

Course Code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned				
		Theory	Pract.	Tut.	Theory	Tut.	Pract.	Total	
FEC205	C Programming	2	--	--	2	--	--	2	
Course Code	Course Name	Examination Scheme							
		Theory					Term Work	Pract. /oral	Total
		Internal Assessment			End Sem. Exam.	Exam. Duration (in Hrs)			
		Test1	Test 2	Avg.					
FEC205	C Programming	15	15	15	60	2	--	--	75

Objectives

To provide exposure to problem-solving by developing an algorithm, flowchart and implement the logic using C programming language.

Outcomes: Learner will be able to...

1. Formulate simple algorithms for arithmetic, logical problems and translate them to programs in C language
2. Implement, test and execute programs comprising of control structures.
3. Decompose a problem into functions and synthesize a complete program.
4. Demonstrate the use of arrays, strings and structures in C language.
5. Understand the concept of pointers

Module	Detailed Contents	Hrs.
1	Introduction	5
	<ul style="list-style-type: none"> ● Introduction to components of a Computer System ● Introduction to Algorithm and Flowchart 	
1	Fundamentals of C Programming	5
	<ul style="list-style-type: none"> ● Keywords, Identifiers, Constants and Variables ● Data types in C ● Operators in C ● Basic Input and Output Operations ● Expressions and Precedence of Operators ● In-built Functions 	
2	Control Structures	7
	<ul style="list-style-type: none"> ● Introduction to Control Structures 	
2	Branching and looping structures	7
	<ul style="list-style-type: none"> ● If statement, If-else statement, Nested if-else, else-if Ladder ● Switch statement ● For loop, While loop, Do while loop ● break and continue 	
3	Functions	4
	<ul style="list-style-type: none"> ● Introduction to functions ● Function prototype, Function definition, Accessing a function and parameter passing. ● Recursion. 	
4	Arrays and Strings	4

	<ul style="list-style-type: none"> ● Introduction to Arrays ● Declaration and initialization of one dimensional and two-dimensional arrays. ● Definition and initialization of String ● String functions 	
5	Structure and Union	4
	<ul style="list-style-type: none"> ● Concept of Structure and Union ● Declaration and Initialization of structure and union ● Nested structures ● Array of Structures ● Passing structure to functions 	
6	Pointers	4
	<ul style="list-style-type: none"> ● Fundamentals of pointers ● Declaration, initialization and dereferencing of pointers ● Operations on Pointers ● Concept of dynamic memory allocation 	

Assessment:

Internal Assessment Test:

Assessment consists of two class tests of 15 marks each. The first class test is to be conducted when approx. 40% syllabus is completed and second class test when additional 35% syllabus is completed. Duration of each test shall be one hour.

End Semester Theory Examination:

1. Question paper will comprise of total 06 questions, each carrying 15marks.
2. Total 04 questions need to be solved.
3. Question No: 01 will be compulsory and based on entire syllabus wherein sub-questions of 2 to 5 marks will be asked.
4. Remaining questions will be mixed in nature.(e.g. Suppose Q.2 has part (a) from module3 then part (b) will be from any module other than module 3)
5. In question paper weightage of each module will be proportional to number of respective lecture hrs as mentioned in the syllabus.

Text Books:

1. E. Balaguruswamy, Programming in ANSI C, McGraw-Hill
2. Kernighan , Ritchie, “The C programming Language”, Prentice Hall of India
3. Sumitabha Das, Computer Fundamentals and C Programming, McGraw-Hill
4. Pradeep Day and ManasGosh ,“Programming in C”, Oxford University Press.

References:

1. Byron Gottfried, “Programming with C”, McGraw Hill (Schaum’s outline series)
2. Venugopal K.R, Prasad Sudeep, “Mastering C”, McGraw-Hill
3. KanetkarYashwant,” “Let Us C”, BPB Publication.