Bangladesh Polytechnic Institute

Technology: **Civil**

Semester: 6th

Sub Name: **Programming in C (6659)** T P C: 2 3 3

Course Outline

Teacher Name: Mst.Amina Khatun Mob.No: 01783 84 32 66

Class No.	Discussion and Explanation of Topics/ Titles	Remarks
Class-1	❖ **Understand fundamentals of C Programming** ➢ Describe the historical development of C Programs. ➢ Describe the Basic structure of C program and programming style ➢ State the difference of C with other high level languages. ➢ Explain the process of program planning.	
Class-2	❖ **Understand fundamentals of C Programming** ➢ Describe algorithm and flow chart. ➢ Prepare algorithm and flow chart for simple problems. ➢ State the process of compiling C program. ➢ Write simple programs using basic structure of C program	
Class-3	❖ **Understand data types, constants and variables.** ➢ Describe the data types in C. ➢ Explain constants and variables in C. ➢ Describe the keywords and identifiers in C. ➢ Mention the use of qualifiers in data types.	
Class-4	❖ **Understand data types, constants and variables.** ➢ Declare variables and asign values to variables. ➢ State the type conversion and type defination in C. ➢ Write simple programs using constants and variables.	
Class-5	❖ **Understand Operators and Expressions.** ➢ State C operators and their classification. ➢ Describe the arithmetic, relational, logical, assignment, increment, decrement and conditional operators. ➢ Explain the bitwise and special operators. ➢ Write arithmetic expression & its evaluation.	
Class-6	❖ **Understand Operators and Expressions.** ➢ Describe the precedence of arithmatic operators. ➢ Mention operator precedence and associativity. ➢ Write simple programs using operators and expressions	
Class-7	**Feedback**	
Class-8	**Feedback**	
Class-9	❖ **Understand the input and output operations.** ➢ Describe the statement getting input from keyboard. ➢ Describe the statements printing output on screen and by printer. ➢ State the codes used for formatted I/O.Statements. ➢ Mention the escape sequence in C. ➢ Write programs using I/O statements.	
Class-10	❖ **Understand the Branching and Looping Statements.** ➢ Describe the conditional an unconditional branching flow. ➢ State the statement for conditional and unconditional branching. ➢ Explain the format for branching statements. ➢ Describe the conditional an unconditional Looping flow. ➢ Write programs using I/O statements.	
Class-11	**Feedback**	
Class-12	**Class Test**	

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Class-13	❖ **Understand the Branching and Looping Statements.** ➢ State the statement for conditional and unconditional Looping. ➢ Explain the format for looping statements . ➢ Write programs using branching and looping statements.	
Class-14	❖ **Understand arrays** ➢ Define arrays ➢ Describe the dimension of arrays. ➢ Initialize arrays. ➢ Write programs using arrays.	
Class-15	❖ **Understand preprocessor statements in C.** ➢ Describe the preprocessor directives and their functions. ➢ Define header. ➢ Describe the process of including header in routine.	
Class-16	❖ **Understand preprocessor statements in C.** ➢ Explain the use of macro. ➢ Describe the advantage of macros over functions in programs ➢ Write programs using preprocessor statements.	
Class-17	❖ **Understand pointer and its application.** ➢ Define pointer. ➢ Describe the characteristics of pointer. ➢ Explain pointer expressions. ➢ Write programs using pointers.	
Class-18	❖ **Understand Function.** ➢ Explain library function and user defined function. ➢ Describe the process of calling functionsand returning values from functions in C. ➢ Describe arguments used in functions. ➢ Mention function prototype. ➢ Write programs using library function and user defined function.	
Class-19	❖ **Understand structure and union.** ➢ Describe structure and union. ➢ Mention structure and union declaration. ➢ Distinguish between structure and union. ➢ Write simple programs using structure and union.	
Class-20	**Feedback**	
Class-21	**Feedback**	
	Model Test	
Class-22	❖ **Understand file operations.** ➢ Describe file operations. ➢ State the modes of opening files. ➢ Describe the functions that support character I/O.	
Class-23	❖ **Understand file operations.**	

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	➢ Explain the routines for performing formatted I/O to files ➢ Write programs for reading, writing and editing files..	
Class-24	❖ **Understand graphics elements and its application** ➢ Define Text and Graphics ➢ Describe how graphics are created in computers. ➢ State the concept of pixel and resolution of CRT/LCD/LED display. ➢ State the format and use of line( ),rectangle( ), bar( ), bar3d( ), Circle( ), ellipse( ), fillellipse( ) and sector( ) functions with example	
Class-25	❖ **Understand graphics elements and its application** ➢ State the format and use of Arc( ), pieslice( ), drawpoly( ) and fillpoly( ) outtextxy( ) & settextstyle( ), cleardevice( ), delay( ), sound( ) & nosound( ), functions with example ➢ Mention the use of modified cprintf( ) and cscanf( ) functions for I/O operation. ➢ Write program for developing color image using above graphics	

REFERENCE BOOKS

1 Reference books and sites:

1. programming in C – E. Balagurusamy.
2. Teach yourself C _ Herbert Schildt.
3. www.e-booksdirectory.com › Computers & Internet

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