# UNITED INTERNATIONAL UNIVERSITY

Department of Computer Science and Engineering (CSE)

# Course Syllabus

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| **1** | **Course Title** | Data Structure & Algorithms I Laboratory |
| **2** | **Course Code** | CSE 2216 |
| **3** | **Trimester and Year** | Spring 2025 |
| **4** | **Pre-requisites** | CSE 1116, CSE 1112 |
| **5** | **Credit Hours** | 1 |
| **6** | **Section** | U |
| **7** | **Class Hours** | Saturday: 08:30 am-11:00 am |
| **8** | **Class Room** | Computer Lab 10 (0530) |
| **9** | **Instructor’s Name** | Md. Mushfiqul Haque Omi |
| **10** | **Email** | [mushfiqul@cse.uiu.ac.bd](mailto:mushfiqul@cse.uiu.ac.bd%20) |
| **11** | **Office** | 837 – A |
| **12** | **Contact no.** | 01942900887 |
| **13** | **Counseling Hours** | Sunday, Tuesday- 12.30 PM- 1.50 PM |
| **14** | **Text Book** | Follow your theory classes |
| **15** | **Reference** | None |
| **16** | **Course Contents (approved by UGC)** | Laboratory work based on CSE 2215 |
| **17** | **Teaching Methods** | Lecture, Laboratory exercise and reports. |

**Objectives:**

(i) To learn basic concept of different data structures.

(ii) Implement different data structures using C programming.

(iii) Analysis their running time.

**Lab Outline**

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| Class | Topics |
| 1 | Introduction, Basic discussion, and Sorting (Selection Sort, Bubble Sort, Insertion Sort) |
| 2 | Searching (Linear Search, Binary Search) |
| 3 | **Class Performance 1** + Singly/Single Linked List (Insertion, Deletion, Search) |
| 4 | Doubly/Double Linked List (Insertion, Deletion, Search) |
| 5 | **Class Performance 2** |
| **6** | **Midterm Exam** |
| 7 | Stack |
| 8 | Queue |
| 9 | **Class Performance 3** + Graph representation and Basics |
| 10 | Graph Algorithms (BFS, DFS) |
| 11 | Tree Traversal Technique, Binary Tree and Binary Search Tree |
| **12** | **Final Exam** |

**Appendix 1: Assessment Methods**

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| **Assessment Types** | **Marks** |
| Attendance | 05% |
| Class Performance | 30% |
| Assignments | 25% |
| Mid-Term | 20% |
| Final Exam | 20% |

***Regarding Assessment Methods***

Tasks given at the lab will be evaluated by class performance. Marks will be assigned on this performance.