Course Code	**ESC X51**
Course Title	Programming Fundamentals **(P)**
Type of Course	Core
L T P	0 0 3
Credits	1
Course Assessment Methods Practical (Continuous and end semesterevaluation)	50
Course Prerequisites	None
Course Outcomes (CO)	1. To formulate algorithms for simple problems and translategiven algorithms to a working and correct program 2. To be able to develop programs using arithmeticexpressions and if-then else constructs 3. To be able to execute iterative as well as recursiveprograms 4. To be able to demonstrate use of arrays, strings and structures for representing data and manipulate them through aprogram 5. To be able to implement various pointers operations and use them in defining self-referential structures. 6. To be able to create, read and write to and from simple text files

Lab1: Familiarization with programming environment

Lab 2: Simple computational problems using arithmetic expressionsLab 3:

Problems involving if-then-else structures

Lab 4: Iterative problems e.g., sum of series

Lab 5: 1D Array manipulation, Arrays: searching, sorting

Lab 6: Matrix problems, String operations

Lab 7: Simple functions and parameter passing

Lab 8: Numerical methods (Root finding, numerical differentiation, numerical integration)

Lab 9: Recursive functions

Lab 10: Pointers and structures

Lab 11: File operations

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO11	PO12	PSO 1	PSO 2
CO 1	2	2	1	1	1	1	1		1			1	1	-
CO 2	2	2	1	1	1			1	1				1	-
CO 3	2	1	2	1								2		
CO 4	3	3	1	1				2				1	1	1
CO 5	3	2	2	1					1				1	1
CO 6	2	3	1	1	1			1	1			2	1	1