M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2025- 26

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

Subject: Programming with Fundamentals of C

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, Compiler, Linker and preprocessor, Syntax, Program structure, Compilation and Execution of a Program. **C Programming Basics:** Character Set, Keywords, Identifiers, Variables, Datatypes, Constants, typedef, typecasting, Commenting Code, Standard Input and Output, Formatted Input and Output. **Data Input and output:** Single character input and output, entering input data, scanf function, printf function, gets and puts functions, interactive programming**.**		15
August	**Unit 2:** **Operators and Expressions:** Arithmetic, Relational, Logical, Assignment, Increment and decrement, the conditional operator Precedence and Associativity of Operators. **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.		12

	Functions: Defining and Calling Functions, Variable Scope, User Defined and Library Functions.		
September	Unit 3: **Arrays:** One-dimensional Arrays, Two-dimensional Arrays. **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.		10
October	**Unit 4:** **Strings**: String Basics, String Library Functions, String Manipulation Techniques. **File Handling:** File I/O concept, Basic file operations, Random Access to Files, modes of files. **Preprocessor:** Features, #define and #include, Directives and Macros.		08

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2025 - 26

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

Subject: Programming Fundamentals with C

Name of the Faculty: Ms. Rasika Sawant

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	**Module I:** **Unit I: C Programming Fundamentals** **Introduction to Programming: What is Programming, Why C, Applications of C Programming, History of C,** Compiler, Linker and Preprocessor, Program Structure, Compilation and Execution of a Program. **C Programming Basics: Program Structure, Character Set, Keywords, Identifiers, Variables, Datatypes, Constants, typedef, Typecasting, Standard Input and Output, Formatted Input and Output.** **Data Input and Output: Single Character Input and Output, Entering Input Data, printf and scanf Functions, gets and puts Functions, Interactive Programming**		13
August	**Module II:** **Unit II: Operators, Flow Controls and Functions** **Operators and Expressions: Arithmetic, Relational, Logical, Assignment, Increment and Decrement,** Conditional Operator**, Precedence and Associativity of Operators.** **Control Flow Statements: If-else, Switch Case, While Loop, Do-while Loop, For Loop, Break and Continue Statements, Nesting of Control Flow Statements, Goto and Labels.** **Functions: Defining and Calling Functions, Variable Scope, User Defined and Library Functions.**		10
September	**Module III:** **Unit III: Arrays, Pointers and Structures**		12

	Arrays: One-dimensional Arrays, Two-dimensional Arrays. **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.**		
October	**<u>Module IV :</u>** **<u>Unit IV: String, File Handling and Preprocessor</u>** **Strings: String Basics, String Library Functions, String Manipulation Techniques.** **File Handling: File I/O Concept, Basic File Operations, Random Access to Files, Modes of Files.** **Preprocessor: Features, #define and #include, Directives and Macros.**		10

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2025 - 26

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

Subject: Data Management

Name of the Faculty: Supritha Bhandary

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	Introduction to Database Management systems: Purpose and importance of databases, File Processing System, Disadvantages of File Processing System, Advantages of using DBMS, characteristics of DBMS, Three-layer architecture, Data independence. Data model, Database users and Administrators, ER Diagram notations, weak entity, strong entity, Types of attributes, Building blocks of Data Model, Degree of relationship, Constraints, Extended ER features (aggregation, generalization)		13
August	Codd's Rule. Keys, Integrity Rules, Functional Dependency, Anomalies, Normalization. Relational Algebra: Introduction, Selection and Projection, Set Operations, Renaming, Calculus: Tuple relational calculus, Domain Relational Calculus. Overview of SQL, Datatypes, Data Definition Language (DDL), Data Manipulation Language (DML), Data Control Language (DCL), Transaction Control Language (TCL)		13
September	Operators (Arithmetic, Logical, comparison), Pattern Matching, Aggregate functions, Clauses (order by, group by, having), Null values, Joins, Views, Subqueries. Transaction, ACID Properties, Serializability and concurrency control.		13
October	Lock based concurrency control (2PL, Deadlocks), Time Stamping methods, optimistic methods, database recovery management.		06

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M.L.Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2025 - 26

