# M.L. Dahanukar College of Commerce (Autonomous)

## Teaching Plan: 2025 - 2026

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

**Subject: C++ Programming**

**Name of the Faculty: Snehal S. Borlikar**

| Month | Topics to be Covered | Internal Assessment | Number of Lectures |
|---|---|---|---|
| November | Module I:<br>Unit 1: Introduction to Object-Oriented Programming (OOP) Concepts and C++ Basics:<br>Object Oriented Methodology: Introduction, Advantages and Disadvantages of Procedure Oriented Languages, what is Object Oriented, Benefits and Application of OOPS.<br>Principles of OOPS: Objects and Classes, Encapsulation, Data Abstraction, Inheritance, Polymorphism.<br>C++ Programming Basics: Structure of a C++ Program, Character Set, Keywords, Identifiers, Variables, Datatypes, Constants, Control Flow Statements, Conditional Statements.<br>Operators And References in C++: Introduction, Scope Resolution Operator, Reference Variables, The Bool Data Type, The Operator New and Delete, Pointer Member Operators. | | 15 |
| December | Module II:<br>Unit2: Object-Oriented Programming concepts:<br>Classes and Objects in C++: Defining Classes, Creating Objects, Defining Member Variables, Defining and Calling Member Functions Definition, Access Specifiers, Constructors and Destructors.<br>Polymorphism: Concept of function overloading, overloaded operators, overloading unary and binary operators, friend functions.<br>Inheritance: Introduction, Types of Inheritance, Public, Private and Protected Inheritance. | | 10 |
| January | Module III:<br>Unit 3: Pointers, Exception Handling and Strings:<br>Pointers to objects and virtual functions: Pointer to Objects, This Pointer, what is Binding in C++, Virtual Functions, Rules for Virtual Function, Pure Virtual Function, Abstract Class. | | 12 |

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|---|---|---|---|
| | Exception Handling: Introduction, Exception Handling Mechanism, Concept of throw & catch with example.<br>Strings: String Basics, String Library Functions, String Manipulation Techniques, Accessing Characters in Strings, Comparing and Swapping. | | |
| February | Module IV:<br>Unit 4: Templates, File Handling and STL:<br>Templates: Introduction, Function Template and examples, Class Template and examples.<br>File Handling: File I/O concept, Basic file operations, Random Access to Files.<br>Introduction to STL: Introduction , Components of STL , Containers, Vectors, Lists, Sets, Maps, Algorithms , Iterators. | | 08 |

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# M.L.Dahanukar College of Commerce (Autonomous)

## Teaching Plan: 2025 - 26

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

**Subject: C++ Programming**

**Name of the Faculty: Priyanka Kathale**

| Month | Topics to be Covered | Internal Assessment | Number of Lectures |
|---|---|---|---|
| November | Unit 1: Introduction to Object-Oriented Programming (OOP) Concepts and C++ Basics:<br>Object Oriented Methodology: Introduction, Advantages and Disadvantages of Procedure Oriented Languages, what is Object Oriented, Benefits and Application of OOPS.<br>Principles of OOPS: Objects and Classes, Encapsulation, Data Abstraction, Inheritance, Polymorphism.<br>C++ Programming Basics: Structure of a C++ Program, Character Set, Keywords, Identifiers, Variables, Datatypes, Constants, Control Flow Statements, Conditional Statements. | | 15 |
| December | Operators And References in C++: Introduction, Scope Resolution Operator, Reference Variables, The Bool Data Type, The Operator New and Delete, Pointer Member Operators.<br>Module II:<br>Unit2: Object-Oriented Programming concepts:<br>Classes and Objects in C++: Defining Classes, Creating Objects, Defining Member Variables, Defining and Calling Member Functions Definition, Access Specifiers, Constructors and Destructors. | | 10 |
| January | Polymorphism: Concept of function overloading, overloaded operators, overloading unary and binary operators, friend functions.<br>Inheritance: Introduction, Types of Inheritance, Public, Private and Protected Inheritance.<br>Module III:<br>Unit 3: Pointers, Exception Handling and Strings:<br>Pointers to objects and virtual functions: Pointer to Objects, This Pointer, what is Binding in C++, Virtual Functions, Rules for Virtual Function, Pure Virtual Function, Abstract Class.<br>Exception Handling: Introduction, Exception | | 12 |

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|---|---|---|---|
| | Handling Mechanism, Concept of throw & catch with example. | | |
| February | Strings: String Basics, String Library Functions, String Manipulation Techniques, Accessing Characters in Strings, Comparing and Swapping.<br>Module IV:<br>Unit 4: Templates, File Handling and STL:<br>Templates: Introduction, Function Template and examples, Class Template and examples.<br>File Handling: File I/O concept, Basic file operations, Random Access to Files. | | 10 |
| March | Introduction to STL: Introduction **,** Components of STL **,**Containers, Vectors, Lists, Sets, Maps**,** Algorithms **,** Iterators**.** | | 03 |

