

Computer Programming	
Course Code:	SEN-101
Credit Hours:	3+1
Pre requisite:	None
Objectives:	<p>The objective of course is to introduce a disciplined approach to Problem solving methods and algorithm development. The aim is to teach the syntax and vocabulary of C++ Language.</p> <p>The significant philosophies and logical programming, including models for I/O, processing, and all related terminology will be taught. Simple programs will be constructed, using a number of different logical, calculation and algorithm.</p>
Course Learning Outcomes (CLOs):	<p>CLO 1: (C2): Acquire fundamental concepts of structured programming along with problem solving techniques and analytical thinking.</p> <p>CLO 2: (C3): Analyze problem requirements to recognize what type of data and processes are involved in solution.</p> <p>CLO 3: (P1): Utilize basic concepts to alter and expand short programs and algorithms. Writing pseudo-codes and simple program development using standard control structures and functions.</p> <p>CLO 4: (P2): Design module based approach to gratify those requirements, and organize program code for implementation.</p>
Course Outline:	<p>By the end of the semester students will have concepts of programming including:</p> <ul style="list-style-type: none"> ➤ Introduction to Computer Programming ➤ Basics of C++ language ➤ Problem Solving and Algorithm Design ➤ Pseudo-codes and Flow charts ➤ Arithmetic Operators and Variables ➤ Exploring input and output statements ➤ Control Structure (Selection and iterative) ➤ Functions ➤ Primary data structure of Arrays and its multi – dimensional behavior. ➤ Concepts of Pointers ➤ Introductory knowledge of Structures

Resources:

- C++ How to Programme by Dietel and Dietel
- A Structured Programing Approach Using C++ by Behrouz A. Forouzan
- Maureen Sprankle, "Problem Solving and Programming Concepts", 7th Ed., Prentice Hall
- Joyce Farrel, "Programming Logic and Design", 2nd Ed., Thomson Press
- Nell Dale, Chip Weems, "Programming and Problem Solving with C++ ", 5th Ed.

Mapping of CLOs to PLOs (Program Learning Outcomes)

PLOs	CLOs			
	CLO 1	CLO 2	CLO 3	CLO 4
PLO:1 (Engineering Knowledge)	X			
PLO:2 (Engineering Problem Analysis)	X	X		
PLO:3 (Designing and Development)		X	X	X
PLO:4 (Investigation)		X		X
PLO:5 (Modern tool usage)			X	X
PLO:6 (Engineer and Society)				
PLO:7 (Environment and sustainability)				
PLO:8 (Professionalism and Ethics)				
PLO:9 (Communication)				
PLO:10 (Individual and Team Work)				X
PLO:11 (Life long learning)				
PLO:12 (Project Management)				X

Mapping of CLOs to Course Assessment

PLOs	CLOs			
	CLO 1	CLO 2	CLO 3	CLO 4
Assignments	X			
Quizzes	X	X		
Project			X	X
Midterm Exam	X	X		
Final Exam		X	X	

