours

1. Create a database having two tables with the specified fields, to computerize a library system of a Delhi University College.

- LibraryBooks (Accession number, Title, Author, Department, PurchaseDate, Price)
- IssuedBooks (Accession number, Borrower)

a) Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
b) Delete the record of a book titled "Database System Concepts".
c) Change the Department of the book titled "Discrete Maths" to "BVoc".
d) List all books that belong to the "BVoc" department.
e) List all books that belong to the "BVoc" department and are written by author "Navathe".
f) List all computers (Department = "BVoc") that have been issued.
g) List all books which have a price less than 500 or purchased between "01/01/2022" and "31/12/2022".

2. Create a database having three tables to store the details of students of Computer Department in your college, as per the given schema.

- Personal information about Student (College roll number, Name of student, Date of birth, Address, Marks(rounded off to whole number) in percentage at 10 + 2, Phone number)
- Paper Details (Paper code, Name of the Paper)
- Student's Academic and Attendance details (College roll number, Paper code, Attendance, Marks in home examination).

a) Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
b) Design a query that will return the records (from the second table) along with the name of student from the first table, related to students who have more than 75% attendance and more than 60% marks in paper 2.
c) List all students who live in "Delhi" and have marks greater than 60 in paper 1.
d) Find the total attendance and total marks obtained by each student.
e) List the name of student who has got the highest marks in paper 2

3. Create the following tables and answer the queries given below:

- Customer (CustID, email, Name, Phone, ReferrerID)
- Bicycle (BicycleID, DatePurchased, Color, CustID, ModelNo) BicycleModel (ModelNo, Manufacturer, Style)
- Service (StartDate, BicycleID, EndDate)

a) Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
b) List all the customers who have the bicycles manufactured by manufacturer "Honda".
c) List the bicycles purchased by the customers who have been referred by customer "C1".
d) List the manufacturer of red colour bicycles.
e) List the models of the bicycles given for service.

4. Create the following tables, enter at least 5 records in each table and answer the queries given below.

- EMPLOYEE (Person_Name, Street, City) WORKS (Person_Name, Company_Name, Salary)
- COMPANY (Company_Name, City)
- MANAGES (Person_Name, Manager_Name)

a) Identify primary and foreign keys.
b) Alter table employee, add a column "email" of type varchar (20).
c) Find the name of all managers who work for both Samba Bank and NCB Bank.
d) Find the names, street address and cities of residence and salary of all employees who work for "Samba Bank" and earn more than $10,000.
e) Find the names of all employees who live in the same city as the company for which they work.
f) Find the highest salary, lowest salary and average salary paid by each company.
g) Find the sum of salary and number of employees in each company.
h) Find the name of the company that pays the highest salary.

5. Create the following tables, enter at least 5 records in each table and answer the queries given below.

- Suppliers (SNo, Sname, Status, SCity)
- Parts (PNo, Pname, Colour, Weight, City)
- Project (JNo, Jname, Jcity)
- Shipment (Sno, Pno, Jno, Quantity)

a) Identify primary and foreign keys.
b) Get supplier numbers for suppliers in Paris with status>20.
c) Get supplier details for suppliers who supply part P2. Display the supplier list in increasing order of supplier numbers.
d) Get suppliers names for suppliers who do not supply part P2.
e) For each shipment get full shipment details, including total shipment weights.
f) Get all the shipments where the quantity is in the range 300 to 750 inclusive.
g) Get part nos. for parts that either weigh more than 16 pounds or are supplied by suppliers S2, or both.
h) Get the names of cities that store more than five red parts.
i) Get full details of parts supplied by a supplier in London.
j) Get part numbers for parts supplied by a supplier in London to a project in London. k) Get the total number of projects supplied by a supplier (say, S1).
k) Get the total quantity of a part (say, P1) supplied by a supplier (say, S1)

B.Voc.-(Banking & Financial Services and Insurance)
(Ramanujan College)

Category-I

BVOC –Banking, Financial Services and Insurance course for Undergraduate Programme of study with Banking, Financial Services and Insurance as a Single Core Discipline

DISCIPLINE SPECIFIC CORE COURSE – 4: Business Environment

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Business Environment	4	3	1	0	Class XII Pass	NIL

Learning Objective

The objective of this course is to make learner aware and sensitive towards the overall Business environment within country and at global level. During the course the student shall learn the interaction of business with different dimensions of business environment.

Learning Outcomes

After completion of the course, learners will be able to:
1. Understand and critically evaluate the factors affecting business environment.
2. Identifying business opportunities both in the country and abroad.
3. Understand Economic Survey and its implications for Indian Business Environment.
4. Critically evaluate the government policies related to business environment.

SYLLABUS OF DSC-4

UNIT-I: Business and its Environment **(9 Hours)**

Concept and Significance of Business Environment, Corporate Social Responsibility of Business, Business Ethics, Cultural and Social Environment, Concepts of Culture, Interface between Business and Cross-cultural Communication, Environment Scanning – Concept, Types, Objectives and Process of Environment Scanning, Economic System – Capitalism, Socialism, Mixed Economy, Salient Features of Indian Economy.

UNIT-II: Economic Environment **(12 Hours)**

Component of Economic Environment, NITI-Ayog Concept, Significance, Objectives and Machinery. Government Policies relating to Industrial Development, New Economic Policy, Major Thrusts, Economic Role of Government, Rationale of State Intervention in Economy, New Industrial Policy 1991.