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# M.L.Dhanukar College of Commerce (Autonomous)

**Teaching Plan: 2025 - 26**

Department**: Information Technology** **Semester: II**

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

Subject**: Essentials of Web Development**

Name of the Faculty**: Archana Talekar**

| Month | Topics to be Covered | Internal Assessment | Number of Lectures |
|---|---|---|---|
| **November** | **Unit I**<br>• Basics of HTML<br>• CSS<br>• Page Layout<br>**Unit II**<br>• HTML Media | | 12 |
| **December** | **Unit II**<br>• Tables<br>• Forms<br>• jQuery | | 10 |
| **January** | **Unit III**<br>• JavaScript - Introduction<br>• Operators<br>• Statements<br>• Core JavaScript<br>• Document and its Associated Objects<br>• Events and Event Handlers | | 12 |
| **February** | **Unit IV**<br>• Introduction to PHP<br>• Advanced PHP and MySQL | | 11 |

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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: II**

**Subject: Architecture of Microprocessor**

**Name of the Faculty: Ms.Shruti Save**

| Month | Topics to be Covered | Internal Assessment | Number of Lectures |
|---|---|---|---|
| **NOVEMBER** | **Module I:**<br>**Introduction to Microprocessor and Assembly Language:**<br>Introduction to Microprocessor, Organization of Microprocessor based system, difference between microprocessor and microcontroller, Applications. Machine language, Assembly language, Low-Level language and High-Level Language.<br>**8085 Microprocessor Architecture:**<br>Introduction, 8085 Microprocessor architecture, Pin configuration of 8085, Address and Data bus, Multiplexing/Demultiplexing concept, Control and Status Signals, **Externally initiated signals. Programming model of 8085, flags and flag register.** | | 12 |
| **DECEMBER** | **Module II:**<br>**8085 Machine Cycles and Bus Timings:**<br>Memory and Memory Classification, ,8085 Machine Cycles and its types, Debugging a Program.<br>**Interfacing of I/O Devices and Logic Devices:**<br>Basic interfacing concepts, Memory Mapped I/O, Peripheral Mapped I/O, Logic Devices and Interfacing, Tri-State devices, DMA, Basic concept in serial I/O.<br>**Module III:**<br>**Introduction to 8085 Instructions:**<br>Instruction Classification, Data Transfer Operations, Arithmetic Operations, Logic Operation, Branch Operation, addressing modes, 1-byte, 2-byte and 3-byte Instructions, Data Format and Storage, Writing assembling and Execution of a simple program, | | 12 |
| **JANUARY** | **Programming Techniques with Additional Instructions:**<br>Programming Techniques: Looping, Counting, and Indexing, Additional Data Transfer and 16-bit | | 15 |

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|---|---|---|---|
| | Arithmetic Instructions, Arithmetic Instruction Related to Memory, Logic Operations: Rotate, Logics Operations: Compare.<br>**Module IV:**<br>**Counters and Time Delays:** Concept of counter and delay, Time delay using single register.<br>**Stacks and Sub-Routines:**<br>Stack, Subroutine, Restart, Conditional Call, Return Instructions, Advanced Subroutine concepts. | | |
| **FEBRUARY** | **Module IV:**<br>**Interrupts:**<br>The 8085 Interrupt, 8085 Vectored and Non vectored Interrupts, Restart as S/W Instructions. | | 06 |

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# M.L.Dhanukar College of Commerce (Autonomous)

## Teaching Plan: 2025 - 26

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

**Class: F.Y.B.Sc.I.T.** **Div: A/C**

**Subject: Architecture of Microprocessor**

**Name of the Faculty: Mrs. Snehal Borade**

| Month | Topics to be Covered | Internal Assessment | Number of Lectures |
|---|---|---|---|
| November | **Module I:**<br>Introduction to Microprocessor and Assembly Language: Introduction to Microprocessor, Organization of Microprocessor based System, Difference between Microprocessor and Microcontroller, Applications. Machine Language, Assembly Language, Low-Level Language and High-Level Language.<br><br>8085 Microprocessor<br>Architecture: Introduction, 8085 Microprocessor architecture, Pin Configuration of 8085, Address and Data bus, Multiplexing/Demultiplexing Concept, Control and Status Signals, Externally Initiated Signals. Programming Model of 8085, Flags and Flag Register. | | 8 |
| December | **Module II:**<br>8085 Machine Cycles and Bus Timings: Memory and Memory Classification, ,8085 Machine Cycles and its Types, Debugging a Program.<br>Interfacing of I/O Devices and Logic Devices: Basic interfacing concepts, Memory Mapped I/O, Peripheral Mapped I/O, Logic Devices and Interfacing, Tri-State devices, DMA, Basic Concept in Serial I/O | | 8 |
| January | **Module III:**<br>**Introduction to 8085**<br>**Instructions:** Instruction Classification, Data Transfer Operations, Arithmetic Operations, Logic Operation, Branch Operation, Addressing Modes, 1-byte, 2- | | 14 |

