Data Structures
Course CSCI 313
Spring 2021, Queens College, CUNY

Class lectures will be given online, live, through Blackboard Collaborate Ultra:
Section 26: Tuesday, Thursday 1:40–2:55 pm
Section 37: Tuesday, Thursday 3:10–4:25 pm
Jan 29, 2021 – May 17, 2021 No class on March 30 and April 1

[To access the lectures, log in to Blackboard, find/click on our class on the left side of the Home Page and then go to Blackboard Collaborate Ultra on left menu bar and look for the (active) session. Click on the session and then Join the Session. During class, you may write in the Chat area on the right side of the window with questions or use Raise Hand feature. I’ll try to keep an eye out. I will disable your microphones as default to reduce noise; you may enable it while you’ve been called to ask questions. It would be nice if you turn on your computer webcam during class lecture or office hour so I can see you - but that’s not a requirement.]

The Main lectures will be recorded and saved so you should be able to view them through Blackboard after they are given – for review or if you are unable to attend the live stream. To view a recorded lecture, go to Sessions to the drop down menu and to Recordings.

Students who participate in this class with their camera on or use a profile image are agreeing to have their video or image recorded solely for the purpose of creating a record for students enrolled in the class to refer to, including those enrolled students who are unable to attend live. If you are unwilling to consent to have your video or profile image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live.

Make sure you can log in to Blackboard. If you cannot, please contact the Help Desk at 718-997-4444. Please familiarize yourselves with how Blackboard works. For example, you may wish to view https://keepeteaching.qc.cuny.edu/i-need-help-with/video-conferencing.
If my internet connection fails during a lecture, please don’t leave; I will reconnect as soon as practicable.

All major class announcements will appear on Blackboard in Announcements and be emailed out to your qmail account on Blackboard. You are each responsible for all class announcements made in lecture and posted to Blackboard - whether or not you are in attendance in the live class lecture.

Office Hours are Monday, Wednesday 4:00–5:30 pm on Blackboard Collaborate Ultra
(Guest Link: here)
Email: kangmei.yang@qc.cuny.edu
Course Description: This is a class about Fundamental data structures and their implementations: stacks, queues, trees (binary and AVL), heaps, graphs, hash tables. Searching and sorting algorithms. Runtime analysis. Examples of problem-solving using greedy algorithm, divide-and-conquer, and backtracking.
Required Text: Data Structures and Algorithm Analysis in Java (3rd edition) by Mark Allen Weiss
http://qc.textbooks.com/institutional/index.php?action=browse#books/2670500/
(Note that not all of the topics in lecture are covered in the text. Likewise, not all topics in the text are covered in lecture.)
Course Grades will be determined based upon performance on two exams and four assignments. Each assignment weights 8 points, the first exam worth 33 points and the last exam (the final examination) worth 35 points. (If you are not willing to show yourself taking the exams, I do offer another option (II, below) where the course grade is determined by four assignments and one final exam.)

Scores will be curved only if the entire class’s performance is way out of reasonable expectations. The grade should be determined based on skills shown not relative skills unless both section 26 and 37’s class performances suggest the assessment doesn’t fairly examine the skills. An A should mean excellent knowledge of the course material was displayed and no less.

Consider the two paragraphs identified as (I) and (II) below very carefully. Only one of (I) and (II) applies to you. The default is (I). Option (II) only applies if you select it before February 19, 2021. And your selection cannot be changed.

Before March 25, 2021, you must submit an image of your QC ID card (or other acceptable picture ID).

(I) Students will be required to show themselves taking examinations; how visual monitoring will be set up will be discussed. (Exams will be given through Blackboard with video monitoring through simultaneous log in to a Zoom Meet room from your Queens College account.) Refusal to show yourself during the exam will result in an exam grade of 0. If you take part of the exam ‘off camera’, you will be penalized 1 point on the exam score for each minute you are not showing yourself. Bathroom break may be requested during the exam, once permitted, you should leave your cellular phone in front of the camera and return in a reasonable time.

(II) If a student is unwilling to show themselves for exams, I do offer one alternative: a student may choose to have one, cumulative, oral, final exam with me in a private 1-1 session (audio only) that will count for 100% of their exam grade. A student selecting this option must inform me of this in writing before February 19, 2021. This option may not be taken after that time and if this option is taken, the student cannot change their mind or take any of the in-class exams. Details of the oral exam will be provided in May, 2021.

If you have a letter or statement from the Office of Special Services that you are allowed some special allowance or accommodation for exams, please provide me such or notify me of such allowance before February 19, 2021.

