North South University - Spring 2023

Department of Electrical and Computer Engineering

Course Outline: CSE225L (Data Structure and Algorithm Lab)

Lab Instructor:

A. S. M. Sabiqul Hassan

Email: sabigul.hassan@northsouth.edu

Office: TBA (Check your Canvas announcement section)

Office Hours: TBA (by email appointment)

Lab Class Timing & Classroom:

TBA (Check your RDS for the updated information)

Tentative Marks Distribution:

| Class Attendance (CA) | 10 |
|------------------------|--------------|
| Class Performance (CP) | 25 (15 + 10) |
| Home Work (HW) | 15 |
| Mid Exam (ME) | 25 |
| Final Exam (FE) | 25 |

Instructions for Students:

- Class Manners: Be attentive during the whole class time. Making a noise, gossiping with others, accessing any electronic device without permission and other activities are strictly prohibited. Don't leave the classroom without permission of your instructor.
- **Attendance:** You must attend all the lab sessions on time (within the first 5 minutes of class time). After 15 minutes, no attendance will be counted.
- Late Submission: Strictly maintain the deadlines and no late submission will be accepted.
- **Make-up Exam:** There will be no make-up exam throughout the semester. So be careful about the exam schedule. I will not change any assessment timing based on your other courses.
- Academic Honesty: Try to complete all tasks by yourself. Don't submit others' work or blindly copy-paste from any source. Any type of unfair practices will not be tolerated and you will be punished.
- Grading Policy & Others: I will follow the ECE department's instruction on grading policy and it will be finalized after consulting with the course instructor. There is a possibility of general curving based on the requirement. As I do partial marking for all, don't request me for an individual favor. Be assured that you will face no discrimination (gender, religious, etc.) from my side. Most importantly, I don't like any unnecessary formalities (class party, any gift etc.) and those will not help to increase your grade.

Tentative Class Schedule: (6 months semester)

| Week No | Topic(s) |
|---------|---|
| 01 & 02 | Introduction to C++ (review syntax & required OOP concepts) |
| 03 | Dynamic Memory Allocation |
| 04 | Classes & Objects |
| 05 | Template Class and Operator Overloading Practice Session – (PS 1) / Quiz – 1 |
| 06 | Unsorted List (array based) |
| 07 | Sorted List (array based) |
| 08 | Stack (array based) |
| 09 | Queue (array based) Practice Session – (PS 2) / Quiz – 2 |
| 10 | Lab Mid Exam Bonus: Introduction to Git, GitHub & CLI |
| 11 | Unsorted List (linked list based) |
| 12 | Sorted List (linked list based) |
| 13 | Stack (linked list based) |
| 14 | Queue (linked list based) |
| 15 | Recursion Practice Session – (PS 3) / Quiz – 3 |
| 16 | Binary Search Tree |
| 17 | Priority Queue |
| 18 | Graph Lab Final Exam |