

EECS 560 Introduction to Data Structure

Instructor:

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Catalog Listing:

Data abstraction and abstract data types. Topics include the design and implementation of dictionary, priority queues, concatenated queue, disjoint set structures, graphs, and other advanced data structures based on balanced and unbalanced tree structures. Special emphasis will be placed on the implementations of these structures and their performance tradeoffs. Both asymptotic complexity analysis and experimental profiling techniques will be introduced. Labs will be used to provide students with hands-on experience in the implementations of various abstract data types and to perform experimental performance analysis.

Prerequisite: MATH 210 and EECS 448.

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Text Book:

Data Structures and Algorithm Analysis in C++, Mark Allen Weiss, Addison Wesley, 3rd Edition, 2006, ISBN-10: 032144146X.

Grading:

Homework: 6 homework assignments/projects	30pts
Quizzes: 5 in classes quizzes	5pts
Midterm Exam: two midterms	30pts
Final Exam: one final	30pts
Classroom participation	5pts
Total:	100pts

We will use the following scale to assign final grades (tentative and curving will be used):

A:	over	90%	
B:	80%	-	89%
C:	70%	-	79%

D:	60%	-	69%
F:	below 60%		

Attendance:

I expect you to come to lectures on a regular basis. While you are in classroom, please show courtesy to your classmate. You are responsible for all announcements made in class. Generally I will be unwilling to answer questions about material covered in a class you missed (unless you were sick or had another legitimate excuse). Class participation is strongly encouraged.

Late Assignments:

There are two types of assignments, written and programming, in this course. Unless you have a previously approved excuse, the submission of late assignments is strongly discouraged. Late penalties: you lose 25% of your scores if the assignment was delayed by one day, 50% for two days, and 75% for three days. No late assignment will be accepted after three days.

Programming Assignments:

All programs will be developed in C++ on the departmental linux systems. If you use another C++ development environment at home or elsewhere, it is your responsibility to make sure the code you submit compiles and runs correctly in our linux environment. If it does not, your project will not be considered submitted and you will be given no extra time to make corrections.

It is your responsibility to make sure that your program will compile and execute correctly and we will not debug your program for you. A program that will not compile will earn you at most 30% of the points.

Programming Policy: Each programming assignment that you do not turn in will lower your final grade by one-half letter. To be considered "turned in", you must earn at least 50% of the points on a programming assignment. Note that this means if you turn a project in late, you must earn more than 50% since point will be deducted from your score due to lateness.

Homework/project:

Unless otherwise stated, all material from (a) the assigned readings, (b) lecture notes, and (c) assignments are fair game for exams.

Occasionally you may not understand why points have been deducted from your assignment or exam. If so, you should come to see us. We will reconsider your whole assignment, or exam, if, and only if, you contact us within 5 days after it has been returned in class. No assignment, or exam, will be re-graded after it has been returned for more than 5 days, regardless of whether you were in class that day or not.

We are not responsible for any assignment, or exam, that you do not pick up after they have been returned in class. Keep all copies of your work. If you dispute any score recorded, you must bring in your original work for verification in order to have it changed.

Exam Policy

All exams are closed book, closed notes, and will be held in class. No calculators, cell phones, head phones, or electronic devices of any sort will be allowed. No such devices should be out in the open.

You must write legibly and show all your work clearly for credit. Partial credit will only be given to meaningful answers. You will be graded according to your approach to the problems, mathematical rigor, and quality of your solutions.

If you come in late after an exam has already begun, you will not be allowed any extra time to complete your exam.

Academic Misconduct:

The department, school and university have very strict guidelines regarding academic misconduct. Obviously, copying is not allowed on exams. Students are expected to submit their own work on individual programming projects. Lending or borrowing all or part of a program from another student is not allowed. Students ARE allowed to borrow and modify any code on this class web site in their labs or programming projects. Instances of cheating will result in a loss on one letter grade in the course and referral to the department chairman and the dean of engineering. If a second case of academic misconduct is reported in any class, a dismissal hearing may be initiated by the dean of engineering.