M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024- 25

Department: I.T. Class: F.Y.B.Sc.I.T. Semester: I

Subject: Fundamentals of Programming

Name of the Faculty: Snehal Borlikar

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	**UNIT-I :** **Introduction to Programming:** What is Programming, Why C, Applications of C Programming, History of C. **C Programming Basics:** Program Structure, Character Set, Keywords, Identifiers, Variables, Datatypes, Constants, typedef, typecasting, Standard Input and Output, Formatted Input and Output. **Operators and Expressions**: Arithmetic, Relational, Logical, Assignment, Increment and decrement, Precedence and Associativity of Operators.		08
August	**UNIT-I :** **Control Flow Statements:** If-else, Switch Case, While Loops, Do-while Loops, For Loops, Break and Continue Statements, Nesting of Control Flow Statements, Goto and Labels. **Functions:** Defining and Calling Functions, Variable Scope, User Defined and Library Functions.		08
September	**UNIT-I :** **Arrays**: One-dimensional Arrays, Two-dimensional Arrays. **UNIT II:Pointers:** Pointer Basics, Pointer Arithmetic, Arrays and Pointers, Passing Arrays to Functions using Pointer, Dynamic Memory Allocation. **Structures and Unions:** Defining Structures, Accessing Structure Members, Arrays of Structures, Unions**.**		08
October	**UNIT II:** **Strings**: String Basics, String Library Functions, String Manipulation Techniques. **File Handling:** File I/O concept, Basic file operations, Random Access to Files		06

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

Department: I.T. **Class: F.Y.B.Sc.(I.T.)** **Semester: I**

Subject: Data Organization

Name of the Faculty: Supritha Bhandary

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	Purpose and importance of databases, Advantages of using DBMS, characteristics of DBMS, Three-layer architecture, Data independence, Basic building block of data model, Relational Model, ER model		08
August	Types of keys, Normalization (first, second and third normal form) Overview of SQL, Data Definition Language (DDL), Data Manipulation Language (DML), Data Control Language (DCL), Transaction Control Language (TCL)		10
September	Operators (Arithmetic, Logical, comparison), Pattern Matching, Aggregate functions, Clauses (order by, group by, having), Null values, Joins, Views.		12

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

Department: I.T. Class: F.Y.B.Sc.(I.T.) Semester: I

Subject: Major Practical I

Name of the Faculty: Mrs. Supritha Bhandary / Snehal Borlikar

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	1. Defining Data a. Using CREATE Statement. b. Using ALTER Statement. c. Using DROP Statement. d. Using TRUNCATE Statement. e. Using RENAME Statement. 2. Manipulating Data a. Using INSERT Statement b. Using UPDATE Statement c. Using SELECT Statement d. Using DELETE Statement e. Saving (commit) and undoing (rollback) 3. Basic Of C a) Write a C program that prompts the user for their name and then prints a greeting message that includes their name. b) Write a C program to perform arithmetic operation of two numbers by taking input from user. c) Write a C program to Find the Size of int, float, double, and char. d) Write a C program to calculate the simple interest based on the principal amount, rate, and time.		20
August	4. Constraints, Restricting and Sorting data a. Creating Table with Constraints: PRIMARY KEY, FOREIGN KEY, NOT NULL, UNIQUE, DEFAULT. b. Using DISTINCT, IN, AS, LIKE, ISNULL c. Using Group By, Having Clause, order By d. Conceptual Designing using ER Diagrams (Identifying entities, attributes, keys and relationships between entities, cardinalities etc) 5. Aggregate and Mathematical Functions		20

	a. Simple queries with Aggregate functions. b. AVG (), MIN (), MAX(), SUM(), COUNT() c. ABS, SQRT, ROUND, TRUNCATE, SIGN, POWER, MOD, CEIL, FLOOR. 6. Conditional statements and Loops a) Write a C program to check entered character is vowel or consonant. b) Write a C program to calculate factorial of a number. c)Write a C program to generate different patterns. d)Write a C Program to check whether number enter by user is even or odd		
September	7. Views, Joins and Subqueries a. Creating view, dropping view b. Illustrating types of views c. Selecting from a view. d. Illustrating types of joins e. With IN clause f. With EXISTS clause 8.String and Pointers a)Write a C program that checks if a given string is a palindrome or not palindrome. b)Write a C program to demonstrate use of string functions. c)Write a C program to perform addition and subtraction using pointer. d)Write a program to swap two numbers using pointers		10
October	9.Structure And File Handling a)Write a C program to print the structure using •Title •Author •Subject •Book ID Print the details of two students. b)Write a C program that reads the contents of a text file and prints them to the console. c)Write a C program that creates a simple text file and writes a message to it. d)Write a C program to copy the contents of the file from one file into other.		10

