United International **University** (UIU)
Dept. of Computer Science & Engineering (CSE)
COURSE OUTLINE

Course Code: CSE 2216
Course Title: Data Structure and Algorithms I Laboratory
Section: B
Trimester and Year: Fall 2022

Instructor Md. Tarek Hasan (MdTH)

Classes Sunday 2:00 PM - 04.30 PM Computer Lab 7 (0522)

Counseling hours

Day	Time
Saturday	12:00 AM – 01:00 PM 03:30 PM – 04:30 PM
Tuesday	12:00 AM – 01:00 PM 03:30 PM – 04:30 PM
Wednesday	02:00 PM – 04:00 PM

Room No. **0319 (A)**

Email tarek@cse.uiu.ac.bd

Text Book **Follow your theory classes**

Assignment or Offline
Assignment will be provided in the class. Copied assignments will cause 0 of both.

Continuous Evaluation or Graded Practice
Tasks given at the lab will be evaluated by class performance. Marks will be assigned on this performance.

Exams
Mid-term and final exam will be closed book, closed notes. The materials for Mid-term exam and final exam will be informed in due time. There will be no grade exemptions from the final. Final examination is not comprehensive.

Marks distribution of the course is as follows:

Attendance	10%
Class Performance	10%
Online	10%
Offline	20%
Mid-term	20%
Final Exam	30%

Course Grade The following scale will be used to convert numerical grades to letter grade:

Letter Grade	Marks	Grade Point	Letter Grade	Marks	Grade Point
A (Plain)	90-100	4.0	C+ (Plus)	70-73	2.33
A- (Minus)	86-89	3.67	C (Plain)	66-69	2.00

B+ (Plus)	82-85	3.33	C- (Minus)	62-65	1.67
B (Plain)	78-81	3.00	D+ (Plus)	58-61	1.33
B- (Minus)	74-77	2.67	D (Plain)	55-57	1.00

Objectives:

(i) To learn basic concept of different data structures.
(ii) Implement different data structures using C/C++ programming.
(iii) Analysis their running time.

Outcome:

(i) Improve programming skills.
(ii) Enhances knowledge in the area of data structures.

Week	Topics
1	Introduction, Basic Discussion, and Sorting (Selection Sort)
2	Sorting Cont. (Insertion Sort, Bubble Sort, Counting Sort)
3	Searching (Linear Search, Binary Search, Ternary Search)
4	Singly Linked List (Insert, Delete, Search)
5	Doubly Linked List (Insert, Delete, Search) and Circular Linked List (Insert, Delete, Search)
6	**MIDTERM EXAM**
7	Stack and Queue
8	Graph representation and Graph Algorithms (BFS)
9	Graph Algorithms Cont. (DFS, Topological Ordering)
10	Tree Traversal Technique, Binary Tree and Binary Search Tree
11	Set Operation
12	**FINAL EXAM**