COURSE BASICS

Course Title**:** **Computer Programming**
Course Code**:** **CSC-113**
Credit Hours**:** **3+1**
Prerequisite**:** **Nil**
Class & Section: **BSE-1(A, B)**

COURSE OBJECTIVES AND DESCRIPTION:
In this course the student will gain a broad understanding of modern computer programming. The student will acquire introductory skills in problem analysis, solution design, and program construction. Through practical programming activities, the student will gain an appreciation of the nature of computer programming.

COURSE LEARNING OUTCOMES (CLO):

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

CLO #	CLO Statement	Bloom's Taxonomy
CLO 1	Describe basic concepts related to computer, programming concepts and constructs of a structured programming language including lexemes, expressions, statements and methods.	C1
CLO 2	Analyze programs with respect to their performance, correctness, possible output, errors and exception.	C4
CLO 3	Apply knowledge and understanding to solve computing problems and project their solutions under specific requirements.	C3
CLO4	Present an advanced computer programming topic confidently and professionally.	A2

WEEKLY BREAKDOWN:

Week	Week Days	Tentative Course Plan
1	11th Oct	Course Intro Define a computer system and its parts List new technologies in computer Cloud Computing Grid Computing Utility Computing
2	18th Oct	Language translators Loaders Linkers
3	25th Oct	SDLC Variables, Values and Types

4	1st Nov	Explain Algorithm Flowchart Pseucode
5	8th Nov	Operators and Expressions Arithmetic, Relational, Boolean, Assignment, cascading operations Conditional Statement
6	15th Nov	Conditional Statement Comparison Operators and Boolean Expressions Conditional Statements "if" and "if-else" Conditional Statement "switch-case"
7	22nd Nov	Loops What is a loop? While loop, do-while loop
8	29th Nov	For loop Nested loops
9		**Mid Term Exam**
10	13th Dec	Array Declaration and Allocation of Memory for Arrays, Access to the Elements of an Array Reading an Array from the Console, Printing an Array to the Console
11	20th Dec	Iteration through Elements of an Array, Multidimensional Arrays, Arrays of Arrays
12	27th Dec	Methods Subroutines in Programming What Is a "Method"? Why to Use Methods? How to Declare, Implement and Invoke a Method?
13	03rd Jan	Parameters in Methods Returning a Result from a Method
14	10th Jan	Structures Defining a Structure
15	17th Jan	Pointers Memory Address Value at the address
16	24th Jan	Records and Filing Text vs. Binary files, Records, CRUD operations on records
17	31st Jan	GUI Development Form based application Event driven programming
18		**Final Term Exam**

NOTE:

a. *This schedule is subject to revisions as conditions may warrant.*

b. *Topics will be covered in sequence no matter if city observes any planned or unplanned holidays.*

c. *The information in this course outline is subject to revision as conditions may warrant.*

COURSE ASSESSMENT METHOD

METHOD OF EVALUATION AND STRUCTURE:

A student's grade will be based on multiple measures of performance as mentioned below:

EVALUATION INSTRUMENTS (EI)	MARKS
Quizzes (4 Quizzes of 10 Marks)	10
Assignments (3 Assignments)	20
Mid Term Examination	20
Final Examination	50
Total	**100**

NOTE: Any change in this scheme/format will be communicated well in time.

MAPPING OF CLOS TO PLOS (PROGRAM LEARNING OUTCOMES)

PLO's	CLO's			
	CLO 1	CLO 2	CLO 3	CLO 4
PLO:1 (Engineering Knowledge)	x			
PLO:2 (Engineering Problem Analysis)		x		
PLO:3 (Designing and Development)			x	
PLO:4 (Investigation)				
PLO:5 (Modern tool usage)				
PLO:6 (Engineer and Society)				
PLO:7 (Environment and Sustainability)				
PLO:8 (Professionalism and Ethics)				
PLO:9 (Individual and Team Work)				x
PLO:10 (Communication)				
PLO:11 (Project Management)				
PLO:12 (Lifelong Learning)				

MAPPING OF CLOS TO COURSE EVALUATION INSTRUMENTS (EI)

EI	CLO's			
	CLO 1	CLO 2	CLO 3	CLO 4
Assignments			x	x
Quizzes	x	x	x	
Midterm Exam	x	x	x	
Final Exam	x	x	x	

GRADING SYSTEM:

Letter Grade	Grade Point	Percentage	
A	4.0	≥ 85	-
A-	3.67	≥ 80	< 85
B+	3.33	≥ 75	< 80
B	3.00	≥ 71	< 75
B-	2.67	≥ 68	< 71
C+	2.33	≥ 64	< 68
C	2.00	≥ 60	< 64
C-	1.67	≥ 57	< 60
D+	1.33	≥ 54	< 57
D	1.00	≥ 50	< 53
F	0.00	-	< 50

COURSE RESOURCES

INSTRUCTOR:

NAME: Engr. Muhammad Faisal

TEXT BOOK:

1. Problem Solving and Programming Concepts, Maureen Sprankle, Jim Hubbard, , 9th Edition 2012 Pearson.

REFERENCE BOOKS:

1. Fundamentals of Computer Programming with CSharp, Nakov.pdf, 2013
2. Visual C# How to Program, Harvey M. Deitel & Paul J. Dietel., 6E.
3. Professional Visual Studio 2013, Bruce Johnson

ONLINE REFERENCES:

1. https://www.tutorialspoint.com/csharp/
2. https://docs.microsoft.com/en-us/dotnet/csharp/programming-guide/
3. https://mva.microsoft.com/en-US/training-courses/c-fundamentals-for-absolute-beginners-16169

Appendix III
Blooms Taxonomy Levels Codes

Cognitive	Knowledge (C1)
	Comprehension (C2)
	Application (C3)
	Analysis (C4)
	Synthesis (C5)
	Evaluation (C6)
Affective	Receiving (A1)
	Responding (A2)
	Valuing (A3)
	Organization (A4)
	Characterization (A5)
Psychomotor	Speed (P1)
	Strength (P2)
	Endurance (P3)
	Coordination (P4)
	Precision (P5)
	Flexibility (P6)
	Agility (P7)
	Dexterity (P8)
	Manipulation (P9)
	Grace (P10)
	Technique (P11)