

M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 2025

Department: I.T.

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

Semester: II

Subject: Object Oriented Programming

Name of the Faculty: Snehal S. Borlikar

Month	Topics to be Covered	Internal Assessment	Number of Lectures
November	Module 1: Unit 1: Introduction to Object-Oriented Programming (OOP) Concepts and C++ Basics: Object Oriented Methodology: Introduction, Advantages and Disadvantages of Procedure Oriented Languages, what is Object Oriented, Benefits and Application of OOPS.		05
December	Principles of OOPS: Objects and Classes, Encapsulation, Data Abstraction, Inheritance, Polymorphism. C++ Programming Basics: Structure of a C++ Program, Character Set, Keywords, Identifiers, Variables, Datatypes, Constants, Control Flow Statements, Conditional Statements. Operators And References in C++: Introduction, Scope Resolution Operator, Reference Variables, The Bool Data Type, The Operator New and Delete, Pointer Member Operators.		05
January	Classes and Objects in C++: Defining Classes, Creating Objects, Defining Member Variables, Defining and Calling Member Functions Definition, Access Specifiers, Constructors and Destructors. Polymorphism: Concept of function overloading, overloaded operators, overloading unary and binary operators, friend functions. Module 2: Unit 2: Inheritance, Exception Handling and File Handling in C++: 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. Inheritance in C++: Introduction, Types of Inheritance, Public, Private and Protected Inheritance.		15
February	Exception Handling: Introduction, Exception Handling Mechanism, Concept of throw & catch with example. Strings: String Basics, String Library Functions, String Manipulation Techniques, Accessing Characters in Strings, Comparing and Swapping. Templates: Introduction, Function Template and examples, Class Template and examples. File Handling: File I/O concept, Basic file operations, Random Access to Files.		05

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ML Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

Department: I.T.

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

Semester: II

Subject: Object Oriented Programming

Name of the Faculty: Ms. Rasika Sawant

Month	Topics to be Covered	Internal Assessment	Number of Lectures
November	Module I: Unit I: Introduction to Object-Oriented Programming (OOP) Concepts and C++ Basics: Object Oriented Methodology Principles of OOPs		04
December	C++ Programming Basics Operators And References in C++ Classes and Objects in C++		06
January	Polymorphism Module II: Unit II: Inheritance, Exception Handling and File Handling in C++: Pointers to Objects and Virtual Functions		08
February	Inheritance in C++ Exception Handling Templates		08
March	Strings File Handling		04

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M.L.Dhanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

Department: Information Technology

Semester: II

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

Subject: Web Programming

Name of the Faculty: Archana Talekar

Month	Topics to be Covered	Internal Assessment	Number of Lectures
November	Unit I <ul style="list-style-type: none">• Introduction to JavaScript		04
December	Unit I <ul style="list-style-type: none">• JavaScript Statements• JavaScript Objects		06
January	Unit I <ul style="list-style-type: none">• JavaScript Objects (ctd)• JavaScript Events and Event Handlers		08
February	Unit II <ul style="list-style-type: none">• Introduction to PHP• Advanced PHP		08
March	Unit II <ul style="list-style-type: none">• PHP and MySQL		04

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M.L.Dhanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

Department: Information Technology

Semester: II

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

Subject: Major Practical II

Name of the Faculty: Archana Talekar / Snehal Borlikar / Rasika Sawant

Month	Topics to be Covered	Internal Assessment	Number of Lectures
November	<p>Class and Object</p> <p>a) Write a C++ program using classes and object Student to print name of the student, roll_no. Display the same.</p> <p>b) Write a C++ program to design an employee class for reading and displaying the employee information, the getInfo () and displayInfo () methods will be used respectively. Where getInfo () will be private method.</p> <p>Write a C++ program to demonstrate function definition outside class and accessing class members in function definition.</p> <p>JavaScript Control Statements:</p> <ul style="list-style-type: none">• Using JavaScript, design a web page to accept a number from the user and print its Factorial.• Using JavaScript, a web page that prints Fibonacci series/any given series.• a JavaScript program to display all the prime numbers between 1 and 100.• Write a JavaScript program to accept a number from the user and display the sum of its digits.		08
December	<p>Class and Object</p> <p>c) Write a C++ program using classes and object Student to print name of the student, roll_no. Display the same.</p> <p>d) Write a C++ program to design an employee class for reading and displaying the employee information, the getInfo () and displayInfo () methods will be used respectively. Where getInfo () will be private method.</p>		14

