



**FACULTY OF COMPUTER SCIENCE**  
**Master of Computer Application (Integrated) (Sem-I)**  
In Effect from Academic Year 2023-24

<b>Branch Name:</b>	IMCA
<b>Program Code:</b>	CS301
<b>Course Name:</b>	Fundamentals of Programming-I
<b>Course Code:</b>	1CS3010101T
<b>Pre-requisite Course:</b>	Logical thinking, Basic Mathematics including number systems

**Course Objectives:**

1. To acquire the ability to develop logic, corresponding flowcharts and an algorithm for solving programming problems.
2. To learn about the data types, operators and functions in the C programming language.
3. To be able to write code in C programming language for a variety of problems

**Teaching and Examination Scheme:**

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture (L)	Tutorial (T)	Practical (P)	Credit	Theory (Marks)		Practical (Marks)		Total (Marks)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
4	-	-	4	60	40	00	00	100

**Course Contents:**

Unit No	Topic	Total Hours	Weightage (%)
1	<b>Introduction to programming:</b> Programs & programming, programming languages, compiler, interpreter, loader & linker, C program execution, Classification of Programming Languages, Concept of Structured Programming and Algorithms; Good programming practices: In-line comments, Meaningful variable names, etc	05	10
2	<b>C Programming Basics:</b> Simple program in C, Structure of C Program, Concept of Variable, Data types in C, Program statements, declarations, How the computer stores data in memory, Tokens, Operators and Expressions, Expressions revisited, L-values and R-values, Working with complex numbers.  <b>Input Output:</b> Basic Screen and Keyboard I/O in C, Unformatted Input and Output, Formatted Input and Output Functions	07	15

<b>3</b>	<b>Control Statements:</b> Specifying Test Condition for Selection and Iteration, Writing Test Expression, Conditional execution and selection, Iteration and Repetitive Execution: for and while loops; when to use which loop, goto statement, special control statements, nested loops.	<b>12</b>	<b>25</b>
<b>4</b>	<b>Arrays &amp; strings:</b> One-dimensional Array, Strings, String: One dimensional Array, Multi-dimensional array, Array of string, two dimensional Arrays	<b>12</b>	<b>25</b>
<b>5</b>	<b>Functions:</b> Concepts of Function, Using Functions, working with function, Passing array to Function, Scope and Extent, Storage class, In-line function	<b>12</b>	<b>25</b>

**Text Books:**

1. Programming in C, by Pradip Dey & Manas Ghosh, Publisher – Oxford

**Reference Books:**

1. Programming in ANSI C, Balagurusamy, Tata McGraw-Hill
2. The Complete Reference, Herbert schildt Fourth Edition
3. Let Us C , Yashwant Kanetkar, BPB Publications
4. Programming in C, by Reena thareja Publisher – Oxford

**List of Open-Source Software/learning website:**

1. [www.w3school.com](http://www.w3school.com)
3. [www.tutorialspoint.com](http://www.tutorialspoint.com)
4. [www.geeksforgeeks.org](http://www.geeksforgeeks.org)
5. [www.javatpoint.com](http://www.javatpoint.com)

**Course Learning Outcomes (CLO): On completion of this course, the students will be able to:**

<b>CLO</b>	<b>Description</b>	<b>Bloom's Taxonomy Level</b>
CLO1	To have fundamental knowledge on flowcharts and algorithm	2 Understanding
CLO2	To understand the basic terminology used in computer programming using C	1 Remembering 2 Understanding
CLO3	To Study, analyze and understand logical structure of a computer program, and different construct to develop a program in 'C' language	2 Understanding, 3 Applying, 4 Analyze

CLO4	To write, compile and debug programs in C language	3 Applying 4 Analyze 5 Evaluate 6 Creating
CLO5	To design programs involving decision structures, loops and functions	3 Applying 4 Analyze 5 Evaluate 6 Creating
CLO6	To design programs involving array and string handling function	3 Applying 4 Analyze 5 Evaluate 6 Creating

**Mapping of CLOs with Pos & PSOs**

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes (PSOs)	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CLO1	M	L	M		M	H		L	L		L	M	M	M
CLO2	L		M		H		M		H		L		M	M
CLO3		M	H	L		L		L	M	L	M	L	M	L
CLO4		L	H		M			L		L	L		M	
CLO5	M		H		M			L	M		M	L	L	M
CLO6	H	L	M		L		L		L		L	M	L	L

**H: High, M: Medium**