UNITED INTERNATIONAL UNIVERSITY
Department of Computer Science and Engineering (CSE)
Course Syllabus

1	**Course Title**	Data Structures and Algorithms
2	**Course Code**	CSE 5031
3	**Trimester and Year**	Fall 2023
4	**Section**	M
4	**Class Hours**	Friday 8.00 AM – 10.30 AM
9	**Instructor's Name**	Rubaiya Rahtin Khan
10	**Email**	rubaiya@cse.uiu.ac.bd
11	**Office**	Room 435(C)
13	**Text Book**	Introduction to Algorithms (3rd edition) by Cormen, Leiserson, Rivest and Stein
15	**Course Contents**	DATA STRUCTURE 1. Array: a. Sorting: i. Insertion Sort ii. Bubble sort iii. Selection sort b. Searching: i. Linear search ii. Binary Search 2. Linked List (Linear) : a. Creation b. Display c. Insertion d. Deletion 3. Stack and Queue using a. Array b. Linked list 4. Graph: a. BFS, DFS b. Topological Order 5. Tree traversal Technique a. Inorder, preorder and postorder ALGORITHM 6. Divide & conquer Technique using Merge Sort, Quick Sort 7. Time complexity analysis of a. Iterative algorithm b. Recursive algorithm 8. Greedy technique: a. Knapsack algorithm b. Single Source Shortest Path 9. Dynamic Technique: a. Travelling Salesperson Algorithm

Appendix 1: Assessment Methods

Assessment Types	Marks
Attendance	5%
Assignments	10%
Class Tests	15%(2 out of 3)
Mid Term	30%
Final Exam	40%

Appendix 2: Grading Policy

Letter Grade	Marks %	Grade Point	Letter Grade	Marks%	Grade Point
A (Plain)	90-100	4.00	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
			F (Fail)	<55	0.00