	<p>Write a C++ program to demonstrate function definition outside class and accessing class members in function definition.</p> <p>JavaScript Objects & Events</p> <ul style="list-style-type: none"> • Using JavaScript, design a web page demonstrating different native objects of JavaScript. • Write a program in JavaScript to accept a sentence from the user and display the number of words in it. (Do not use split () function). • Write a JavaScript program to demonstrate different events and event handlers. • Design a form and validate all the controls placed on the form using JavaScript. 		
January	<p>Constructor, Destructor and Pointers to Object</p> <p>a) Write a C++ program to demonstrate use of constructor.</p> <p>b) Write a C++ program to demonstrate use of destructor.</p> <p>Write a C++ program to access members of a STUDENT class using pointer to object members.</p> <p>Inheritance And Exception Handling:</p> <p>a) Write a C++ program to perform different types of inheritance.</p> <p>b) Write a C++ program to implement the exception handling</p> <p>c) Write a C++ program illustrating the use of virtual functions in class.</p> <p>Basic PHP</p> <ul style="list-style-type: none"> • Write a PHP code to find the greater of 2 numbers. Accept the no. from the user • Write a PHP program to accept a number from the user and print it factorial. • Write a PHP program to accept a number from the user and print whether it is prime or not. • Write a PHP program to display different pyramids <p>Advanced PHP</p> <ul style="list-style-type: none"> • Write a PHP program to demonstrate different string functions. • Write a PHP program to demonstrate different array functions. 		22
February	<p>File Handling, Template and String:</p> <p>a) Write a C++ program to copy the contents of the file from one file into other.</p>		14

	<p>b) Write a C++ Program to create Simple calculator using Class template.</p> <p>c) Write a C++ program to demonstrate use of string functions.</p> <p>Advanced PHP</p> <ul style="list-style-type: none"> • Write a PHP program to demonstrate use of sessions and cookies. • Write a PHP program to demonstrate use of filters. <p>PHP and MySQL</p> <ul style="list-style-type: none"> • Write a PHP program to create a database College with table Department (Dname, Dno, Number_of_faculty). • Write a PHP program to create a database named “College”. Create a table named “Student” with following fields (sno, sname, percentage). Insert 3 records of your choice. Display the names of the students whose percentage is between 35 to 75 in a tabular format. 		
March	<p>PHP and MySQL</p> <ul style="list-style-type: none"> • Write a PHP program to update and delete rows in a table. • Design a PHP page for authenticating a user 		02

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M. L. Dhanukar College of Commerce (Autonomous)

Teaching Plan: 2024 – 25

Department: B.Sc.IT

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

Semester: II

Subject: Microprocessor Architecture

Name of the Faculty: Ms.Shruti Save

Month	Topics to be Covered	Internal Assessment	Number of Lectures
NOVEMBER	Unit I Microprocessor and Assembly Language: Introduction to Microprocessor, Organization of Microprocessor based system, Machine language, Assembly language, Low-Level language and High Level Language. 8085 Microprocessor Architecture and Memory Interface: Introduction, 8085 Microprocessor architecture and its operations, Memory, Memory Map and Addresses.		06
DECEMBER	Introduction to 8085 Instructions and Assembly Language Programming: The 8085 Programming Model, Instruction Classification, Data Transfer Operations, Arithmetic Operations, Logic Operation, Branch Operation, Instruction, Data Format and Storage, Writing assembling and Execution of a simple program, Overview of 8085 Instruction Set.		08
JANUARY	UNIT II: Programming Techniques with Additional Instructions: Programming Techniques: Looping, Counting, and Indexing, Additional Data Transfer and 16-bit Arithmetic Instructions, Arithmetic Instruction Related to Memory, Logic Operations: Rotate, Logics Operations: Compare. Stacks and Sub-Routines: Stack, Subroutine, Restart, Conditional Call, Return Instructions, Advanced Subroutine concepts.		10
FEBRUARY	UNIT-II Interrupts: 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: 2024 - 25