UNIT-III: Public Sector Enterprises and India's Macroeconomy (12 Hours)
Characteristics and Significance of Mixed Economy, Genesis and Growth of Public Sector Enterprises in India, Problems and Prospects of Public Sector Enterprise in India- Present Scenario, Privatization of PSUs. General Political Environment in India affecting Economy and Economic Reforms.

UNIT-IV: Technological Environment and Indian Economy (12 Hours)
Features of Technology, Technology Transfer, Levels of Technology Transfer, Mechanism of Technology Transfer, Impact of Technology on Business and Society, Technology Selection, Major R&D Institutions and their Research and Development Activities, Broad feature of Managerial Trend such as Professionalization of Management, Restructuring of Organization,Technology Policy in India. The Advertising Council of India, Code for Self-regulation in Advertising, Consumer Protection Act, 2019 - Objects, Reasons and Salient Features of the Act. The Consumer Disputes Redressal Agencies, MNCs, Implications of Globalization and WTO on Indian Economy

Suggested Readings:

- Keith Davis: Business and Society: Environment and Responsibility Management, Tata McGraw Hill, New Delhi.
- Cherunilam F.: Business Environment, Himalaya Publishing House, Noida.
- Kazi Karim: Economic Environment of Business, Sultan Chand & Sons, New Delhi
- Chakravarty, S: Development Planning, Oxford University Press, Delhi.
- Ramaswamy, VS and S. Namakumari: Strategic Planning for Corporate Success, MacMillan India, New Delhi.
- Sengupta N.K: Government and Business in India, Vikas Publishing House, Noida.
- Aswathappa K.: Essential of Business Environment, Himalaya Publishing House, New Delhi.

Additional Resources:

- Justin Paul: Business Environment: Text and Cases, Tata McGraw Hill, New Delhi.
- Cherrunilam, Francis: Business Environment, Himalaya Publishing House, New Delhi.
- Ghosh P.K. and G. K. Kapur.: Business Policy and Environment, Sultan Chand &Sons, New Delhi. Adhikari M.: Economic Environment of Business, Sultan Chand & Sons, New Delhi.
- Gupta, C.B.: Business Environment, Sultan Chand & Sons, New Delhi.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

DISCIPLINE SPECIFIC CORE COURSE – 5: Computer Applications in Business

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Computer Applications in Business	4	3	0	1	12th Pass	NIL

Learning Objective

This paper aims to impart computer knowledge that will enable them to handle and analyse data for decision making and present it in the form of presentations and/or reports.

Learning Outcomes

After completion of the course, learners will be able to:
1. Create, edit and design document for communication & reporting.
2. Make good presentations.
3. Analyse various computations using various functions in the area of accounting and finance and represent the business data using suitable charts.
4. Create, work and manage the database.

SYLLABUS OF DSC-5

UNIT-1: Word Processing **(12 Hours)**

Introduction to word Processing, Word processing concepts, Use of Templates and styles, Working with word document: Editing text, Find and replace text, Formatting, spell check, Autocorrect, Auto-text; Bullets and numbering, Tabs, Paragraph Formatting, Indent, Page Formatting, Header and footer, page break, table of contents, Tables: Inserting, filling and formatting a table; Inserting Pictures and Video; Mail Merge (including linking with spreadsheet files as data source); Printing documents; Citations, references and Footnotes.

UNIT-II: Preparing Presentations **(9 Hours)**

Basics of presentations: Slides, Fonts, Drawing, Editing; Inserting: Tables, Images, texts, Symbols, hyperlinking, Media; Design; Transition; Animation; and Slideshow, exporting presentations as pdf handouts and videos.

UNIT-III: Spreadsheet basics **(12 Hours)**

Spreadsheet concepts, managing worksheets; Formatting, conditional formatting, Entering data, Editing, and Printing and Protecting worksheets; Handling operators in formula, Project involving multiple spreadsheets, Organizing Charts and graphs; Flashfill; Working with Multiple worksheets; controlling worksheet views, naming cells and cell ranges. Spreadsheet functions: Mathematical, Statistical, Financial, Logical, Date and Time, Lookup and reference, Text functions and Error functions. Working with Data:

Sort and filter; Consolidate; Tables; Pivot tables; What–if-analysis: Goal seek, Data tables and Scenario manager.

UNIT-IV: Database Management System **(12 Hours)**
DBMS Software: Environment; Tables; Forms; Queries; Reports; Modules; Applying DBMS in the areas of Accounting and Business; Managing the data records of Employees, Suppliers, and Customers.

Practical component (30 Hours)

Students will perform practical problems based upon the concepts such as word processing software, power point presentations, spreadsheet and database and practice the same on relevant software.

Suggested Readings:

- Lambert, J. (2019). Microsoft Word 2019 Step by Step. United States: Pearson Education.
- Jain, H. C. & Tiwari, H. N. "Computer Applications in Business" Taxmann, Delhi.
- Mathur, S. & Jain, P. "Computer Applications in Business" Galgotia Publishing Company
- Madan, S. "Computer Applications in Business" Scholar Tech Press, Delhi.

Additional Resources:

- Walkenbach, J. "MS Excel 2016, Bible". John Wiley & Sons, USA.
- Elmasari, Ranez and Shamkant B. Navathe Fundamentals of Database Systems, 7th Edition, (2016), Pearson Education
- Winston, W. L. "MS Excel 2013, Data Analysis & Business Modeling" Microsoft Press, USA.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

DISCIPLINE SPECIFIC CORE COURSE – 6: Basics of Banking Operations

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Basics of Banking Operations	4	3	1	0	12th Pass	NIL

Learning Objective

This paper aims to acquaint the students about the Indian banking system and provide them knowledge of banking legislations, instruments and reforms.