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|---|---|---|---|
| | byte and 3-byte Instructions, Data Format and Storage, Writing Assembling and Execution of a Simple Program.<br><br>**Programming Techniques with Additional Instructions:** Programming Techniques: Looping, Counting, Indexing, Additional Data Transfer and 16-bit Arithmetic Instructions, Arithmetic Instruction Related to Memory, Logic Operations: Rotate, Logics Operations: Compare. | | |
| February | **Module IV:**<br>**Counters and Time Delays:** Concept of Counter and Delay, Time Delay using Single Register.<br><br>**Stacks and Sub-Routines:** Stack, Subroutine, Restart, Conditional Call, Return Instructions, Advanced Subroutine Concepts. | | 10 |
| March | **Interrupts:**<br>The 8085 Interrupt, 8085 Vectored and Non Vectored Interrupts, Restart as S/W Instructions | | 5 |

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## M.L. Dahanukar College of Commerce (Autonomous)

## Teaching Plan: 2025 - 26

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

**Semester: II** **Subject: Finite Mathematics**

**Name of the Faculty: Manisha Warekar**

| Month | Topics to be Covered | Internal Assessment | Number of Lectures |
|---|---|---|---|
| **November** | **Set Theory:** Basic concepts of Set theory, Operations on sets, Venn diagram, Principle of Inclusion & Exclusion | | 6 |
| **December** | **Relations:** Cartesian product between two sets, Basic concepts of Relation, Matrix Representation of Relation, Pictorial Representatives of Relation, Composition of Relations, Types of Relations, Equivalence Relation, Partial Ordering Relation & Hasse Diagram<br>**Functions:** Definition, Types of Function, Inverse Function, Floor & Ceiling Function | | 4<br>4 |
| **January** | **Recurrence Relations**<br>**Combinatorics:** Introduction, Basic Counting Principles, Permutations & Combinations,<br>**Probability:** Introduction, Addition Rule of Probability, Independent Events, Binomial Distribution, Mean & Variance of Probability Distribution | | 2<br>2<br>4 |
| **February** | **Graph Theory :** Introduction to graphs, Graph terminology, Types of Graphs, Colouring of Graph,<br>**Trees** : Introduction of Rooted tree, Introduction of Binary tree, Spanning Tree, Kruskal's Algorithm, Traversing Binary Tree, Huffman's Algorithm | | 4<br>4 |

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## M.L. Dahanukar College of Commerce (Autonomous)

## Teaching Plan: 2025 - 26

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

**Subject: Digital Marketing**

**Name of the Faculty: Ms. Sneha Chavan**

| Month | Topics to be Covered | Internal Assessment | Number of Lectures |
|---|---|---|---|
| November'25 | **Introduction to Digital Marketing:** Digital Marketing – Meaning, Evolution, Types, Benefits, Challenges of Digital Marketing for businesses, 7 P's and 7 C's of Digital Marketing, Digital vs. Traditional Marketing, Skills Required for Digital Marketing, Digital Marketing Plan. | Case Study | 8 |
| December'25 | Analysing the need for digital marketing in the modern business landscape, Customer Journey in the digital world, Online Consumer Behaviour and Decision-making process, Customer segmentation and targeting in the digital world, The importance of user experience (UX) in digital marketing. | Assignment | 6 |
| January'26 | Online Advertisement, Online Marketing Research, Online PR, Website Optimization and Analytics, Website design principles for digital marketing, Landing pages and conversion optimization techniques, Introduction to website analytics tools (Google Analytics) and key metrics, Usage of Artificial Intelligence, Augmented Reality and Virtual Reality in Digital Marketing. | Presentation | 8 |
| February'26 | Online Advertisement, Online Marketing Research, Online PR, Website Optimization and Analytics, Website design principles for digital marketing, Landing pages and conversion optimization techniques, Introduction to website analytics tools (Google Analytics) and key metrics, Usage of Artificial Intelligence, Augmented Reality and Virtual Reality in Digital Marketing. | Quiz | 8 |
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Sneha Chavan

