

CSCI 335 – Software Design and Analysis III

Instructor: Justin Tojeira Semester: Fall 2023

Text: *Data Structures and Algorithm Analysis in C++*, 4th edition, Mark Allen Weiss.

Instructor Email: jtojeira@hunter.cuny.edu

Office Hours: Thursdays 2-4pm. Office location will be posted on Blackboard and may change during the semester.

Course Description:

In this course, we will study, analyze, and implement algorithms using several widely-used and moderately complex data structures and techniques in computer science. Entering this course, you are assumed to be proficient with linear data structures (including lists, stacks, and queues) from CSCI 235, and are able to implement them as vectors and/or arrays in C++. I'm also assuming you're able to design, implement, and use classes in C++.

Then, in this class we can focus mainly on balanced BSTs, heaps, associative arrays, advanced recursion, and graph algorithms. We will analyze algorithms, and study the time complexity of some common operations and algorithms associated with the aforementioned data structures and techniques.

Grading:

Your grade will be 60% tests and 40% assignments, as follows:

Midterm 1: 20% (or 10% if it's your lowest test grade)

Midterm 2: 20% (or 10% if it's your lowest test grade)

Final Exam: 30% (or 20% if it's your lowest test grade)

Programming Assignments: 40%

Participation: possible extra credit, at my discretion, not to exceed one increment (e.g. B to B+)

Missed Exams: Make-up exams will only be given in the case of a valid, documented emergency or unexpected medical issue, and will be given after the normal semester ends. If you miss one exam for a valid reason and you have a passing average on the other exams and programs, you may petition for an INC in order to take the missed exam after the semester.

Programming Assignments: There will be 3-6 major(ish) programming assignments, making up 40% of your grade. The projects may be of different scopes and weights.

Posting programming assignments from this course to any public forum (Stack Overflow, Chegg, Course Hero, etc) is strictly prohibited.

Using any sort of automated code generation is strictly prohibited.

Blackboard (<http://bb.hunter.cuny.edu/>) will be used regularly for this course. Announcements and homework will be posted there, as well as additional resources and any new material I develop this semester.

Additional Contact Information:

Computer Science Department: Room N-1008 Hunter North

Phone: 212-772-5213

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