



Ganpat University
॥ विद्यया समाजोत्कर्षः ॥

Faculty of
Computer Applications



Programme	BCA Honors (Cyber Security)				Branch	Computer Applications			
Semester	I				Version	1.0.0.0			
Effective from Academic Year			2026-2027		Effective for the batch Admitted in			June 2026	
Subject Code	U101A1LDP		Subject Name		LOGIC DEVELOPMENT WITH PROGRAMMING				
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture (DT)		Practical (Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	2		2	-	4	Theory	50	50	100
Hours	2		4	-	6	Practical	-	-	-
Objective:									
The course is designed to provide a complete knowledge of the C language. Students will be able to develop logics that will help them create programs, applications in C. Also, by learning the basic programming constructs, they will be able to easily switch to any other language in the future.									
Pre-requisites:									
Students need to know about computer programs and programming languages.									
Course Outcomes :									
Name of CO	Description								
C01	Apply fundamental programming concepts, algorithms, and flowcharts to design basic problem-solving solutions.								
C02	Develop C programs using operators, expressions, input/output functions, and control structures effectively.								
C03	Implement and manipulate arrays, strings, and related operations in program development.								
C04	Create modular programs using user-defined functions and structured data types.								
C05	Utilize pointers for efficient data access and manipulation with arrays, strings, functions, and structures.								
Mapping of CO and PO									
Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	
C01	3	2	1	0	1	1	1	1	
C02	3	2	2	1	1	1	1	1	
C03	3	2	2	1	1	1	1	1	
C04	3	2	3	2	1	1	1	1	
C05	3	3	2	2	1	1	1	1	
Content:									
Unit									Hrs

1	Fundamentals of Programming & C Basics Algorithms: concept, importance, simple examples (swap, sum, prime check, factorial), Flowcharts: purpose, symbols, simple examples, Introduction to C: history, features, structure of a C program, Constants, variables, data types, keywords, identifiers	06
2	Operators, Expressions, I/O & Control Structures Operators: arithmetic, relational, logical, assignment, increment/decrement, conditional, Input/Output: scanf, printf, getchar, putchar, Decision making: if, if-else, nesting of if...else, else-if ladder, switch-case, Looping: while, do-while, for, break & continue	06
3	Arrays & Strings 1D arrays: declaration, initialization, traversal, 2D arrays: declaration, initialization, traversal, Concepts of Multidimensional Array, Strings: declaration, initialization, input/output, String functions: strcpy, strcmp, strcat, strlen	06
4	Functions & Structures User-defined functions: need, syntax, Category of functions, Recursion basics, Functions with arrays, Structures: declaration, initialization, arrays of structures, structures with functions	06
5	Pointers Basics: declaration, initialization, dereferencing, Pointer arithmetic, Pointers with arrays & strings, Pointers with functions, Pointers with structures	06

Practical Content:

List of programs specified by the subject teacher based on above mentioned topics

Text Books:

- | | |
|---|--|
| 1 | Programming in ANSI-C By E. Balaguruswamy, TMH Publication |
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Reference Books:

1	How to Solve it by Computer, R.G.Dromey, PHI Publication
2	Let us C By Yashwant Kanetkar, BPB Publication
3	C Programming language By Kernighan, Brian, W, Retchie, Dennis PHI publication
4	Programming in C By Pradip dey and Manas Ghosh

Web References / MOOC / Certification Course

1	https://www.w3schools.com/c/index.php
2	https://programiz.pro/learn/master-c-programming?utm_source=landing-example-nav&utm_campaign=programiz&utm_medium=referral
3	https://www.programiz.com/c-programming
4	https://www.tutorialspoint.com/cprogramming/index.htm
5	https://www.coursera.org/courses?query=c%20programming
6	https://www.simplilearn.com/free-c-course-skillup
7	https://www.mygreatlearning.com/academy/learn-for-free/courses/c-for-beginners1

8	https://www.edx.org/learn/c-programming
9	https://onlinecourses.nptel.ac.in/noc22_cs40/preview
10	https://www.coursera.org/specializations/c-programming-for-everybody

Question Paper Scheme:

End Semester Examination Duration: (2 Hours Theory Examination)

Note for Examiner: -

Q-1 Any Five out of Seven (25 Marks)

Q-2 Any Two out of Three (06 Marks)

Q-3 Mandatory question (05 Marks)

Q-4 Any Two out of Three (08 Marks)

Q-5 Any Two out of Three (06 Marks)

The question paper must comprehensively address all Course Outcomes (COs), align Taxonomy levels, and ensure complete syllabus coverage.