CSCI 335 "Software Design and Analysis III"
Fall 2020
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**Classes :** Classes will happen through the Blackboard Collaborate. A link to the class will appear on our course page on the Blackboard before the class itself. Pay attention, I do not upload records of the class or slides. I expect everyone to make real notes. Feel free to pause me if you need time to make notes. Also, I'm always happy to hear questions.

**Office hours :**
Me:         Tuesday 5:10 - 7:10 PM (through Slack)
Eileen:      Thursday 1:00 - 3:00 PM
Ralph:      Friday 1:30 - 3:30 PM

**Textbook** :  "Data Structures and Algorithm Analysis in C++", 4th Edition, Mark Allen Weiss.
ISBN : 0-13-284737-X
ISBN BRV: 978-0-13-284737-7

**Grades** : Grades will be based on multiple tests at the start of the class, a few home projects (around 4) and a paper project. Paper project is 5% of your grade.

All tests combined contribute 45% of your grade.

The collection of all home projects contributes 50% of your grade. Late home projects will not be accepted. Home projects may not be resubmitted. No collaboration is allowed on home projects. I can show you the printout of one of your home projects and ask some questions about it (or related to it). A failure to answer any of these questions will lead to a severe test penalty and 0 points for the home project itself. You are solely responsible for preventing any plagiarism of your own work. Home projects should be submitted ONLY through Blackboard unless instructed otherwise. All projects are checked and graded ONLY on our Linux lab computers.

Homeworks are for home work only. You are not allowed to work on your homework anywhere in CUNY.

Stealing other people's work is considered an especially heavy crime. The Office of Student Conduct suggests expulsion from college and note on transcript to be a penalty for such stealing. I fully uphold this suggestion.

There will be no "extra credit" assignments. There will be no chance to pull up your grade by doing additional work. All grades are assigned following the same criteria.

This course satisfies the following learning goals: 1b, 2a, 2b, 2c, 3a and 3c.

Course follows Hunter policies on Academic Integrity:
 "Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures."

ADA compliance:
In compliance with the ADA and with Section 504 of the Rehabilitation Act, Hunter College is committed to ensuring educational access and accommodations for all its registered students. Hunter College's students with disabilities and medical conditions are encouraged to register with the Office of AccessABILITY for assistance and accommodation. For information and appointment contact the Office of AccessABILITY located in Room E1214 or call (212) 772-4857 /or TTY (212) 650-3230.

Hunter College Policy on Sexual Misconduct
"In compliance with the CUNY Policy on Sexual Misconduct, Hunter College reaffirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.
a. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444).
b. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link: *http://www.cuny.edu/about/administration/offices/la/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf*

**Topics to be covered (approximate list):**
- Algorithm analysis
- Containers

- C++ move vs copy. Big Five.
- AVL or Red-Black trees, B-tree
- Sets, maps
- Hash tables
- Heaps
- Advanced sorting
- Graph algorithms
- Greedy algorithms
- Backtracking
- Dynamic programming

Topics might vary depending on time availability.