



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

1	Course Title	Data Structure and Algorithm II Laboratory		
2	Course Code	CSE 2218		
3	Trimester and Year	Spring 2024		
4	Pre-requisites	CSE 2216: Data Structure and Algorithm I Laboratory		
5	Credit Hours	1.00		
6	Section	G		
7	Class Hours	Sunday (11:11 AM – 01:40 PM)		
8	Class Room	422		
9	Instructor’s Name	Charles Aunkan Gomes		
10	Email	charles@cse.uiu.ac.bd		
11	Office	219(A)		
12	Counselling Hours		Check ELMS	
13	Text Book	Introduction to Algorithms (3 rd edition) by Cormen, Leiserson, Rivest and Stein		
14	Course Contents (approved by UGC)	Laboratory works based on CSE 2218		
15	Course Outcomes (COs)	COs	Description	
		CO1	Implement correct algorithms to handle large datasets efficiently.	
		CO2	Analyze worst-case running times of algorithms using asymptotic analysis.	
		CO3	Describe different algorithm paradigms and explain when algorithmic design situations call for them. Recite algorithms that employ these paradigms. Synthesize such algorithms. Derive and solve problems describing the performance of the algorithms.	
16	Teaching Methods	Lecture, Case Studies.		
17	CO with Assessment Methods	CO	Assessment Method	(%)
		-	Attendance	10

		CO1, CO3	Offline/Home Assignments	25%	
			Online/Class Tests	35%	
		CO1, CO3	Presentations	10%	
		CO1	-	-	
		CO2, CO3	Final	20%	

18 Mapping of COs and Program outcomes

COs	Program Outcomes(POs)											
	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010	P011	P012
CO1			C									
CO2		C										
CO3			C									

19 Lab Outline

Class	Topics/Assignments	COs	Lab Outcomes/Activities
Lab1	Practice 1: Review of Recursive Functions	CO1	Lecture, Graded practice
Lab2	Exam 1: Review of Recursive Functions	CO1	Exam
Lab3	Practice 2: Divide-and-Conquer	CO1, CO3	Lecture, Graded practice
Lab4	Exam 2: Divide-and-Conquer Assignment 1	CO1, CO3	Exam; Lecture
Lab5	Practice 3: Greedy Algorithms	CO1, CO3	Lecture, Graded practice
Lab6	Assignment 2: Greedy Algorithms; Practice 4: Dynamic Programming	CO1, CO3	Lecture, Graded practice
MIDTERM WEEK			
Lab7	Exam 3: Dynamic Programming	CO1, CO3	Exam
Lab8	Practice 5: Disjoint-Sets Forests	CO1, CO3	Lecture, Graded practice
Lab9	Exam 4: Disjoint-Sets Forests; Minimum Spanning Trees	CO1, CO3	Exam
Lab10	Practice 6: Single-Source Shortest Paths	CO1, CO3	Lecture, Graded practice
Lab11	Exam 5: Single-Source Shortest Paths Assignment 3	CO1, CO3	Exam
Lab12	Practice 7: String Matching	CO1, CO3	Lecture, Graded practice