Learning Outcomes

After completion of the course, learners will be able to:
1. Understand the basic concept of Bank and banking system, functions and retail banking products.

2. Learn about the basics products offered by banks.
3. Develop understanding of the overall operations of banks.
4. Acquainted with bank's objectives, roles, functions and structure.
5. Learn about the basic terminology used in banking system.

SYLLABUS OF DSC-6

Unit I: Introduction to banking **(12 Hours)**

Meaning and Definition of Bank and Banking, functions, need and importance; legal framework; structure, organisation and working of banks, need for proper regulation and supervision; banker and customer relationship, general and special types of customers. Types of banks in India; Role of Foreign Banks in India; Advantages and Disadvantages of Foreign banks, Road Map for Foreign Banks in India; India's approach to Banking Sector reforms; Achievements of financial sector reforms and areas of concern, Credit Allocation Policies of Commercial banks, Credit Market Reforms. Instruments of Monetary Control-CRR, SLR, Repo, Reverse Repo, Bank rate, OMO; Regulatory Restrictions. Banker & customer relationship.

Unit II: Indian Banking System, Operations and instruments **(12 Hours)**

Apex bank & role of Central Bank, RBI's credit policy & Monetary policy, structure and functions of commercial banks in India, Banking Ombudsman scheme. Cheque: definition, features and types of cheque; Endorsement: meaning and essentials of a valid endorsement, types of endorsement; Era of Internet Banking and its benefits, Mobile Banking, Home banking, Virtual Banking, Electronic Clearing System (ECS), E-payments, Electronic Fund Transfer (EFT), E-money, Unified Payment Interface (UPI), Safeguard for internet banking, Critical comparison of traditional banking methods and e-banking; Balance Sheet of a Bank, special items of a Balance Sheet, off Balance Sheet Items; Anti-money Laundering Guidelines. Basics of Negotiable Instruments.

Unit III: Liability Products **(12 Hours)**

Remittance and payment Services (Draft, RTGS, IMPS, NEFT, etc); Types of Accounts, Opening of accounts, Universal Banking; Cross Selling, Bancassurance and ancillary services, Locker's facilities, custodial, Standing instructions, ATMs, POS; emerging opportunities, Stand by letter of credit. KYC, Internet banking and mobile banking, International transactions and FDI remittances.

Unit IV: Asset Products **(9 Hours)**

Home Loans, Personal Loans; consumer loans; Education loans and others; introduction to business loans (terms loans and cash credit); Priority sector lending-agricultural, SME and Microfinance.

Suggested Readings:

- Legal Regulatory Aspects of Banking, M/s Macmillan India Limited by K.D. Zacharias, C.P. Ravindranath, P.R. Kulkarni,B. Gopalakrishnan.
- Indian Financial System: Evolution and Present Structure, New Century Publications, by Bhasin, Niti.
- Banking and Financial Institution, New Century Publications, by Suri, Niti.
- Banking and Insurance, Himalya Publishing House, by Agarwal, O.P.
- H.R., Practical and Law of Banking, Himalya Publishing House by . Suneja.
- Legal Aspects of Banking Operations, Sultan Chand and Sons by Saxena, G.S.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

B.Voc. – Healthcare Management
(Jesus & Mary College)

Category-I

DISCIPLINE SPECIFIC CORE COURSE – 4 Medical Terminology- 2

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Medical Terminology-2	4	3	1	0	Class XII Pass	NIL

Learning Objectives

Includes structure, recognition, analysis, definition, spelling, pronunciation, and combination of medical terms from prefixes, suffixes, roots, and combining forms.

Learning outcomes

- Lectures, discussions, presentations, case discussions, exercises, practical and exposure to current practices. The pedagogy for the course is more student centric; Visit to healthcare facilities.
- Lectures would be delivered by experts drawn from the fields of both management and healthcare

SYLLABUS OF DSC-4

General Terminology (procedures, diseases, treatment) related to following body system

Unit-1 (10 hours)
Circulatory System- procedures, diseases, treatment

Unit-2 (10 hours)
Digestive System- procedures, diseases, treatment
Unit-3 (10 hours)
Respiratory system- procedures, diseases, treatment
Unit-4 (5 hours)
Urinary System- procedures, diseases, treatment

Unit-5 (10 hours)
Obstetrics & Gynecology- procedures, diseases, treatment

Practical component (if any) -
N/A
Essential/recommended readings
N/A
Suggestive readings
Reference texts and online material
Books:-Medical Terminology Systems by Barbara A.Gylys, Mary Ellen Wedding
STEDMAN'S Medical Dictionary

Note: Examination scheme and mode shall be as prescribed by the Healthcare Sector Skill Council(HSSC) from time to time.

DISCIPLINE SPECIFIC CORE COURSE – 5: Medical Software Applications-1

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Medical Software Applications-1	4	3	1	0	Class XII pass	NIL

Learning Objectives

- Basic Understanding of functioning of computers & its application in Healthcare with a perspective on Hospital operations
- Create basic awareness on Healthcare record systems and infrastructure.

