

# Syllabus, CS 6515 (Introduction to Graduate Algorithms)

Fall 2022

*Note: the syllabus and course schedule are subject to change. Any changes to the syllabus and/or course schedule after the semester begins will be relayed to the students on Canvas or Ed Discussion.*

## Textbook

The required textbook is Algorithms by S. Dasgupta, C. Papadimitriou, and U. Vazirani. The textbook Algorithm Design by J. Kleinberg and E. Tardos is an excellent reference that you might consider looking at as well.

## Grading

The breakdown of the grading will be as follows

- 1 Homework: 12%.
- 2 Polls: 4%
- 3 Coding Projects: 9%.
- 4 Logistic quizzes: 3%.
- 5 Three exams: 24% each.
- 6 Final exam (optional).

## Grade assignments

After *all* grades are in and all overall percentage scores for students have been computed using the weights described above, grades are assigned. The cutoffs will be as follows.

A: [85%, 100%]    B: [70%, 85%)    C: [50%, 70%)    D: [40%, 50%)    F: [0%, 40%)

So, to guarantee an A, get 85% or better overall (not 84.9)

To guarantee at least a B grade, get 70% or better overall, etc.

**These cutoffs are final.** No adjustment or rounding will be applied.

## Homework

There will be 8 homeworks, with a week available to complete each. Homework will be posted on Monday and due the Monday after, through Gradescope, due at 8am EST. There will be no extensions. The homeworks are excellent practice for the exams. Only two problems will be graded. This will be clearly marked on each homework. You may work with other people on the homework and you can look at any other references (including online). However you need to write up your solution from scratch as if you are in an exam (this is how you will learn the material). You need to cite your sources and collaborators at the top of your homework.

## Coding Projects.

There will be three small coding projects during the semester. The projects will be similar to the ones in the homework, you should consider it as a practical complement to your homework. You will have a week to complete each project. Details about the submission will be released via Ed and Canvas.

## Polls

There will be 7-8 polls on the lecture material. Polls will be released on Monday, due the Monday after, at 8am EST. Polls will be multiple choice/short answer and administered on Canvas and will be similar to the MCQs you will see on the exams. As with HWs, polls are confidential until the due date. In particular, please refrain from posting the questions on Ed.

## Logistic Quizzes

This set of quizzes is designed to ensure you are aware of our policies and expectations, and focus on three main topics: **Course Communication & Logistics**, which details how the class is run (communication methods, how to submit assignments, what is and is not in scope, etc); **Academic Integrity**, which reviews our expectations in terms of collaboration and plagiarism; and an **Onboarding Exam** which provides students a chance to test their environment to see if it meets our unique Exam Proctoring requirements. This semester we are making these mandatory and worth 3% of your final grade. The only way to miss these points is to not take the quizzes. These quizzes will be open for longer than a week, please see the schedule and Canvas for official dates.

## Exams

Exams are administered through Honorlock. Exams are closed book, you cannot use any additional devices (no calculators, phones, etc. or other applications on your computer) and no additional references (no notes or books). The exam will typically be open for 4 days: starting on a Thursday morning and closing at 8am EST on Monday. You need to finish uploading your exam by 8am EST on Monday so plan your start time accordingly. There are no extensions. We suggest doing the exam at least 24 hours before the deadline.

We will release abundant information about the proctoring system before the exam but here are some things we suggest you to look into now:

- Please refer to this important [Honorlock technical requirements](#).
- Students must have a broadband internet connection.
- Students must have a webcam and microphone.
- Students must have a secure, private location to take an exam.
- Students will be asked to provide a picture I.D. as part of the exam process.
- Honorlock is not compatible with Linux OS, Virtual Machines, tablets, or smartphones.
- Honorlock requires that you install the Honorlock Chrome extension into Google Chrome.

We will release more details about the proctoring of the exams the week of the first exam. See also the Logistic Quizzes.

**Final exam** The final exam is optional and will substitute your lowest score out of the three exams, so you can only improve by taking the final. Final exam will be cumulative. Letter grades will be released at least one week before the final exam dates (see the schedule). Students with and A will not be allowed to take the final exam. We suggest to see if it is mathematically possible to improve your grade before taking the final.

## Gradescope

Homeworks will be submitted through Gradescope. We will import your information into Gradescope which will create a Gradescope account for you; **[you are required to use this Gradescope account with the name and GTid that matches exactly with Canvas]** (otherwise the systems won't sync and you won't get a grade). The default due date/time for all homeworks, exams and projects is Mondays at 8am; there are no extensions (so submit the day before in case of unexpected problems).

## Regrade policy

Unnecessary regrades cause delays on many important tasks of the course, and they are also time consuming for us. If you are thinking of asking for a regrade you should be prepared to prove that your request is meaningful. In particular, you have to be capable of showing that your answer works, up to some relevant extent. Furthermore, we will have the power to penalize you if you ask for a regrade and we detect that you are not sufficiently prepare on the subject. Details regarding the Regrade Request Process will be released in Ed Discussions.

### Students with Disabilities and/or in need of Special Accommodations

If you have any accommodations you need to inform us as soon as possible, and provide us with the detailed accommodation approval letter from the GT Office of Disability Services. We will work as fast as possible to confirm that we can accommodate your requests.

### Waitlists, Registration, Permits, etc.

I am forbidden from doing anything regarding class registration. I cannot issue permits, remove students from waitlists, etc. For guidelines on such matters, please consult <https://math.gatech.edu/permits-and-waitlists>.

### Academic Integrity Policy

Plagiarism and cheating in any form is a violation of the GT honor code. Your homeworks and projects will be checked with auto-checkers to detect plagiarism. All violations will be reported to the GT Office of Student Integrity, and you will be given a 0 on that component of the grade (projects or homeworks) and your course grade will be dropped one letter down (OSI may impose stricter penalties, especially if you have prior offenses).