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

Department: IT **Class: B.Sc.(IT.)** **Semester: I**

Subject: Numerical Analysis

Name of the Faculty: Manisha Warekar

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	Interpolation , Numerical Integration		8
August	Solution of System of Linear Equations, Curve Fitting		8
September	Solution of Non-Linerar Equations		8
October	Errors & Approximations		6

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024- 25

Department: I.T. Class: F.Y.B.Sc.I.T. Semester: I

Subject: Principles of Digital Electronics

Name of the Faculty: Ms.Shruti Save

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	**UNIT-I :** **Introduction to Digital Systems and Number Systems:** Analog Systems and Digital Systems, Introduction to Number Systems, Conversion from one number system to another, Unsigned and Signed binary numbers. **Binary Arithmetic:** Binary addition, Binary subtraction, Negative number representation, Subtraction using 1's complement and 2's complement, Binary multiplication and division.		08
August	**UNIT-I :** **Logic Gates and Boolean Algebra:** Introduction to Basic and Universal gates, Implementation of other gates using universal gates Boolean theorems, Boolean Laws, Reduction of Logic expression using Boolean Algebra. **UNIT II :** **Minterm, Maxterm and Karnaugh Maps:** Sum of Product form, Product of Sum form, Concept of minterm and maxterm, Reduction technique using Karnaugh map.		08
September	**UNIT II:** **Combinational Logic Circuits:** Introduction, Types of Combinational Circuits, Binary adder and Subtractor, Multiplexer, Demultiplexer, Encoder and Decoder.		08
October	**UNIT II:** **Sequential Logic Circuits:** Introduction, types of Flip-Flops, Registers.		06

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024- 25

Department: I.T. Class: F.Y.B.Sc.I.T. Semester: I

Subject: Circuit Design Name of the Faculty: Ms.Shruti Save

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	**Unit I:** **Introduction to Codes and Code Converters:** Introduction, weighted codes binary coded decimal and its properties, non-weighted codes Excess – 3 code, Gray code, Code converters design and implementations. **Combination and Sequential circuit design:** Analysis and Design Procedure for Combinational and Sequential Logic Circuits.		15
July	**1.Study of basic gates and Universal gates** a. Study of AND, OR, NOT, XOR, XNOR, NAND and NOR gate ICs b. Implement and verify NAND and NOR as Universal gates c. Construct Basic gates from Universal Gates		04
August	**2. Study of Boolean Algebra and K-map technique:** a. Verify De Morgan's Laws b. Simplify logical equations using Boolean Algebra and implement it using gates. c. Simplify logical equation using Karnaugh Map and implement it using gates.		08
September	**3.Implement code converters:** a. Design and implement Binary–to–gray code converter. b. Design and implement Gray–to–Binary code converter. c. Design and implement Binary–to–BCD code converter. d.Design and implement Binary–to–XS–3 code converter.		10
October	**4.To Implement Adder and Subtractor Circuits**. a. Design the circuit and implement Half Adder and Full Adder. b. Design the circuit and implement Half Subtractor and Full Subtractor. **5.Design of Combinational and Sequential Circuits.** a. Design and Implement 4:1 Multiplexer. b. Design and Implement 1:4 De-multiplexer c.Design and implement 8: 3 Encoder d.Design and implement 3:8 Decoder e. Design and study flip -flops		08

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024- 25

Department: I.T. Class: F.Y.B.Sc.I.T. Semester: I

Subject: Circuit Design Name of the Faculty: Ms.Snehal Borade

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	Module 2 1.Study of basic gates and universal gates. a. Study of AND,OR, NOT, XOR,XNOR,NAND and NOR gate ICs. b. Study of ICs 7408,7432,7404,7486,7400,7402. c. Implement and verify NAND and NOR as universal gates. d.Construct basic gates form NAND e.Construct basic gates from NOR		12
August	Module 1 Introduction to Codes and Code Converters: Introduction, Weighted Codes, Binary Coded Decimal and its properties. Module 2 2.Study of Boolean algebra and k-map technique. a. Verify De-Morgans's Law. b. Simplify logical equation using Boolean algebra and implement it using gates. c. Simplify logical equation using Karnaugh map and implement it using gates.		10
September	Module 1 Non-Weighted Codes Excess – 3 Code, Gray Code, Code Converters Design and Implementation. Combination and Sequential Circuit Design: Analysis and Design Procedure for Combinational Circuits. Module 2 3.Impplement code converters. a. Design and implement binary to gray code converter. b. Design and implement Gray to Binary code converter. c. Design and implement Binary to BCD code converter. d. Design and implement Binary to XS-3 code converter.		12
October	Module 2 Implementation of Adder and Subtractor Circuits a. Design the circuit and implement Half Adder and Full Adder. b. Design the circuit and implement Half Subtractor and Full Subtractor. c. Design the circuit and implement Half Subtractor. d. Design the circuit and implement Full Subtractor. 5. Design of Combinational and Sequential Circuits		11

	a. Design and Implement 4:1 Multiplexer. b. Design and Implement 1:4 De-multiplexer. c. Design and implement 8:3 Encoder. d. Design and implement 3:8 Decoder. e. Design and study flip -flops.		

