Sukkur IBA University

Department of Computer Science

CSC-121: Programming Fundamentals Lab Syllabus

General Information

Course Number	CSC-121
Credit Hours	3+1 (Theory Credit Hour = 3, Lab Credit Hours = 1)
Prerequisite	None
Course Coordinator	None

Course Objectives

This is a fast-paced introductory course to the programming language which is intended for those with little or no programming background. This course provides a conceptual and practical introduction to programming. The focus is on programming rather than the particular choice of programming language, with general principles being brought out through the study of 'C++'. This course will equip students with tools and techniques to implement a given problem programmatically.

Catalog Description

CSC-121

Project:

Projects will be group based. At max 2 students can work in a group to complete the project. The project will span over the whole semester duration. It will be developed phase by phase iteratively.

Week-wise Labs Schedule

Week No.	Topic	Reading
1	○ Introduction ○ Course Administrivia ○ CodeCombat/Scratch Game	
2	○ Installing C++ Compiler ○ Setting up development environment ○ Compiling, Running, and Debugging the Code ○ Basic Input and Output ○ Escape Sequences	
3	○ Data Types (String, Int, float, char) ○ Type casting ○ Input from user ○ Variables, case sensitive ○ Arithmetic expressions, ○ Parenthesis, comments.	
4	○ Boolean data type ○ Operators (and, or, not) ○ Binary to decimal conversion ○ If else	
5	○ For loop, While loop	
6.	○ 1D array, 2D arrays	
7.	○ Working with User Define Functions	

Week No.	Topic	Reading
	○ Call by value and Call by reference ○ Different type of UDFs	
8.	○ Working with Records (Structures) ○ Structure and Arrays	
9.	○ Introduction to pointers ○ Declaring the pointer ○ Initializing the pointer ○ Integer pointer ○ Floating pointer ○ Character pointer ○ Pointing to pointer variables	
10	○ Pointers Continued	
Mid Term Exam		
11.	○ Working with Files ○ Reading and writing in files	
12.	○ Polishing students skill to think – 2D Array based Mappings	
13.	○ Polishing students skill to think – String Searching	
14.	○ Polishing students skill to think – Recursion	
15.	○ Projects Demonstration	
Final Term Exam		

Course Learning Outcomes

	Course Learning Outcomes (CLO)
1	Understand the programming paradigm & programming Language fundamentals.
2	Understand and Analyze different programming logic problems and Language syntax problems
3	Ability to Constructs a development process to compute the output and Provide solutions for different programming problems.
4	Ability to work in team or organization as core team member on projects

CLO-SO Map

	SO IDs											
CLO ID	**GA1**	**GA2**	**GA3**	**GA4**	**GA5**	**GA6**	**GA7**	**GA8**	**GA9**	**GA10**	**GA11**	**GA12**
CLO 1	1	0	0	0	0	0	0	0	0	0	0	0
CLO 2	0	1	0	0	0	0	0	0	0	0	0	0
CLO 3	0	0	1	0	0	0	0	0	0	0	0	0
CLO 4	0	0	0	0	0	0	0	0	1	0	0	0

Approvals

Prepared By	
Approved By	Not Specified
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