

SVKM's NMIMS Deemed-to-be University
Mukesh Patel School of Technology Management and Engineering

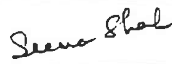
w.e.f. 2022-23					
Program: B Tech / MBA Tech (All programs except CSBS, CSDS)				Semester: I/II	
Course: Programming for Problem Solving				Module Code:	
Teaching Scheme				Evaluation Scheme	
Lecture (Hours per week)	Practical (Hours per week)	Tutorial (Hours per week)	Credit	Internal Continuous Assessment (ICA) (Marks 50)	Term End Examinations (TEE) (Marks 100)
2	4	0	4	Marks Scaled to 50	Marks Scaled to 50
Prerequisite: Nil					
Course Objectives- Enable students to understand problem statements and solve those using basic programming constructs. Develop skills to analyze real life problem statements and implement using Object Oriented Programming.					
Course Outcomes- After successful completion of this course, students will be able to <ol style="list-style-type: none"> 1. Comprehend problem statements, build logic and draw flowchart, 2. Develop complex logic using control structures, 3. Implement programs using arrays, function and pointers 4. Solve real life problems using Object Oriented paradigm. 					
Detailed Syllabus					
Unit	Description				Duration
1	Introduction to problem solving skills, flowcharts, algorithms, basic program structure of C++, I/O statements, data types, variables, operators, expressions, pre-processor directives.				04
2	Control structures: Conditional branching, looping, nested looping, recursion.				08
3	Programming constructs 1 - D and 2 - D arrays, strings.				04
4	Modular Programming: functions, parameter passing, inline function, macro functions.				04
5	Programming using structures and pointers				03
6	Introduction to Object Oriented programming: necessity for OOP, data hiding, data abstraction and encapsulation. Classes and Objects.				02
7	Programming using constructors, polymorphism and inheritance.				05

Seema Shal


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	Total	30
Textbooks: 1. Bjarne Stroustrup, "The C++ Programming Language", 4 th Edition, Addison Wesley, 2013.		
Reference Books: 1. Bjarne Stroustrup, "Programming - Principles and Practice Using C++", 2 nd Edition, Addison Wesley, 2014. 2. KR Venugopal, Rajkumar Buyya, "Mastering C++", 2 nd Edition, Tata McGraw-Hill, Paperback 2013.		
Laboratory Work: 8 to 10 experiments (and a practicum where applicable) based on the syllabus.		



Signature
(Head of the Department)



Signature
(Dean)