

University of Global Village (UGV), Barishal.
Sessional & Lab Module

Department Name: Mechanical Engineering (ME).

Semester: 2nd .

Subject Name:	Computer Programming Language Sessional			Total Class Hour :	1560m (26h)
Subject Code :	ME-0715-1272	Total Class:	22	Total Practice Hour :	4050m (67.5h)
Directed by :	Md. Abdul Aziz			Total Hour :	5610m (93.5h)

Class No:	Skill Title	Details & Training Procedure	Class Hour	Practice Hour	Outcomes	Note
01	Introduction to 'C' programming	<ul style="list-style-type: none"> ➤ Setting up the development environment (IDE, compiler, etc.). ➤ Writing a simple "Hello, World!" program. ➤ Details About Programming language. Environment, Compiler, Interpreter, Syntax, keyword, Identifier, tools, debug, run, Command Prompt, etc. ➤ Input and output using scanf and printf. 	60m	240m	<ul style="list-style-type: none"> ✓ capable of downloading necessary IDE, Compiler, etc. ✓ capable of developing the environment & basic setup. ✓ Understanding how to run & debug their first program in C. ✓ Capable of using input/output commands. ✓ Understanding how to work Compiler, Interpreter, and other tools. ✓ Understanding details concepts in a programming language and its work process. 	
02		<ul style="list-style-type: none"> ➤ Variables and data types in C. ➤ Basic arithmetic operations and expressions. 	60m	120m	<ul style="list-style-type: none"> ✓ ability to use Variables, data types, Basic arithmetic operations and expressions. ✓ 	

03	Introduction to Conditional Statement.	<ul style="list-style-type: none"> ➤ To be familiar with if - else statement. ➤ To be familiar with switch statement. ➤ Nested if...else statement. 	60m	300m	<ul style="list-style-type: none"> ✓ Understanding how to work and use Conditional Statement. ✓ Understanding how to use Nested if... else statement. ✓ capable to make Result sheet, Current bill etc. ✓ capable to use Conditional Statement in programming 	
04 & 05	Introducing Loops	<ul style="list-style-type: none"> ➤ To be familiar with while, do while and for loop. ➤ Difference between while, do while and for loop. ➤ Loop continued (nested loop). ➤ switch case flow control. ➤ break & Continue. ➤ goto ➤ a simple project using for loop. 	120m	480m	<ul style="list-style-type: none"> ✓ Understanding how to work and use with while, do while and for loop. ✓ Understanding how to use Nested loops statement. ✓ capable to use Conditional flow in programming. ✓ Understanding how to use switch case, break & Continue. 	
06	Assessment 1	Assessment 1	60m (2h)		Assessment 1	
07	Introducing Functions	<ul style="list-style-type: none"> ➤ Introduction to functions in C. ➤ Function prototypes and headers. ➤ Pass by value and pass by reference. ➤ User-define function. ➤ Types of User-define functions. ➤ Recursion. ➤ C Storage class. 	60m	180m	<ul style="list-style-type: none"> ✓ Understanding how to use Function in C. ✓ Understanding how to use Function prototypes and headers. ✓ capable to use Pass by value and pass by reference. 	
08 & 09	Introducing Arrays.	<ul style="list-style-type: none"> ➤ Introduction to arrays. ➤ One-dimensional and multi-dimensional arrays. 	120m	450m	<ul style="list-style-type: none"> ✓ Understanding what is array and how it works. 	

		<ul style="list-style-type: none"> ➤ Array manipulation and practice exercises. ➤ Two-Dimensional Array ➤ Array of Characters and String. 			<ul style="list-style-type: none"> ✓ Understanding how to use One-dimensional and multi-dimensional arrays ✓ capable to use Array of Characters and String 	
10 & 11	Structures & Pointers	<ul style="list-style-type: none"> ➤ Introduction to structures and user-defined data types. ➤ Creating and using structures in C. ➤ Pointers and memory management. ➤ Pointer arithmetic. ➤ Pointers and arrays. ➤ Practice exercises with structures and pointers. 	120m	480m	<ul style="list-style-type: none"> ✓ Understanding what is Structures & Pointers and how it works. ✓ capable to use Structures & Pointers. ✓ capable to use Pointers and memory management. 	
12	Assessment 2	Assessment 2	120m (2h)		Assessment 2	
13 & 14	C Programming String	<ul style="list-style-type: none"> ➤ C Programming String. ➤ C String Function. 	120m	300m	<ul style="list-style-type: none"> ✓ Understanding what is string function and how it works. ✓ capable to use strings & string functions. 	
15 & 16	Structure and Union	<ul style="list-style-type: none"> ➤ C Structure. ➤ C Struct & Pointers ➤ C Struct & Function ➤ C unions. 	120m	480m	<ul style="list-style-type: none"> ✓ Understanding what is Structures & union and how it works. ✓ capable to use Structures & union. ✓ capable to use C struct & function. 	
17 & 18	C Programming File handling	<ul style="list-style-type: none"> ➤ C file Input / Output ➤ C file Examples ➤ review previous Classes. 	120m	300m	<ul style="list-style-type: none"> ✓ Understanding what is File handling input/output and how it works. ✓ capable to use file Examples in a project. 	
19	Assessment 3	Assessment 3	120m (2h)		Assessment 3	

20 & 21	Group Project Work	➤ a real life usable Application	120m	720m	✓ Prove their Capability by using previous practical knowledge	
22	Final Assessment***	Final Assessment***	180m (3h)		Final Assessment***	