Learning outcomes

- Lectures, discussions, presentations, case discussions, exercises, practical and exposure to current practices. The pedagogy for the course is more student centric; Visit to healthcare facilities.
- Lectures would be delivered by experts drawn from the fields of both management and healthcare

SYLLABUS OF DSC-5

Unit-1 (10 Hours)

Introduction To HIS

a. Concept Of HIS
b. Role Of HIS
c. Characteristics Of HIS
d. Pre Requisites Of HIS

Unit-2 (05 Hours)

Need & Importance Of HIS

Unit-3(5 Hours)

Electronic Health Record (EHR) Vs Manual Records

Unit-4(10 Hours)

Computerized Patient Record System (CPRS)

Unit 5(15 Hours)

Modules used in HIS

1. Front office Module in HIS – Introduction, Process of Registration, admitting, billing, discharging of Patients, bed management system, OP & IP modules
2. Financial Management Module – Introduction to Tally
3. Management Information System
4. OT Management System
5. Lab Management and reporting System

Practical component (if any) –

N/A

Essential/recommended readings

N/A

Suggestive readings

Business Journals, case studies, Hospital system

Books:-Hospital Informations System by S.A.Kelkar

Note: Examination scheme and mode shall be as prescribed by the Healthcare Sector Skill Council(HSSC) from time to time.

DISCIPLINE SPECIFIC CORE COURSE – 6: Planning of Hospital Functions

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Planning of Hospital Functions	**4**	**3**	**1**	**0**	**Class XII pass**	**NIL**

Learning Objectives

After completion of the module student should be able to describe all aspects of planning and commissioning of different types of hospital including specialty hospitals and project management

Learning outcomes

Class room sessions, interactive learning, visit to hospital

SYLLABUS OF DSC-6

Unit-1(5 Hours)
Changing health care concept in planning / designing.

Unit-2 (5 Hours)
Site surveys for planning a hospital (Techno-Commercial)

Unit-3 (10 Hours)
Hospital building, architectural patterns, landscaping, Internal arrangements, sanitation, lighting, ventilation and traffic control

Unit-4 –(15 Hours)
Planning of Hospital-Planning of 30,100,250 bedded hospital(general/specialty)

- Planning of 500, 750 and above bedded hospital(teaching/super-specialty/non-teaching specialty hospitals)

Unit-5 (10 Hours)
Project cost and total budget : Feasibility and viability study of Hospital
Project conceptualization, functional requirements. Implementation

Practical component (if any) –
N/A

Essential/recommended readings
N/A

Suggestive readings
Textbooks, and on-line reference and training materials
Books:-Hospital:Facilities Planning & Management by G.D.Kunders
Principles of Hospital Administration and Planning by B.M.Sakharkar

Note: Examination scheme and mode shall be as prescribed by the Healthcare Sector Skill Council(HSSC) from time to time.

GENERIC ELECTIVES (GE-2)

Credit distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
Introduction to Human Resource Management	4	3	1	0	Class XII pass	NIL

Learning Objectives

The objective of the course is to acquaint students with the techniques and principles to manage human resource of an organization.

Learning outcomes

1. Lectures, discussions, presentations, case discussions, exercises, practical and exposure to current practices. The pedagogy for the course is more students centric.
2. Apply and evaluate a learning process starting with training needs, analysis, assessment and evaluation process.
3. Explore the role of training needs of employees.
4. Evaluate the training methods used in industry.

SYLLABUS OF GE-2 (Lecture-45 Hours)

Unit 1

Introduction

Human Resource Management: Concept and Functions, Role, Status and competencies of HR Manager, HR Policies, Evolution of HRM, HRM vs HRD. Emerging Challenges of Human Resource Management like Workforce diversity, Downsizing, Work life balance

Unit 2

Acquisition of Human Resource

Human Resource Planning- Quantitative and Qualitative dimensions; job analysis — job description and job specification; Recruitment - Concept and sources; Selection — Concept and process; test and interview; placement and induction

Unit 3

Performance Appraisal

Nature, objectives and importance; Modern techniques of performance appraisal; potential appraisal and employee counseling; job changes - transfers and promotions; Compensation: concept and policies; job evaluation; methods of wage payments and incentive plans; fringe benefits; performance linked compensation.

Unit 4

Maintenance

Employee health and safety; employee welfare; social security; Employer-Employee relations- an overview; grievance-handling and redressal; Industrial Disputes: causes and settlement machinery

Practical component (if any) -

N/A

Essential/recommended readings

N/A

Suggestive readings

1. Gary Dessler. A Framework for Human Resource Management. Pearson Education.
2. DeCenzo, D.A. and S.P. Robbins, Personnel/Human Resource Management, Pearson Education.
3. Bohlendar and Snell, Principles of Human Resource Management, Cengage Learning
4. Ivancevich, John M. Human Resource Management. McGraw Hill.
5. Wreather and Davis. Human Resource Management. Pearson Education.
6. Robert L. Mathis and John H. Jackson. Human Resource Management. Cengage Learning.
7. TN Chhabra, Human Resource Management, Dhanpat Rai & Co., Delhi
8. Biswajeet Patttanayak, Human Resource Management, PHI Learning

GENERIC ELECTIVES (GE-2)

Credit distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
Communication Management	**4**	**3**	**1**	**0**	**Class XII pass**	**NIL**

Learning Objectives

The course aims to train students to enhance written as well as oral communication in management. This course will help students in understanding the principles and techniques of communication

Learning outcomes

1. Analyze the need of communication in management.
2. Interpret the need for effective listening.
3. Understand the basics of written and spoken communication.
4. Demonstrate the role of group discussion and interviews.
5. Summarize business reports and proposals.

SYLLABUS OF GE-2 – (Lecture-45 Hours)

Unit 1

Meaning and Objectives of Communication. Process of Communication. Forms of communication: formal and informal; upward, downward, diagonal and lateral. Role of a Manager. Barriers to effective Communication and Overcoming them. Effectiveness in Managerial Communication. Make use of grapevine. Role of verbal and non-verbal communication; interpreting non-verbal communication.

