

P.T.V.A.'s

M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2026- 27

Department: I.T.

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

Semester: I

Subject: Programming Fundamentals with C

Name of the Faculty: Ms. Snehal Borlikar

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	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
July	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. Functions: Defining and Calling Functions, Variable Scope, User Defined and Library Functions.		12
August	Unit 3: Arrays: One-dimensional Arrays, Two-dimensional Arrays.		10

	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.		
September	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

Sign of Faculty

Sign of Coordinator

P.T.V.A.'s

M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2026- 27

Department: I.T.

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

Semester: I

Subject: Programming Fundamentals with C

Name of the Faculty: Ms. Anju Rai

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	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
July	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. Functions: Defining and Calling Functions, Variable Scope, User Defined and Library Functions.		12
August	Unit 3: Arrays: One-dimensional Arrays, Two-dimensional Arrays.		10

	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.		
September	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

Sign of Faculty

Sign of Coordinator

P.T.V.A.'s

M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2026- 27

Department: I.T.

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

Semester: I

Subject: Data Management

Name of the Faculty: Mrs. Supritha Bhandary

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	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)		08
July	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)		16
August	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.		16
September	Lock based concurrency control (2PL, Deadlocks), Time Stamping methods, optimistic methods, database recovery management.		05

Sign of Faculty

Sign of Coordinator

P.T.V.A.'s

M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2026- 27

Department: I.T.

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

Semester: I

Subject: Data Management

Name of the Faculty: Dr. Gayatree Karnik

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	<u>Module I: Introduction to Database Management systems</u> 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.		8
July	<u>Module II: Relational Database Design, Relational Algebra and Calculus</u> 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.		12
August	<u>Module III: Introduction to SQL</u> 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		12
August-September	<u>Module IV: Transaction Management and Concurrency Control</u> Transaction, ACID Properties, Serializability and Concurrency Control, Lock-based Concurrency Control (2PL, Deadlocks), Time Stamping methods, Optimistic Methods, Database Recovery Management.		12

Sign of Faculty

Sign of Coordinator

P.T.V.A.'s

M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2026- 27

Department: I.T.

Class: B.Sc. (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
JUNE	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.		10
JULY	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. 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.		14
AUGUST	Module III: Classification of Logic Circuits: Introduction, Types of Combinational Circuits, Code converters design and implementations. Module IV:		14

	Combinational Logic Circuits: Binary adder and Subtractor, IC 7483 Adder/subtractor, BCD addition, Multiplexer, Demultiplexer, Encoder and Decoder.		
SEPTEMBER	<u>Module IV:</u> Sequential Logic Circuits: Introduction, types of Flip-Flops, Registers.		06

Sign of Faculty

Sign of Coordinator

P.T.V.A.'s

M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2026- 27

Department: I.T.

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

Semester: I

Subject: Digital Logic Design

Name of the Faculty: Ms. Anju Rai

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	<u>Module I :</u> Unit -1: 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.		10
July	Module I: Unit-1: 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. Module II: Unit – 2: 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.		18
August	<u>Module III :</u> Unit - 3: 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: Introduction, Types of Combinational		08

	Circuits, Code converters design and implementations.		
September	<u>Module IV :</u> Unit- 4: 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
			44

Sign of Faculty

Sign of Coordinator

P.T.V.A.'s

M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2026- 27

Department: I.T.

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

Semester: I

Subject: Numerical Analysis

Name of the Faculty: Mrs. Manisha Warekar

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	Errors & Approximations		4
July	Errors & Approximations, Interpolation		8
August	Numerical Integration, Curve Fitting		8
September	Solution of Non-Linear Equations		6
October	Solution of system of linear equations		4

Sign of Faculty

Sign of Coordinator

P.T.V.A.'s

M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2026- 27

Department: I.T.

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

Semester: I

Subject: Principles Management

Name of the Faculty: Ms. Siddhi Kadam

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	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.		6
July	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).	Presentation	8
August	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	Case Studies	8
September	UNIT-II: Directing - Meaning, Advantages, Disadvantages & Process □ Leadership - Meaning, Styles, Qualities of a Good Leader □ Coordinating - Meaning, Importance □ Controlling - Meaning, Advantages, Disadvantages, Process , Techniques	Case Studies	8

Sign of Faculty

Sign of Coordinator

P.T.V.A.'s

M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2026- 27

Department: I.T.

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

Semester: I

Subject: Effective Communication Skills - I

Name of the Faculty: Ms. Siddhi Khamkar

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	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, Importance of Verbal Communication		7 lectures
July	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		7 lectures
August	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.		8 lectures
September	Physical Barrier, Language Barrier, Socio-psychological Barrier, Cultural Barrier, Organizational Barrier and Ways to Overcome Barriers		8 lectures

Sign of Faculty

Sign of Coordinator

P.T.V.A.'s

M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2026- 27

Department: I.T.

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

Semester: I

Subject: Green Innovations

Name of the Faculty: Ms. Siddhi Kasare

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	<u>Module I:</u> 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	6
July	<u>Regulating Green IT: Laws, Standards and Protocols</u> 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 Study and discussion	8
August	<u>Module II:</u> 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 Study and discussion	8
Sept – Oct	<u>Changing the Way of Work:</u> 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	8
	Total Lectures		30

Sign of Faculty

Sign of Coordinator

P.T.V.A.'s

M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2026- 27

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

Subject: Basics of Indian Knowledge Systems

Name of the Faculty: Ms. Bhoomi Dave

Month	Topics to be Covered	Internal Assessment	Number of Lectures
June	Town Planning and Water Resource Management of Ancient India (15 Topics) Introduction to Town Planning in Ancient India, History and Evolution of Town Planning in India, City Development in Ancient India, City Development in Medieval India		05
July	Factors Necessary for Town Planning in India, Classification of Ancient Town Planning, Features of Ancient Indian Urban Settlements, Planning and Architecture of the Indus Valley Civilization, Street Layout, Drainage and Sanitation Systems in Ancient Cities, Introduction to Water Resource Management in Ancient India, History and Development of Water Resource Management in Ancient India, Knowledge of Hydrological Processes in Ancient India		09
August	Water Management Technologies in Ancient India (Wells, Tanks, Stepwells, Canals), Traditional Water Conservation and Rainwater Harvesting Techniques, Wastewater Management and Sanitation Practices in Ancient India, Tourism and Traditional Crafts of Ancient India (15 Topics) Historical Perspective of Ancient Tourism in India, Evolutionary Changes in Human Lifestyle and Their Impact on Tourism, Antecedents of Modern Tourism, Early Trade Routes of the World and Tourism, Silk Route and Ancient Indian Trade Networks, Religious Tourism in Ancient India		09
September	Pilgrimage Tourism: Importance and Development, , Major Pilgrimage Centres of Ancient India, Tourism and Cultural Exchange in Ancient India, Introduction to Traditional Crafts of Ancient India, Wood Carving: History, Techniques and Significance, Stone Masonry and Temple Architecture in Ancient India, Painting Traditions and Crafts of Ancient India, Metal Work and Metallurgical Achievements of Ancient India, Textile Traditions, Weaving Techniques and Handicrafts of Ancient India		07

Sign of Faculty

Sign of Coordinator