
Prerequisites. CSCI 211, 212 and 220.

Required text:
Michael T. Goodrich, Roberto Tamassia & Michael Goldwasser:
*Data Structures & Algorithms in Java, 6th Edition*
John Wiley, 2014,

Learning Goals. A solid understanding of the fundamental concepts of data structures. Successful students will be able to write correct and complete Java implementations of homework projects. Successful students will also complete exam questions that test the uses, implementation and efficiency of data structures.

Course Topics:
Review of Java programming (Chapters 1 and 2)
Linked Lists (Chapter 3)
Algorithm Analysis (Chapter 4)
Recursion (Chapter 5)
Stacks and Queues (Chapter 6)
Iterators (Section 7.4)
Trees and Binary Trees (Chapter 8)
Priority Queues and Heaps (Chapter 9)
Maps and Hash Tables (Chapter 10)
Binary Search Trees, AVL Trees (Chapter 11)
Sorting (Chapter 12)
Graphs (Chapter 14)

Instructor:
Krishna Mahavadi
kmahavadi@qc.cuny.edu
office: SB A201
office hours: Monday, Tuesday 12:30pm – 1:30pm
or by appointment.

Course Website:
http://venus.cs.qc.edu/~krishna/cs313/

Classes:
Monday, Tuesday, Wednesday and Thursday,
2:00 – 3:34pm, SB B145
Requirements:
One in-class midterm exam and the final exam (cumulative).
After each chapter or unit of chapters there will be a quiz.
Dates for quizzes on the course website.
In total there will be 9 quizzes and all 9 will be counted.
There will be 3 pass/fail HW assignments that are mandatory.
Everyone has to pass all three assignments (separately) in order to pass the course.
There will be a one half of a grade increase for those who successfully complete all three assignments.
There will also be one half of a grade decrese for those who do not pass all three assignments.
All assignments will be checked for plagiarism.
Copied projects will result in grades of F for all students involved.
You are allowed to discuss the project with each other.
However, you are not allowed to code together. Discussion shouldn’t result in identical codes.
You are expected to document all the resources you have used, including any people with whom you discussed the project.
This should be included in a comment right at the start of your code.

The final counts for 50% of the course grade.
The midterm counts for 25% of the grade.
Quizzes count for a total of 25% of the course grade.

Exam dates:
Midterm 1: Monday, July 23rd, 2018
Final: Monday, August 13th, 2018

Policies: Homework must be submitted on or before the published deadline, late homework will not be accepted.
No make up quizzes will be given. If a student misses an exam, the score from their next exam will be used in place of the missing exam score. Score less than 60 after the final exam will be given at most a C- for the class.
Academic dishonesty such as plagiarism or cheating will be dealt with seriously in accord with the University’s policy on academic integrity.