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

Subject: Data Management

Name of the Faculty: Priyanka Kathale

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	**Module I: Introduction to Database Management systems** Purpose and Importance of Databases, File Processing System, Disadvantages of File Processing System, Advantages of using DBMS, Characteristics of DBMS, Three-layer Architecture, Data Independence, Data Model, Relational Model, Hierarchical Model, Network Model, ER Model, Object-oriented Data Model, Database Users and Administrators, ER Diagram Notations, Weak Entity, Strong Entity, Types of Attributes, Building Blocks of Data Model, Degree of Relationship, Constraints, Extended ER Features (Aggregation, Generalization), Codd's Rule. Module II: Relational Database Design, Relational Algebra and Calculus Keys, Integrity Rules,		16
August	Functional Dependency, Types of Functional Dependency,Anomalies, Normalization. Relational Algebra: Introduction, Selection and Projection, Set Operations, Renaming, Calculus: Tuple relational calculus, Domain Relational Calculus.		9
September	Module III: Introduction to SQL Overview of SQL, Datatypes, Data Definition Language (DDL), Data Manipulation Language (DML), Data Control Language (DCL), Transaction Control Language (TCL), Operators (Arithmetic, Logical, comparison), Pattern Matching, Aggregate Functions, Clauses (Order By, Group By, Having), Null values, Joins, Views, Subqueries.		11
October	Module IV: Transaction Management and Concurrency Control Transaction, ACID Properties, Serializability and Concurrency Control, Lock-based Concurrency Control (2PL, Deadlocks), Time Stamping methods, Optimistic Methods, Database Recovery Management.		9

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2025 - 26

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

Subject: Data Management

Name of the Faculty: Abhishekkumar Mishra

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	**Module I: Introduction to Database Management systems** Purpose and Importance of Databases, File Processing System, Disadvantages of Processing System, Advantages of using DBMS, Characteristics of DBMS, Three-layer Architecture, Data Independence, Data Model, Relational Model, Hierarchical Model, Network Model, ER Model, Object-oriented Data Model, Database Users and Administrators, ER Diagram Notations, Weak Entity, Strong Entity, Types of Attributes, Building Blocks of Data Model, Degree of Relationship, Constraints, Extended ER Features (Aggregation, Generalization),Codd's Rule.		7
July- August	**Module II: Relational Database Design, Relational Algebra and Calculus** Keys, Integrity Rules, Functional Dependency, Types of Functional Dependency, Anomalies, Normalization. Relational Algebra: Introduction, Selection and Projection, Set Operations, Renaming, Calculus: Tuple relational calculus, Domain Relational Calculus.		8
August	**Module III: Introduction to SQL** Overview of SQL, Datatypes, Data Definition Language (DDL), Data Manipulation Language (DML), Data Control Language (DCL), Transaction Control Language (TCL), Operators (Arithmetic, Logical, comparison), Pattern Matching, Aggregate Functions, Clauses (Order By, Group By, Having), Null values, Joins, Views, Subqueries.		7
August-September	**Module IV: Transaction Management and Concurrency Control**		8

	Transaction, ACID Properties, Serializability and Concurrency Control, Lock-based Concurrency Control (2PL, Deadlocks), Time Stamping methods, Optimistic Methods, Database Recovery Management.		

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M. L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2025– 26

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

Subject: Digital Logic Design

Name of the Faculty: Ms.Shruti Save

Month	Topics to be Covered	Internal Assessment	Number of Lectures
JULY	**Module 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. Introduction to Codes and Code Converters**:** Weighted codes binary coded decimal and its properties, non-weighted codes Excess – 3 code, Gray code. Error detecting and correcting codes. **Binary Arithmetic:** Binary addition, Binary subtraction, Negative number representation, Subtraction using 1's complement and 2's complement, Binary multiplication and division, Octal and Hex arithmetic. **<u>Module II:</u>** **Introduction to Logic Gates:** Introduction to Basic and Universal gates, Implementation of other gates using universal gates.		14
AUGUST	**<u>Module II:</u>** **Introduction to Boolean Algebra:** Boolean theorems, Boolean Laws, Reduction of Logic expression using Boolean Algebra. **<u>Module III</u>:** **Concept of Minterm, Maxterm and Karnaugh Maps:** Sum of Product form, Product of Sum form, Concept of minterm and maxterm, Reduction technique using Karnaugh map.		12
	<u>Module III</u>:		14

SEPTEMBER	**Classification of Logic Circuits:** Introduction, Types of Combinational Circuits, Code converters design and implementations. **Module IV:** **Combinational Logic Circuits:** Binary adder and Subtractor, IC 7483 Adder/subtractor, BCD addition, Multiplexer, Demultiplexer, Encoder and Decoder.		
OCTOBER	**Module IV:** **Sequential Logic Circuits:** Introduction, types of Flip-Flops, Registers.		06