Department: Information Technology

Semester: II

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

Subject: Microprocessor Architecture

Name of the Faculty: Snehal Borade

Month	Topics to be Covered	Internal Assessment	Number of Lectures
November	<u>Module I:</u> <u>Unit I</u> Microprocessor and Assembly Language: Introduction to Microprocessor, Organization of Microprocessor based system, Machine language, Assembly language, Low-Level language and High Level Language. 8085 Microprocessor Architecture and Memory Interface: Introduction, 8085 Microprocessor architecture and its operations, Memory, Memory Map and Addresses.		06
December	Introduction to 8085 Instructions and Assembly Language Programming: The 8085 Programming Model, Instruction Classification, Data Transfer Operations, Arithmetic Operations, Logic Operation, Branch Operation, Instruction, Data Format and Storage.		06
January	Writing assembling and Execution of a simple program, Overview of 8085 Instruction Set. <u>Module II:</u> <u>Unit II</u> Programming Techniques with Additional Instructions: Programming Techniques: Looping, Counting and Indexing, Additional Data Transfer and 16-bit Arithmetic Instructions, Arithmetic Instruction Related to Memory, Logic Operations: Rotate, Logics Operations: Compare.		10
February	Stacks and Sub-Routines: Stack, Subroutine, Restart, Conditional Call, Return Instructions, Advanced Subroutine concepts. Interrupts: The 8085 Interrupt, 8085 Vectored and Non vectored Interrupts, Restart as S/W Instructions		08

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

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 Functions: Definition, Types of Function, Inverse Function, Floor & Ceiling Function		4
			4
January	Recurrence Relations Combinatorics: Introduction, Basic Counting Principles, Permutations & Combinations, Probability: Introduction, Addition Rule of Probability, Independent Events, Binomial Distribution, Mean & Variance of Probability Distribution		2
			2
February	Graph Theory : Introduction to graphs, Graph terminology, Types of Graphs, Colouring of Graph, Trees : Introduction of Rooted tree, Introduction of Binary tree, Spanning Tree, Kruskal's Algorithm, Traversing Binary Tree, Huffman's Algorithm		4
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M. L. Dhanukar College of Commerce (Autonomous)

Teaching Plan: 2024 – 25

Department: B.Sc.IT

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

Semester: II

Subject: Microprocessor Architecture Lab

Name of the Faculty: Ms.Shruti Save

Month	Topics to be Covered	Internal Assessment	Number of Lectures
NOVEMBER	Unit 1 8085 Machine Cycles and Bus Timings: Memory and Memory Classification, ,8085 Machine Cycles and its types, Debugging a Program.		06
DECEMBER	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. 1. Simple Assembly Language Programs : a. Exchange the contents of memory locations. b. Add two 8-bit numbers stored in the memory. c. Add two 16-bit numbers stored in the memory. d. Subtract two 8-bit numbers/ e. Find the 1's complement of the number stored in the memory location. f. Find the 2's complement of the number.		12
JANUARY	2. Register Operations : a. To shift eight-bit data to four bits right. Assume that data is in register C b. Write a program to count a number of 1's in the contents of register D and store the count in the B register. 3. BCD Operations: a. Add two BCD numbers. b. Pack the two unpacked BCD numbers. c. Unpack the BCD number stored in the memory. 4. Multiple memory locations: a. Calculate the sum of a series of numbers stored in a memory. b. Find the largest number in a block of data. c. Find the number of negative elements (most significant bit 1) in a block of data. d. Transfer ten bytes of data from one memory to another memory block.		16
FEBRUARY	5. Calculations with respect to memory locations: a. Calculate the sum of a series of even numbers from the list of numbers. b. Calculate the sum of a series of odd numbers from the list of numbers. c. Separate even numbers from the given list of numbers. d. Search the given byte in the list of numbers stored in consecutive memory locations. e. Multiply two 8-bit numbers stored in memory locations. f. Find the square of the given numbers from memory locations.		10

