MTH 4300: Algorithms, Computers and Programming II

Fall 2025

Section: STRA

Instructor: Jaime Abbariao, Software Engineer at Figma

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Class schedule: Tuesday and Thursday, 5:40pm - 7:20pm in 6-125

Office hours: By appointment

Prerequisite: MTH 3300 (or CIS equivalent); Programming experience is required for this class.

Course website: https://jabbariao.com/teaching/baruch/mth4300/fall25

Recommended text

- *The C++ Programming Language, Fourth Edition, Bjarne Stroustrup*

Course overview

This course is intended to be a sequel to MTH 3300 and focuses on the notion of classes, along with the concepts of pointers, inheritance, and polymorphism. The implementation of classes in a practical setting, such as scientific computing, quantitative finance, or Windows programming, will be part of the course. Not open to students who have completed CIS 4100. Students will not receive credit for both CIS 3100 and MTH 4300.

Grading

- Problem sets, quizzes, and labs: 10%
- Midterm 1: 28%
- Midterm 2: 28%
- Final exam: 34%

Given the difficulty of the material, if needed, grades will be curved such that a minimum of 20% of students receive at least an A- and a minimum of 40% of students receive at least a B-. This means that if we already reached the stated threshold without a curve, I won't be using one.

Problem sets

Problem sets will be assigned on Thursdays and will be due the following Thursday before the start of class.

Late submissions will be treated as follows:

- Missing the immediate deadline: 10% of the total points for the problem set will be deducted.
- For each day your submission is late: 25% of the total points for the problem set will be deducted.

But in general, just don't be late with submissions then you won't have to worry about the late penalty.

Quizzes

Quizzes will be given before the start of each class. These are typically going to be one question only and will take up about 10 minutes of class time.

These quizzes are meant to make sure that you're consistently keeping up with the material. Last thing I want is for anyone to try catching up at the end of the semester.

Labs

Listening to me talk isn't the most interesting way to learn how to code. That's why we'll be doing labs in class. These labs will be graded as pass-fail. These will have to be submitted on Brightspace before the end of class for you to receive credit.

Since the lecture outlines are going to be available 24 hours before each class, those who are not able to attend class will be able to do the labs on their own time, but must still submit them on Brightspace before the end of class time.

Exams

There will be two midterms and a final exam. All exams will be closed-book and paper-based.

Since I like comeback stories, if you perform better on the final than any of your midterms, I'll replace your lowest midterm grade with your final exam grade.

Exam Policy

- All personal belongings should be set at the front of the class. This includes any electronic devices.
- No bathroom breaks during the exam.
- If you're having an emergency, you can leave the classroom, but you will not be allowed to continue with the exam. You'll have to take a make-up exam.

Course Policy

- Laptops: Come to class with your laptop. We'll be doing a good amount of coding in class. There are also the school computers, but good luck trying to get that one to work.

- Exams: According to department policy, any student who scores less than 50% on the final exam will not receive a passing grade for the course. The midterms and final exam will be given during in-person meetings.
- Accommodations: Baruch has a continuing commitment to providing reasonable accommodations for students with disabilities. Like so many things this term, the need for accommodations and the process for arranging them have been altered by COVID-19 and the safety protocols currently in place. Students with disabilities who may need some accommodation in order to fully participate in this class should contact Student Disability Services as soon as possible at Student Disability Services.
- Academic Honesty: The Department of Mathematics fully supports Baruch College's policy on Academic Honesty which states, in part: "Academic dishonesty is unacceptable and will not be tolerated. Cheating, forgery, plagiarism and collusion in dishonest acts undermine the college's educational mission and the students personal and intellectual growth. Baruch students are expected to bear individual responsibility for their work, to learn the rules and definitions that underlie the practice of academic integrity, and to uphold its ideals. Ignorance of the rules is not an acceptable excuse for disobeying them. Any student who attempts to compromise or devalue the academic process will be sanctioned." Academic sanctions in this class will range from an F on the assignment to an F in this course. A report of suspected academic dishonesty will be sent to the Office of the Dean of Students. Additional information and definitions can be found at Academic Honesty Policy