Unit 2

Meaning and objectives of Listening. Features of a good listener. Analyzing poor listening. Effective listening skills and barriers to effective listening.

Unit 3

Nature, forms and classification of Groups. Role of managers in Group Discussions. Effective Group Decision Making. Group Conflict.

Unit 4

Planning and conducting meetings. Meeting Process. Ways to Effectively lead a meeting. Evaluating meeting and drafting minutes of a meeting. E-mail, Business Reports and Proposals: E-mail Etiquettes, smartness and presentation. Business Reports and proposals: Writing and purpose.

Practical component (if any) -

N/A

Essential/recommended readings

N/A

Suggestive readings

1. Bell, Reginald & Martin, Jeanette (2014). Managerial Communication. Business Expert Press.
2. Lesikar, R.V. & Flatley, M.E. (2001). Basic Business Communication Skills for Empowering the Internet Generation, Tata McGraw Hill Publishing Company Ltd. New Delhi.
3. Ludlow, R. & Panton, F.(1992). The Essence of Effective Communications, Prentice Hall of India Pvt. Ltd., New Delhi.
4. Owen Hargie, David Dickson, Dennis Tourish (1999). Communication in Management. Gower Publishing, Ltd.
5. R. C. Bhatia (2008), Business Communication, Ane Books Pvt Ltd, New Delhi.

B.Voc. – Retail Management & IT,
Jesus & Mary College

Category-I

DISCIPLINE SPECIFIC CORE COURSE – 4 Store Display and Visual Merchandising

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria/	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Store Display and Visual Merchandising	4	3	1	0	Class XII Pass	NIL

Learning Objectives

Create basic knowledge of store display and visual merchandising and its various aspects.

Learning outcomes

- An in-depth understanding of store design and display
- Understanding of store image, security and managing communication
- Proficiency in managing visual merchandising
- An introduction to different aspects of visual merchandising
- Knowledge about the growth and future of visual merchandising

SYLLABUS OF DSC-4 (Lecture-45 Hours)

Unit 1

Store Design and Display: Introduction, Objectives, Concept of Store Design and Display, Objectives of store design, Purpose and importance of display, Components of display, Some Useful Display Fixtures, Shelves, Gondolas, Round racks, Four ways, Saccades and fixation, Replenishes, Plano gramming.

Unit 2

Managing Communication for a Retail Store Offering: Introduction, Objectives, Marketing Communication, Thematic Communication, Methods of Communication, Graphics, Signage, The Loop for Guiding the Shoppers through a Store, Organize the display of products at the store.

Unit 3

Introduction to Visual Merchandising (VM): Introduction, Objectives, Concept of Visual Merchandising, Objectives of Visual Merchandising, Growth of Visual Merchandising, Visual Merchandising in India, Scope of visual merchandising in India, Visual Merchandising as a Support for Positioning Strategy, Prospects of Visual Merchandising, Challenges in Visual Merchandising, Plan visual merchandising.

Unit 4

The Merchandise Mix: Introduction, Objectives, Concept of Merchandise Mix, Merchandise line, The Assortment of Products, Assortment strategy, Merchandise Mix of Show Off, Role of a merchandiser, Other Atmospherics in Merchandising, Colour scheme, Lighting.

Practical component (if any) -

N/A

Essential/recommended readings

N/A

Suggestive readings

- David Gilbert. (2003) Retail Marketing Management, Dorling Kindersley (India) Pvt. Ltd. New Delhi.
- Fleming P (2003) "Guide to Retail Management" Jaico publications.
- Newman, Andrew J. and Peter Cullen (2007) Retailing Environment and Operations, Thomson Learning, India.
- Neelesh Jain (2008) Retail Management, Global India Publications Pvt. Ltd. New Delhi.
- R.Sudarshan (2007) Retail Management, New Century Publications, New Delhi 2007.
- Swapan Pradhan (2007) Retailing Management- text and cases, Tata Mc Graw Hill, 2012

Note: Examination scheme and mode shall be as prescribed by the Retailer's Association Skill Council of India, from time to time.

DISCIPLINE SPECIFIC CORE COURSE – 5 Sales Management

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Sales Management	4	3	1	0	Class XII pass	NIL

Learning Objectives

The course aims at providing in-depth understanding of sales management in retail stores.

Learning outcomes

- Introduction to sales management and personnel selling
- Understanding of the compensation and supervision of salesmen besides setting sales territories and targets
- Proficiency in evaluation of sales performance and sales cost analysis
- Understanding of sales personnel training

SYLLABUS OF DSC-5 (Lectures- 45 Hours)

Unit 1

Sales Management; Objectives and Functions; Setting and Formulating Personal Selling Objectives, Personal selling - nature, scope & objectives, Formulating Personal selling strategy.

Unit 2

Designing and Administering Compensation Plans; Supervision of Salesmen; Standards and Performance; Motivating Sales Personnel; Sales Meetings and Sales contests.

Unit 3

Planning the Sales Effort - Sales planning and Budgeting, Estimating Market Potential and Sales forecasting, Setting the sales territory & quotas, Sales and cost Analysis.

Unit 4

Developing and conducting Sales Training Programmes. Sales organization, Sales function & policies, Retail markets - Competition and Best Practices.

Practical component (if any) –
N/A

Essential/recommended readings
N/A

Suggestive readings

- Still, R. R., Cundiff, E. W. &Govoni, N. A. P(1998) Sales Management: Decision Strategies and Cases, Dorling Kindersley.
- Gupta, S.L (2005) Sales and Distribution Management: Text and Cases – An Indian Perspective, Excel Books.
- Havaldar, K. K. &Cavale, V. M. (2007) Sales and Distribution Management: Text & Cases, Tata McGraw-Hill.