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2025 - 26

Department: B.Sc.I.T. **Semester: I**

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

Subject: Digital Logic Design

Name of the Faculty: Mrs. Snehal Borade

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	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. Introduction to Codes and Code Converters: Weighted Cdes Binary Coded Decimal and its Properties, Non-weighted Codes Excess – 3 Code, Gray Code. Error Detecting and Correcting Codes. Binary Arithmetic: Binary Addition, Binary Subtraction, Negative Number Representation, Subtraction using 1's Complement and 2's Complement, Binary Multiplication and Division, Octal and Hex Arithmetic.		14
August	Module II: Introduction to Logic Gates: Introduction to Basic and Universal Gates, Implementation of other Gates using Universal Gates. Introduction to Boolean Algebra: Boolean Theorems, Boolean Laws, Reduction of Logic Expression using Boolean Algebra.		11
September	Module III: Concept of Minterm, Maxterm and Karnaugh Maps: Sum of Product Form, Product of Sum Form, Concept of Minterm and Maxterm, Reduction Technique using Karnaugh Map. Classification of Logic Circuits:		12

	Introduction, Types of Combinational Circuits, Code Converters Design and Implementations		
October	Module IV: Combinational Logic Circuits: Binary Adder and Subtractor, IC 7483 Adder/Subtractor, BCD Addition, Multiplexer, Demultiplexer, Encoder and Decoder. Sequential Logic Circuits: Introduction, Types of Flip-Flops, Registers		08

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2025 - 26

Department: IT **Class: B.Sc. (I.T.)** **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 Firting		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: 2025- 26

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

Subject: Principles of Management

Name of the Faculty: Mrunmayi Vengurlekar

Month	Topics to be Covered	Internal Assessment	Number of Lectures
July	**UNIT-I:** Management- Concept, Features, Significance, 6 Ms of Management, Skills, Levels of Management, Qualities of manager, Functions of Management, Managerial Gird, Traditional v/s Modern Management.		9
August	**UNIT-I:** Evolution of Management Thoughts- Principles of management and contributions= Henry Fayol, Scientific School of Management, Contemporary theory – William Ouchi's Theory Z, Recent Trends – Green Management, Talent Management, Knowledge management (concepts only).		7
September	**UNIT-II:** Planning - Meaning, Advantages, Disadvantages • MBO- Elements • Decision Making - Meaning, Techniques • Organising - Meaning, Advantages, Disadvantages, Process • Organisational Structure- Meaning , Types • Departmentation- Meaning, Bases • Span of Control Meaning, Factors Affecting, Centralisation Vs Decentralisation, Graicunas theory • Delegation - Meaning, Barriers		9
October	**UNIT-II:** Directing - Meaning, Advantages, Disadvantages & Process • Leadership - Meaning, Styles, Qualities of a Good Leader • Coordinating - Meaning, Importance • Controlling - Meaning, Advantages, Disadvantages, Process . Techniques		5

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2025 - 26

Department: I.T. **Class: FYBsc.(I.T.)** **Semester: I**

Subject: Effective 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, Importance of Verbal Communication, Types of Verbal Communication, Facial Expressions, Appearance and Dressing, Eye Contact, Posture, Gesture, Body Language, Space, Signs, Symbols, Charts, Graphs, Colours, Channels of Communication- Formal Communication- Vertical (Upward and Downward), Horizontal, Diagonal, Informal Communication- Grapevine	Word games for understanding spontaneous structuring of words	10
August	Physical Barrier, Language Barrier, Socio-psychological Barrier, Cultural Barrier, Organizational Barrier and Ways to Overcome Barriers. (Interpersonal, Intrapersonal, Small Group and Public Communication), Tips to improve Verbal Communication, Oral Communication (Interview Skills, Negotiation skills, instructions and Group Discussion,	Discussion on personal barriers in communication. Exercising Group Discussion on given topics.	10
September	Business Presentation, Use of Graphic Aids, Professional Etiquette (Telephone, Cubical, Office, Meal, Meeting), Elocutions, Debate, Anchoring.	Practicing debate and elocution skills	10
Total			30

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2025 - 26

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: 2025 - 26

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

Subject: BASICS OF 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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