NATIONAL UNIVERSITY
of Computer & Emerging Sciences, Lahore

Department of Computer Science

CS1002 – Programming Fundamentals
FALL 2023

Instructor Name:	Muhammad Saifullah	**TA Name:**	TBA
Email address:	saifullah.tanvir@nu.edu.pk	**Email address:**	TBA
Office Location:	M-109(in front of Lab CS-4)		
Office Hours:	Monday 12 PM – 1 PM (email me to schedule a meeting)		

Course Information

Program: BS (CS) **Credit Hours:** 3 + 1 (Lab) **Course Type:** Core

Class Meeting Time: Section J: M / W 10:00 – 11:30 AM

Section E: T / Th 11:30 – 01:00 PM

Class Venue: CS-15 and CS-6

Course Description/Objectives/Goals:

- To introduce the notion of algorithms.
- To develop problem-solving and logic-building skills in students.
- To introduce the basic concepts of programming in C++, including basic data types, expressions, iterations, functions and arrays.

Course Learning Outcomes (CLOs):

At the end of the course students will be able to:	**Domain**	**BT* Level**
Understand basic problem solving steps and logic constructs	C	2
Apply basic programming concepts	C	3
Design and implement algorithms to solve real world problems and should be able to translate a problem statement into pseudo-code/C++ code	C	3
* BT= Bloom's Taxonomy, C=Cognitive domain, P=Psychomotor domain, A= Affective domain **Bloom's taxonomy Levels:** 1. Knowledge, 2. Comprehension, 3. Application, 4. Analysis, 5. Synthesis, 6. Evaluation		

Course Textbook

1. C++ Programming: From Problem Analysis to Program Design, by D. S. Malik (5th Edition)
2. C++: How to Program? by Deitel & Deitel (9th Edition)

Additional references and books related to the course:

1. Programming and Problem Solving with C++, Nell Dale
2. www.learncpp.com

(Tentative) Weekly Schedule

Week 1,2: Problem Solving and Programming basics
Week 3,4,5: Simple C++ Programs
Week 5 (contd.): Repetition Structures(Loops)
Week 6: Nested Control Structures
Week 7: Functions
Week 8: Functions
Week 9: File Handling
Week 9(contd.), 10, 11: Arrays
Week 12: CStrings and character Arrays
Week 13,14: 2D Arrays

(Tentative) Grading Criteria:

Assignments	**(10%)**	Quiz	**(10 %)**	Midterms	**(30 %)**
Project	**(10%)**	Final Exam	**(40 %)**		

Course Policies:

- Quizzes may be unannounced.
- All assignments and course work must be done individually.
- In case of cheating, both parties will be considered equally responsible.80% attendance is required for appearing in the exams. No Late Submissions
- No Makeup Quizzes.
- 80% attendance is required for appearing in the Final exams.

Passing criteria:

Minimum requirement to be eligible to pass this course is to get at least 50% marks in the course. All CS department's grading policies apply. Grading scheme for this course is **Absolute**.