Note: Examination scheme and mode shall be as prescribed by the Retailer's Association Skill Council of India, from time to time.

DISCIPLINE SPECIFIC CORE COURSE – 6: Profitability Management in Retail Store

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Profitability Management in Retail Store	4	3	1	0	Class XII pass	NIL

Learning Objectives

The course will enhance the understanding the profitability management in retail stores and its various aspects.

Learning outcomes

- Lectures, discussions, presentations, case discussions, exercises, practical and exposure to current practices. The pedagogy for the course is more students centric.
- Class room sessions, interactive learning, Role plays
- Introduction to inventory management.
- Understanding of merchandise management.

SYLLABUS OF DSC-6 (Lecture-45 Hours)

Unit 1
Inventory management, Managing inventory turnover , Controlling cost and inventory shrinkage, labour scheduling, store maintenance, calculation of shrinkage, preventing shop lifting, reducing employee theft.

Unit 2
Merchandise Management Process and types of Merchandise, Evaluating merchandise management performance (GMROI), Plan visual merchandise

Unit 3
Develop Sales Strategy and Campaigns, Monitor and manage store performance, Technology in Retail, Manpower planning and training

Unit 4
Point of purchase communication- Significance of POP communication, POP display materials - leaflets, special fittings, Demonstrators, Managing sales and service delivery to increase store profitability, Manage a budget.

Practical component (if any) –
N/A

Essential/recommended readings
N/A

Suggestive readings

- Vedmani G Gibson - Retail Management - Functional Principles and Practice (Jaico Publication).
- SwapnaPradhan - Retailing Management- Tata McGraw Hill.
- Mrs.Suja R Nair - Retailing Management - Himalaya Publication House.
- Angadi, Ansuya - A Text Book of Retailing Management, S. Chand Group.
- Chetan Bajaj, RajnishTuli and Nidhi V Srivastava - Retail Management, Oxford University Press

Note: Examination scheme and mode shall be as prescribed by the Retailer's Association Skill Council of India, from time to time.

GENERIC ELECTIVES (GE-2)

Credit distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
Introduction to Human Resource Management	4	3	1	0	Class XII pass	NIL

Learning Objectives

The objective of the course is to acquaint students with the techniques and principles to manage human resource of an organization.

Learning outcomes

1. Lectures, discussions, presentations, case discussions, exercises, practical and exposure to current practices. The pedagogy for the course is more students centric.
2. Apply and evaluate a learning process starting with training needs, analysis, assessment and evaluation process.
3. Explore the role of training needs of employees.
4. Evaluate the training methods used in industry.

SYLLABUS OF GE-2 (Lecture -45 Hours)

Unit 1

Introduction

Human Resource Management: Concept and Functions, Role, Status and competencies of HR Manager, HR Policies, Evolution of HRM, HRM vs HRD. Emerging Challenges of Human Resource Management like Workforce diversity, Downsizing, Work life balance

Unit 2

Acquisition of Human Resource

Human Resource Planning- Quantitative and Qualitative dimensions; job analysis — job description and job specification; Recruitment - Concept and sources; Selection — Concept and process; test and interview; placement and induction

Unit 3

Performance Appraisal

Nature, objectives and importance; Modern techniques of performance appraisal; potential appraisal and employee counseling; job changes - transfers and promotions; Compensation: concept and

policies; job evaluation; methods of wage payments and incentive plans; fringe benefits; performance linked compensation.

Unit 4

Maintenance

Employee health and safety; employee welfare; social security; Employer-Employee relations- an overview; grievance-handling and redressal; Industrial Disputes: causes and settlement machinery

Practical component (if any) -

N/A

Essential/recommended readings

Suggestive readings

1. Gary Dessler. A Framework for Human Resource Management. Pearson Education.
2. DeCenzo, D.A. and S.P. Robbins, Personnel/Human Resource Management, Pearson Education.
3. Bohlendar and Snell, Principles of Human Resource Management, Cengage Learning
4. Ivancevich, John M. Human Resource Management. McGraw Hill.
5. Wreather and Davis. Human Resource Management. Pearson Education.
6. Robert L. Mathis and John H. Jackson. Human Resource Management. CengageLearning.
7. TN Chhabra, Human Resource Management, Dhanpat Rai & Co., Delhi
8. Biswajeet Patttanayak, Human Resource Management, PHI Learning

GENERIC ELECTIVES (GE-2)

Credit distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
Communication Management	4	3	1	0	Class XII pass	NA

Learning Objectives

The course aims to train students to enhance written as well as oral communication in management. This course will help students in understanding the principles and techniques of communication

Learning outcomes

6. Lectures, discussions, presentations, case discussions, exercises, practical and exposure to current practices. The pedagogy for the course is more students centric.

7. Analyze the need of communication in management.
8. Interpret the need for effective listening.
9. Understand the basics of written and spoken communication.
10. Demonstrate the role of group discussion and interviews.
11. Summarize business reports and proposals.

SYLLABUS OF GE-2 (Lecture – 45 Hours)

Unit 1

Meaning and Objectives of Communication. Process of Communication. Forms of communication: formal and informal; upward, downward, diagonal and lateral. Role of a Manager. Barriers to effective Communication and Overcoming them. Effectiveness in Managerial Communication. Make use of grapevine. Role of verbal and non-verbal communication; interpreting non-verbal communication.