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## P.T.V.A.'s

## M.L.Dahanukar College of Commerce (Autonomous)

## Teaching Plan: 2025 – 2026

## Department: Information Technology

**Class: F.Y.B.Sc. (I.T.) – Semester II**
**Subject: PL/SQL**
**Name of the Faculty: Supritha Bhandary**

| Month | Topics to be Covered | Internal Assessment | Number of Lectures |
|---|---|---|---|
| NOV | **Introduction to PL/SQL**<br>PL/SQL Block Structure, Data Types in PL/SQL, Variables and Constants, assigning values to variables, %TYPE Attribute, Control Structures (IF-THEN-ELSE, CASE, FOR, WHILE LOOP) | | 04 |
| DEC | Procedures and Functions (Creating and Using Procedures and Functions), Cursors (Implicit and Explicit Cursors, Cursor Attributes) | | 04 |
| JAN | Exception Handling (Predefined and User-Defined Exceptions, RAISE, RAISE_APPLICATION_ERROR), Triggers (Types of Triggers, Trigger Timing, Creating Triggers) | | 04 |
| FEB | Collections and Records (Types of Collections, Declaring and Using Collections and Records). | | 03 |

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# ML Dahanukar College of Commerce (Autonomous)

## Teaching Plan: 2025 - 26

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

**Subject: PL/SQL**

**Name of the Faculty: Ms. Rasika Sawant**

| Month | Topics to be Covered | Internal Assessment | Number of Lectures |
|---|---|---|---|
| **November** | **Unit I: Introduction to PL/SQL**<br>PL/SQL Block Structure, Data Types in PL/SQL, Variables and Constants, Assigning values to variables, %TYPE Attribute | | 04 |
| **December** | Control Structures (IF-THEN-ELSE, CASE, FOR, WHILE LOOP), Procedures and Functions (Creating and Using Procedures and Functions) | | 03 |
| **January** | Cursors (Implicit and Explicit Cursors, Cursor Attributes), Exception Handling (Predefined and User-Defined Exceptions, RAISE, RAISE_APPLICATION_ERROR) | | 04 |
| **February** | Triggers (Types of Triggers, Trigger Timing, Creating Triggers), and Collections and Records (Types of Collections, Declaring and Using Collections and Records) Package in PLSQL. | | 03 |

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# M.L. Dahanukar College of Commerce (Autonomous)

## Teaching Plan: 2025 - 26

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

**Subject: Effective Communication Skills**

**Name of the Faculty: Rashmi Warang**

| Month | Topics to be Covered | Internal Assessment | Number of Lectures |
|---|---|---|---|
| November | Remedial Grammar, One Word Substitution, Parts of Formal Letter, Emails, | Practicing Grammar and writing email. | 08 |
| December | Application Letter, C.V. Permission Letter, Thank You Letter, Invitation, Inquiry, RTI, Statement of Purpose | Practicing letter writing and filing RTI for practice purposes. | 06 |
| January | Summary, Paragraph Writing, Precis Writing, LinkedIn, Twitter<br>Report Writing- Different Types of reports, Memo, Proposals | Writing reports for college events. Practicing memo and proposal writing. | 10 |
| February | Writing for Websites, Writing Articles, Blog Writing, Story Elaboration, Writing for Social media (Instagram and Facebook) | Blog content exercise, building story exercise, and generating Insta and Facebook story | 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: II**

**Subject: Eco-Friendly Computing (EFC)**

**Name of the Faculty: Farhan M. Shaikh**

| Month | Topics to be Covered | Internal Assessment | Number of Lectures |
|---|---|---|---|
| November | **Module I:**<br>**Unit I: Green Computing with Concept of Paperless System**<br>**Recent Trends in Green Computing:** Green PCs, Notebooks and Servers, Green Data Centres, Introduction of Green Cloud, Green Data Storage, Ideas behind Green Software, Green Networking and Communications, Applying IT for Enhancing Environmental Sustainability, Enterprise Green IT Strategy, Green IT: Burden or Opportunity. | Case Study, video clips and discussion | 8 |
| December | **Going Paperless:** Paper Problems, The Environment, Costs: Paper and Office, Practicality, Storage, Destruction, Going Paperless, Organizational Realities, Changing Over, Paperless Billing, Handheld Computers vs. the Clipboard, Unified Communications, Intranets, Building an Intranet, Electronic Data Interchange (EDI), Advantages, Obstacles. | Case Studies and discussion | 6 |
| January | **Module II:**<br>**Unit II: Importance of Recycling in Green IT**<br>**Recycling**: Means of Disposal, Recycling, Refurbishing, Life Cycle, From Cradle to Grave, Life, Cost, Green Design, Recycling Companies, Finding the Best One, Checklist, Hard Drive Recycling, Consequences, How to clean a Hard Drive, CDs and DVDs, pros and cons of CD and DVDs disposal, Change the mindset, David vs. America Online. | Case Studies and discussion | 8 |
| February | **Staying Green:** Organizational Check-ups, Chief Green Officer, Evolution, Sell the CEO, SMART Goals, Equipment Check-ups, Gather Data, Tracking the data, Baseline Data, Benchmarking, Analyse Data, Conduct Audits, Get Back on Track, Certifications, Benefits, Realities. | Case Studies and discussion | 8 |

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