

COURSE FILE

(Aug-Dec 2026)

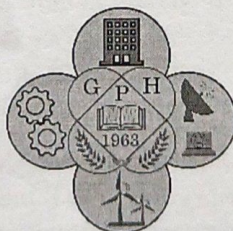
Subject : ITPC201 (Computer Programming using C language)

Semester : 3rd

Branch : Computer Engg. & IoT

Teacher : Pratibha Thakur

	Load per Week	Distribution of Marks	
		Internal Assessment	External Assessment
Theory	4	40	60
Practicals	4	40	60



हिमाचलस्य कौशलं भारतस्य गौरवम्

Govt. Polytechnic Hamirpur

V. P.O. Mohin
Teh. & Distt. Hamirpur
H.P. – 177001

Govt. Polytechnic Hamirpur (H.P.)

Lecture Planning (Theory)

Branch : Computer Engg. & IoT

Semester : 3rd

Subject: ITPC201 (Computer Programming using C language)

Session : Aug-Dec 2026

Teacher : Pratibha Thakur

Classroom : CBLH1

Sr. No.	No. of Lectures Planned	Chapter/ Unit Description	Detail of Contents	Reference/ Resources
1.	8	Introduction to Programming	Program Design Tools - Algorithm, Flowchart, Pseudocode; Evolution of Programming Languages, Programming Terminology - Program, Compiler, Interpreter, Linker, Source Code, Libraries, Syntax and Semantic Errors, Bugs.	R1, R2
2.	10	Introduction to C Language	Brief History of C Language, Features of C Language, Character Set, Identifier, Keywords, Literals, Variables, Constants, Structure of a 'C' Program, Comments, Preprocessor Directives, Data Types, Type Casting, Storage Classes.	R1,R3
3.	8	Input/ Output	Standard Input, Standard Output, Standard Error, I/O Redirection, Unformatted I/O Functions - getchar(), putchar(), gets(), puts(); Formatted I/O Functions - printf(), scanf(), Format Specifier	R1, R2, R3
4.	10	Operators	Arithmetic Operators, Relational Operators, Logical Operators, Bitwise Operators, Assignment Operators, Conditional Operator, Special Operators, Expressions, Associativity and Order of Precedence of Operators	R1, R3, R4
5.	12	Flow Control Statements	Selection Statements: if, if...else, Nested if, if...else if Ladder, switch...case; Loops - while, do...while, for; Jump Statements - goto, break, continue, return; Nested Loops, Infinite Loops	R1, R3, R4
6.	10	Arrays, Structures, Unions and Pointers	Array, Memory Representation, One-Dimensional Arrays and Two-Dimensional Arrays: Declaration and Initialization; Enumeration, Strings, String Constants, Escape Sequences, Standard String Functions - strlen(), strcmp(), strcpy(), strcat(); Structures, Unions, Pointer - Declaration, Initialization, Assignment; Dynamic Memory Allocation: malloc(), calloc(), free()	R1, R3, R4
7.	6	Functions	Definition of Function, Function Prototype, Formal and Actual Parameters, Function Call, Call by Value and Call by Reference, Arrays as Function Arguments, Recursion	R1, R3, R4

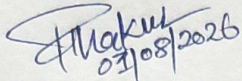
Course Outcomes:

After completing this course the students will be able to :

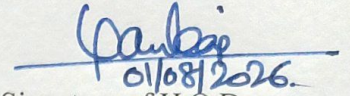
- CO-1. Understand the basic terminology of computer programming.
- CO-2. Write algorithms and draw flowcharts for simple computational problems.
- CO-3. Write, edit, compile, debug, run simple programs in 'C'.
- CO-4. Make use of flow control structures in programs.
- CO-5. Organize complex programs around a set of functions.

Teaching Resources:

- R1. Problem Solving and Programming in C, R.S. Salaria, Khanna Publications
- R2. Programming in ANSI C, E. Balagurusamy, Tata McGraw-Hill
- R3. The C Programming Language, Brian Kernighan and Dennis Ritchie, Pearson
- R4. How to Solve it by Computer, R. G. Dromey, Pearson
- R5. Outline of Programming with C, Byron Gottfried, Schaum, McGraw-Hill


01/08/2026

Signature of Teacher with Date


01/08/2026

Signature of H.O.D.