Unit 2

Meaning and objectives of Listening. Features of a good listener. Analyzing poor listening. Effective listening skills and barriers to effective listening.

Unit 3

Nature, forms and classification of Groups. Role of managers in Group Discussions. Effective Group Decision Making. Group Conflict.

Unit 4

Planning and conducting meetings. Meeting Process. Ways to Effectively lead a meeting. Evaluating meeting and drafting minutes of a meeting. E-mail, Business Reports and Proposals: E-mail Etiquettes, smartness and presentation. Business Reports and proposals: Writing and purpose.

Practical component (if any) - N/A

Essential/recommended readings

N/A

Suggestive readings

1. Bell, Reginald & Martin, Jeanette (2014). Managerial Communication. Business Expert Press.
2. Lesikar, R.V. & Flatley, M.E. (2001). Basic Business Communication Skills for Empowering the Internet Generation, Tata McGraw Hill Publishing Company Ltd. New Delhi.
3. Ludlow, R. & Panton, F.(1992). The Essence of Effective Communications, Prentice Hall of India Pvt. Ltd., New Delhi.
4. Owen Hargie, David Dickson, Dennis Tourish (1999). Communication in Management. Gower Publishing, Ltd.
5. R. C. Bhatia (2008), Business Communication, Ane Books Pvt Ltd, New Delhi.

B.Voc. - Web Designing
(KALINDI COLLEGE)
Category-I

DISCIPLINE SPECIFIC CORE COURSE – 4 Programming with Python

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisiteof the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Programming with Python	4	3	0	1	Class XII Pass	NIL

Learning Objectives

The course is designed to introduce programming concepts using Python to students. The course aims to develop structured as well as object-oriented programming skills using Python. The course also aims to achieve competence amongst its students to develop correct and efficient Python programs to solve problems in their respective domains.

Learning Outcomes

On successful completion of the course, students will be able to:

1. Write simple programs using built-in data structures in Python.
2. Implement arrays and user defined functions in Python.
3. Solve problems in the respective domain using suitable programming constructs in Python.
4. Solve problems in the respective domain using the concepts of object oriented programming in Python.

SYLLABUS OF DSC-04

Unit 1 Introduction to Programming: (6 Hours)

Problem solving strategies; Structure of a Python program; Syntax and semantics; Executing simple programs in Python.

Unit 2 Creating Python Programs: (12 Hours)

Identifiers and keywords; Literals, numbers, and strings; Operators; Expressions; Input/output statements; Defining functions; Control structures (conditional statements, loop control statements, break, continue and pass, exit function), default arguments.

Unit 3 Built-in data structures: (15 Hours)

Mutable and immutable objects; Strings, built-in functions for string, string traversal, string operators and operations; Lists creation, traversal, slicing and splitting operations, passing list to a function; Tuples, sets, dictionaries and their operations.

Unit 4 Object Oriented Programming: (6 Hours)

Introduction to classes, objects and methods; Standard libraries.

Unit 5 File and exception handling: (6 Hours)

File handling through libraries; Errors and exception handling.

Practical Component – 30 Hours

The practical assignment must include installation of software like Anaconda, Jupyter and Spyder notebook and list of python programs for implementation.

Essential readings

1. Taneja, S., Kumar, N., Python Programming- A modular Approach, Pearson Education India, 2018.

2. Balaguruswamy E., Introduction to Computing and Problem-Solving using Python, 2nd edition, McGraw Hill Education, 2018.

Suggested readings

1. Brown, Martin C., Python: The Complete Reference, 2 nd edition, McGraw Hill Education, 2018.
2. Guttag, J.V. Introduction to computation and programming using Python, 2 nd edition, MIT Press, 2016

DISCIPLINE SPECIFIC CORE COURSE – 5 Introduction to Web Programming

Course title& Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisiteof the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Introduction to Web Programming	4	3	0	1	Class XII Pass	NIL

Learning Objectives

The course aims at introducing the basic concepts and techniques of client-side web programming. The student shall be able to develop simple websites using HTML, CSS and JavaScript.

Learning Outcomes

On successful completion of this course, the student will be able to:

1. Build websites using the elements of HTML.
2. Build dynamic websites using the client-side programming techniques with CSS, JavaScript and jQuery.
3. Learn to validate client-side data.

SYLLABUS OF DSC-05

Unit 1 Introduction: (6 Hours)

Introduction to internet and web design. Basic concepts of web architecture.

Unit 2 HTML: (12 Hours)

Introduction to hypertext mark-up language (html), creating web pages, lists, hyperlinks, tables, web forms, inserting images, frames.

Unit 3 Cascading style sheet (CSS): (12 Hours)

Concept of CSS, creating style sheet, importing style sheets, CSS properties, CSS styling (background, text format, controlling fonts), CSS rules, Style Types, CSS Selectors, CSS cascade, working with block

elements and objects, working with lists and tables, CSS id and class, box model (introduction, border properties, padding properties, margin properties)

Unit 4 JavaScript: (9 Hours)

Document object model, data types and variables, functions, methods and events, controlling program flow, JavaScript object model, built-in objects and operators, validations.

Unit 5 jQuery and JSON: (6 Hours)

Introduction to jQuery, syntax, selectors, events. JSON file format for storing and transporting data.

Practical component-30 Hours

The practical assignments must include exercises on creating static and dynamic websites using HTML, CSS and JavaScript on platforms like Notepad/Notepad++/Visual Studio.