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M.L.Dhanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

Department: Information Technology

Semester: II

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

Subject: Microprocessor Lab

Name of the Faculty: Snehal Borade

Month	Topics to be Covered	Internal Assessment	Number of Lectures
November	<u>Module I:</u> <u>Unit I</u> 8085 Machine Cycles and Bus Timings: Memory and Memory Classification, ,8085 Machine Cycles and its types, Debugging a Program. 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.		12
December	Module II: 1.Simple Assembly Language Programs a. Exchange the contents of memory locations. b. Add two 8-bit numbers stored in the memory. c. Add two 16-bit numbers stored in the memory. d. Subtract two 8-bit numbers stored in the memory. e. Find the 1's complement of the number stored in the memory location. f. Find the 2's complement of the number stored in the memory location.		10
January	2.Register Operations a. To shift eight-bit data to four bits right. Assume that data is in register C. b. Write a program to count a number of 1's in the contents of register D and store the count in the B register. 3. BCD Operations		12

	<p>a. Add two BCD numbers stored in the memory locations.</p> <p>b. Pack the two unpacked BCD numbers stored in memory locations</p> <p>c. Unpack the BCD number stored in the memory.</p> <p>4. Multiple Memory Locations</p> <p>a. Calculate the sum of a series of numbers stored in a memory.</p> <p>b. Find the largest number in a block of data.</p> <p>c. Find the number of negative elements (most significant bit 1) in a block of data.</p> <p>d. Transfer ten bytes of data from one memory to another memory block.</p>		
February	<p>5. Calculations with respect to Memory Locations</p> <p>a. Calculate the sum of a series of even numbers from the list of numbers.</p> <p>b. Calculate the sum of a series of odd numbers from the list of numbers.</p> <p>c. Separate even numbers from the given list of numbers.</p> <p>d. Search the given byte in the list of numbers stored in consecutive memory locations.</p> <p>e. Multiply two 8-bit numbers stored in memory locations.</p> <p>f. Find the square of the given numbers from memory locations.</p>		11

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2021 - 22

Department: I.T.

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

Semester: II

Subject: Computational Programming

Name of the Faculty: Prathamesh Khale

Month	Topics to be Covered	Internal Assessment	Number of Lectures
November	Download / Installation of scilab. Basic introduction to scilab , variables , control statements , preliminary codes Practical 1a , 1b,1c (Matrices) Practical 2a,2b,2c,2d (Solutions to Non-Linear Equations)		4 4 4
December	Practical 3a,3b,3c (Interpolation) Practical 4a , 4b (Linear equations iterative method) Practical 5a,5b,5c,5d (Integration Differentiation)		4 2 4
January	Practical 6a,6b,6c (Curve fitting) Practical 7a,7b (Set theory) Practical 8a,8b,8c,8d,8e (Counting) Practical 9a,9b,9c (Probability) Practical 10a,10b,10c (Recurrence relations)		2 2 4 4 4

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M.L.Dhanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

Department: Information Technology

Semester: II

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

Subject: Web Designing

Name of the Faculty: Archana Talekar

Month	Topics to be Covered	Internal Assessment	Number of Lectures
November	Unit I <ul style="list-style-type: none">• Introduction to HTML		02
December	Unit I <ul style="list-style-type: none">• CSS		03
January	Unit I <ul style="list-style-type: none">• Page Layout• HTML Media and Tables		04
February	Unit I <ul style="list-style-type: none">• HTML Forms• jQuery		04
March	Unit I <ul style="list-style-type: none">• jQuery (ctd)		02

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

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.	06
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 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	08

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M.L. Dahanukar College of Commerce (Autonomous)

Teaching Plan: 2024 - 25

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: Unit I: Green Computing with Concept of Paperless System 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	6
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: Unit II: Importance of Recycling in Green IT 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
March	Revision and Doubt Solving		2

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