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

Department: I.T. Class: F.Y.BSc.(I.T.) Semester: I

Subject: Data Processing Skills

Name of the Faculty: Ms. Rasika Sawant

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	7. Windows (DOS) Commands, Working with Desktop and Utilities 8. Document Formatting and Editing using MS Word 9. Advanced Features using MS Word		16
August	10. Data Entry and Formatting using MS Excel 11. Data Analysis using MS Excel 12. Charts and Graphs using MS Excel		20
September	13. Presentation Design using MS PowerPoint 14. Content Organization using MS PowerPoint		12
October	15. Interactivity and Animation using MS PowerPoint 16. Google Workspace		12

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

Department: I.T. Class: FYB.Sc.(I.T.) Semester: I

Subject: Communication Skills

Name of the Faculty: Rashmi Warang

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	Definition, Importance of Communication, Process of Communication, Impact of Technology on Communication, Channels of Communication- Formal Communication- Vertical (Upward and Downward), Horizontal, Diagonal, Informal Communication- Grapevine	Word games for understanding spontaneous structuring of words	8
August	Importance of Verbal Communication, Types of Verbal Communication (Interpersonal, Intrapersonal, Small Group and Public Communication), Tips to improve Verbal Communication, Oral Communication (Interview Skills, Negotiation skills, instructions and Group Discussion	Exercising Group Discussion on given topics	8
September	Facial Expressions, Appearance and Dressing, Eye Contact, Posture, Gesture, Body Language, Space, Signs, Symbols, Charts, Graphs, Colours, Business Presentation, Use of Graphic Aids, Professional Etiquette (Telephone, Cubical, Office, Meal, Meeting), Elocutions, Debate, Anchoring.	Practicing debate and elocution skills	8
October	Physical Barrier, Language Barrier, Socio-psychological Barrier, Cultural Barrier, Organizational Barrier and Ways to Overcome Barriers	Discussion on personal barriers in communication	6
Total			30

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

Department: I.T. Class: B.Sc.(I.T.) Semester: I

Subject: Green Innovations (GI)

Name of the Faculty: Farhan M. Shaikh

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	**Module I:** **Unit I: Concept of Green IT and Standards of Green IT** **Overview of Green IT:** Problems: Toxins, Power Consumption, Equipment Disposal, Company's Carbon Footprint: Measuring, Details, reasons to bother, Plan for the Future, Cost Savings: Hardware, Power.	Case Study, video clips and discussion	8
August	**Regulating Green IT: Laws, Standards and Protocols** Introduction, The Regulatory Environment and IT Manufacturers RoHS, REACh, WEEE, Legislating for GHG Emissions and Energy Use of IT Equipment. Nonregulatory Government Initiatives, Industry Associations and Standards Bodies, Green Building Standards, Green Data Centres , Social Movements and Greenpeace.	Case Studies and discussion	8
September	**Module II:** **Unit II: Power Usage and Process Reengineering** **Minimizing Power Usage**: Power Problems, Monitoring Power Usage, Servers, Low-Cost Options, Reducing Power Use, Data De-Duplication, Bigger Drives, Involving the Utility Company, Low Power Computers, PCs, Components, Servers, Computer Settings, Storage, Monitors, Power Supplies, Wireless Devices, Software.	Case Studies and discussion	8
October	**Changing the Way of Work:** Old Behaviours, starting at the Top, Process Reengineering with Green in Mind, Analysing the Global Impact of Local Actions, Steps: Water, Recycling, Energy, Pollutants, Teleworkers and Outsourcing, Telecommuting, Outsourcing, how to Outsource.	Case Studies and discussion	6
	Total Lectures		**30**

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

Department: I.T. **Class: B.Sc.(I.T.)** **Semester: I**

Subject: BASIC INDIAN KNOWLEDGE SYSTEM

Name of the Faculty: Miss Supriya Gupta

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	Introduction and History of Town planning in India, City Development in Ancient and Medieval India, Factors necessary for Town planning in India, Classification of Ancient Town planning.	PROJECT & PRESENTATIONS	**08**
August	Introduction and History of Water Resource Management in Ancient India, Knowledge of Hydrological Process in Ancient India, Water Management Technology in Ancient India, Wastewater Management in Ancient India.	PROJECT & PRESENTATIONS	**07**
September	Historical perspective of Ancient Tourism in India, Evolutionary changes in human lifestyle, Antecedents of Modern Tourism, Early trade routes of the World and Tourism, Religious and Pilgrimage Tourism.	PROJECT & PRESENTATIONS	**09**
October	Traditional Crafts of Ancient India- Wood Carving, Stone Masonry, Painting- Crafts of Ancient India, Metal Work, Textiles.	PROJECT & PRESENTATIONS	**06**
TOTAL NO. OF LECTURES:			**30**

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