Essential Readings

1. Nixon, R. (2018). Learning PHP, MySQL & JavaScript with jQuery, CSS and HTML5, O'Rielly.

2. Powell, T.A. (2010).HTML & CSS: The Complete Reference. 5th edition. Tata McGrawHill.

3. Duckett, J.(2014). JavaScript and JQuery: Interactive Front-End Web Development. Wiley

Suggested Readings

1. Minnick, J. (2015). Web Design with HTML5 and CSS3. 8th edition. Cengage Learning. DRAFT
2. Boehm, A., & Ruvalcaba, Z. (2018). Munarch's HTML5 and CCS(4th Edition). Mike Murach & Associates.
3. J. A. Ramalho (2007), Learn Advanced HTML 4.0 with DHTML, BPB Publications
4. Ivan Bayross (2009), Web Enabled Commercial Application Development Using Html, Dhtml, Javascript, Perl CGI , BPB Publications.

DISCIPLINE SPECIFIC CORE COURSE – 6 Fundamentals of Statistics

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Fundamentals of Statistics	**4**	**3**	**0**	**1**	**Class XII Pass**	**NIL**

Learning Objectives

The objective of this course is to introduce the basic knowledge of data analysis using basic statistical tools.

Learning Outcomes

On successful completion of the course, students will be able to:

1. Analyze simple primary data numerically and graphically.
2. Gain the knowledge about probability theory and apply discrete and continuous probability distribution in real life situations.

SYLLABUS OF DSC-06

Unit 1: Data Visualization and Measures of Central Tendency: (12 Hours)

Diagrammatic presentation of data- bar graph, pie chart, histogram, frequency polygon, Ogive, scatter plot for bivariate data. Measures of central tendency (including graphical determination). Partition values (quartiles, deciles, and percentiles).

Unit 2: Measure of Variation: (9 Hours)

Absolute and relative. Range, quartile deviation, mean deviation, standard deviation, and variance. Moments, kurtosis and skewness.

Unit 3: Probability theory: (9 Hours)

Introduction of probability theory, types of events, concept of conditional probability, Bayes Theorem.

Unit 4: Probability Distribution: (15 Hours)

Introduction to random variable, concept of discrete and continuous Probability Distribution Function (PDF). Discrete PDF- binomial, poison. Continuous PDF- uniform, exponential, normal.

Practical Component: 30 Hours

The practical assignments must include exercises on implementing the statistical concepts covered in theory using Spreadsheet – open source software.

Essential Readings:

1. S.P Gupta, Statistical Methods, 46th Edition, Sultan Chand & Sons, 2021.
2. J E Fruend, Mathematical Statistics with Applications, 8th edition, Pearson Education, 2014.

Suggested Readings:

1. S C Gupta and V K Kapoor, Fundamental of Mathematical statistics, latest edition, Sultan Chand & Sons.
2. J. K. Sharma, Business Statistics, latest edition, Pearson Education.
3. Richard Levin and David S. Rubin, Statistics for Management, latest edition, Prentice Hall of India.

GENERIC ELECTIVES (GE-2)

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Database Management System	4	3	0	1	Class XII Pass	NIL

Learning Objectives

The course will give an overview of categories of data models used by database management systems and writing queries in relational algebra. The importance of file indexing and controlled execution of transactions will be taught. The course would give students hands-on practice to write complex queries, nested queries using aggregate functions in SQL and to use basic database administration comma

Learning Outcomes

On successful completion of this course, a student will be able to:

1. Write queries using relational algebra, a procedural language.
2. Use the concept of functional dependencies to remove data anomalies and arrive at normalized database design.
3. Understand the data storage system, file organization and need of file indexing.
4. Learn the importance of transaction processing and concurrency control.
5. Write complex and nested SQL queries, and learn basic database administration commands.
6. Acquire information about emerging technologies.

SYLLABUS OF GE-2

Unit 1 Data models and Relational Algebra: (9 Hours)

Categories of data models, types of database users, Relational Algebra Operations from SET Theory, SELECT, PROJECT, JOIN, DIVISION Operations.

Unit 2 Normalization: (6 Hours)

Functional dependencies, minimal cover, normalizing database with multiple keys till 3NF, Boyce-Codd Normal Form DRAFT

Unit 3 Database Storage and index Structures: (6 Hours)

Storage of data, file structure, file organization and its types: Sequential, Heap and Indexed, Hash file, need for file Indexing, single- and multi-level indexing.

Unit 4 Transaction Processing: (6 Hours)

Concurrent execution of transactions and their handling, ACID properties, need of data recovery and log files.

Unit 5 Advanced SQL: **(9 Hours)**

Nested and complex queries using Inner JOIN, Left JOIN, Right JOIN, Full JOIN, views, Database Administration Commands: COMMIT, ROLLBACK, drop database, control permissions etc.

Unit 6 Emerging Technology: (9 Hours)

Distributed Database concepts, Introduction to emerging technologies like Data Warehousing and OLAP, Data Mining

Practical component – 30 Hours

The practical assignments must include exercises on implementing the simple SQL concepts coveredin theory using MySQL - open source software.

Essential readings

1. Elmasri R. and Navathe B. S. Fundamentals of Database Systems, 7 th Edition, Pearson Education, 2016.

2. Murach J. Murach's MySQL, 3rd Edition, Pearson, 2019.

Suggested Readings:

1. Silberschatz, A., Korth, H.F., & Sudarshan, S. Database System Concepts, 8 th Edition, McGraw Hill,2019.

2. Ramakrishnan, R. & Gehrke, J. Database Management Systems, 3rd Edition, Tata McGraw Hill Education, 2014.

REGISTRAR