Lahore University of Management Sciences

CS 100 – Computational Problem Solving

Spring 2024

Subject to Change

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Secretary/Coordinator/TA	NA / Mr. Afaq Butt (Department Coordinator) /
TA Office Hours	TBA
Course URL (if any)	lms.lums.edu.pk
Lecture	SBASSE Programming Studio Lab
Lab	SBASSE Programming Studio Lab

Course Teaching Methodology
• **Teaching Methodology:** Synchronous. Students will be guided to supplementary reading material as well. • **Lecture Details:** Although the teaching methodology is going to be synchronous, however, occasionally, there may be pre-recorded lectures. In addition, links to related reference material available online from different sources will be provided from time to time.

Class Discussion Forum
• This term we will be using Slack for class discussion. • The system is highly catered to getting you help fast and efficiently from classmates, the TA, and myself. • Rather than emailing questions to the teaching staff (TAs), I encourage you to post your questions on class discussion board. • Link to the class discussion board page will be provided later.

Course Basics				
Credit Hours	3			
Lecture(s)	Nbr of Lec(s)	28-30	Duration	50 min each, twice a week
~~Recitation~~/Lab	Nbr of Lec(s)	0/14	Duration	2 hrs 50 min each, once a week
Tutorial	Nbr of Lec(s)	As per need	Duration	

Course Distribution	
Core	Yes (for SBASSE students, CS Majors, CS minors)
Elective	Yes, can be taken as an elective
Open for Student Category	Freshmen, Sophomore
Close for Student Category	None

COURSE DESCRIPTION
This course provides a conceptual and practical introduction to programming. The focus is on programming rather than a particular choice of programming language, with general principles being brought out through

the study of 'C/C++'. This course will equip students with tools and techniques to analyze, solve, and implement a given problem programmatically.

COURSE PREREQUISITE(S)	
	None

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)	
PEO-01	Demonstrate excellence in profession through in-depth knowledge and skills in the field of Computing.
PEO-02	Engage in continuous professional development and exhibit quest for learning.
PEO-03	Show professional integrity and commitment to societal responsibilities.

COURSE OBJECTIVES (COs)	
CO-01	To teach programming fundamentals to students.
CO-02	To help students analyze and solve programming problems.
CO-03	To prepare students in programming for later courses with programming intensive content.

COURSE LEARNING OUTCOMES (CLOs)

At the successful completion of the course students will be able to:

CLO	Statement	Bloom's Cognitive Level	Graduate Student Attributes Seoul Accord
1.	***use*** C++ syntax and control structures to ***code*** algorithmic solutions using standard coding conventions.	C1 Remembering	Enabling Knowledge
2.	***explain*** key concepts of algorithmic design in written form.	C2 Understanding	Communication
3.	***apply*** relevant standards and ethical considerations to writing computer programs.	C3 Applying	Responsibility
4.	***analyze*** the requirements for solving simple algorithmic problems.	C4 Analyzing	Critical Thinking and Analysis
5.	***evaluate*** the correctness of the proposed solution.	C5 Evaluating	Critical Thinking and Analysis
6.	***design*** and ***implement*** programs to solve simple algorithmic computing problems, based on the analysis of the requirements.	C6 Creating	Problem Solving