Under condition (I), a student who miss the final (or both) exam will receive a grade of WU in the class. Handing in a blank exam or just selecting some multiple choice answers and not showing work does not count as ‘taking’ the exam; evidence of real effort must be satisfactorily displayed.

Following Queens College and CUNY policy, grades of WU will not be converted to F. The first exam will cover all the material up to about the time that that examination is given. Topics will be discussed in the class before the exam. The final exam will focus on the material covered after the first exam but includes whole of the course.

The first exam will be given through Blackboard and begin at your class time and you will have 75 minutes for it (unless special accommodations have been allowed). Chosen settings enable you to go back to work on the exam if your internet connection drops for a time – but the timer is still running. The final exam will also be given through Blackboard on May 20, 2021 for section 26 and May 25, 2021 for section 37.
Final course grades will be assigned following the chart given below, based only on the total points obtained by your exam points and assignment points. Course grades are only based upon performance and not on any other issues including, but not limited to, financial aid, visa status and personal issues. I do not change grades – with the exception of a gross error on my part in their calculation. Your grade is based only upon the knowledge and understanding of the class material that you demonstrate.

Final course grades:

92+ : A
89.5-91.5: A-
86-89: B+
82.5-85.5: B
79-82: B-
74.5-78.5: C+
70-74: C
64.5-69.5: C-
0-64: F

If I judge that your performance on an examination does not seem consistent with your previous work or there is some aspect of your work that is suspect, I may require you to meet with me in a private 1-to-1 video session where I will ask you to solve some similar questions to the ones on the exam as an oral exam. Your performance in that private session will determine your examination grade. This is an unfortunate but seems a necessary process to maintain the integrity of the course grades. If it seems that you may have given or received unfair aid on the exam, I may assign a grade of 0 (and report the matter to the Queens College Office of Student Conduct - Judicial Affairs) or contact you for an immediate explanation. If you do receive notification that I wish to have this private 1-to-1 session with you, you must reply within 48 hours with a time to meet (no later than 48 hours after that). If you do not agree to this call for a private discussion session or do not respond, your exam grade will be a 0 and you will be reported to Judicial Affairs.

After exams are graded (some exams will take more time to grade than others – please do not ask me to expedite your exam. I expect some will be graded within a couple days and some will take several days – how long it takes is no indication of how well you did), you can view your score(s) in Blackboard/Tools/My Grades. I cannot return exams but I’ll go over them in class.

There will be no make-up examinations. This policy is not negotiable. And there are no extra credit projects. If you miss or skip first exam, your grade on that exam will be calculated as 0.

The assignment submitted after the due date is subject to a 10% deduction every day until the cut-off date. A grade of Incomplete will only be given in cases where it applies per QC/CUNY policy.

Exam questions are fair, which is not the same thing as easy; if you don’t understand the lectures and study and practice, how would you expect to do well in - or even pass - the course?
Cheating in any form will not be accepted and will be dealt with harshly in accordance with College policy. **If you cheat on an exam, you will receive a 0 for that exam.**
*I take cheating seriously and will report all incidents to the Office of Judicial Affairs.*

Attending the live class stream is strongly suggested - but not required or demanded.
You must be counted in attendance in at least one of the first five live lectures else a grade of WN will be given and this decision will be final.
Blackboard keeps track of lecture attendance (and viewing of recorded lectures).

No auditing of this class is allowed. You may only view lectures in this section of CS313 if you’re enrolled as a student in this section. If you withdraw from this class, you’re no longer a student in the class.

**Please do not email me with questions about grades.**
By accepting this syllabus, you agree to the rules described here and understand the contents and terms. None of the policies in this syllabus are negotiable. If you have any issues or questions or concerns, contact me during the first week of the semester.
I reserve the right to make minor changes to this syllabus and any such changes will be announced in class and will appear on Blackboard.

We will cover the following topics – in variable depths - (in the approximate order given below):
1 List, Iterator, LinkedList, Polynomial List
2 Runtime analyses, big O, Master Theorem
3 Search
4 Assignment 1 (Due March 5, 2021, Cutoff March 8, 2021)
5 Stack, Queue, Deque
6 Tree, Tree Traversal
7 Binary Tree, Expression Tree
8 Assignment 2 (Due March 26, 2021, Cutoff March 29, 2021)
9 EXAMINATION 1 (April 8, 2021)
10 Binary Search Tree, AVL Tree
11 Set and Map
12 Hash Table
13 Assignment 3 (Due April 30, 2021, Cutoff May 3, 2021)
14 Priority Queue, Heap
15 Sort
16 Graph
17 Assignment 4 (Due May 14, 2021, Cutoff May 17, 2021)
FINAL EXAMINATION (Date and time TBD by CUNY – May 20, 2021)