



(<https://www.khoury.northeastern.edu>)

ABOUT CS3000

This is an introductory undergraduate course in algorithms. Every computer program can be viewed as an implementation of an algorithm for solving a particular computational problem. The focus of this course is on learning algorithm design techniques for solving the underlying computational problems. We will also look at how algorithms translate to programs, but our emphasis will be on the algorithm design and analysis. In this class, we will:

- Work on a range of computational problems that arise in diverse applications
- Learn how to formulate problems precisely from somewhat informal descriptions
- Learn algorithmic design techniques used to solve the problems
- Learn proof techniques critical for reasoning about algorithms
- Learn analysis techniques critical to determine the efficiency of algorithms

Topics	<ol style="list-style-type: none">1. Techniques: tools for the analysis of algorithms, including asymptotic notation and amortized analysis2. Algorithmic Design: divide-and-conquer, dynamic programming, greedy algorithms3. Data Structures: graphs, trees, binary search trees, heaps
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Syllabus [Download \(cs3000_syllabus_summer2024.pdf\)](#)

PROFESSOR & OFFICE HOURS

Laney's Office Hours begin Tuesday, May 7th. We do not hold office hours on university holidays.

Laney Strange (She/Her), Instructor



E-mail laneys@northeastern.edu (<mailto:laneys@northeastern.edu>)

Web <https://northeastern.edu/home/laney> (<https://www.ccs.neu.edu/home/laney>)

Zoom (for OH) <https://northeastern.zoom.us/my/laney> (<https://northeastern.zoom.us/my/laney>)

Office Hours TR 1:30-3:30pm(schedule time during OH (https://bit.ly/laney_oh) or just drop in to my Zoom (<https://northeastern.zoom.us/my/laney>) or my office in Meserve 313. Appointments take priority, though!)

If the Tuesday and Thursday office hours get booked quickly, Laney will add an extra hour on Wednesday morning. Click the calendly link above for the most-updated schedule.

Liz O'Reilly (She/Her), Academic Coordinator



E-mail e.oreilly@northeastern.edu (<mailto:e.oreilly@northeastern.edu>)

LECTURE SCHEDULE

CS3000 lectures introduce key concepts and dive into examples and applications. Lectures are in-person and attendance is expected. We don't want or expect anyone to come to class when they're sick, though, so we'll post notes after class every day, which you can use to catch up on any missed material.

CS3001 recitations will have a practice problem set that you'll work on solo or in a group, and then review solutions with a TA. Recitations will not be graded. Although two recitation meetings per week are on the official schedule, only at the Tuesday recitation will have a problem set. The Thursday recitation will be used for interview practice (we're calling those the "fun algo recitations"!)

Piazza is a great place to ask follow-up questions after lecture or when you're working on homework. You can also ask lecture-related questions directly to Prof. Strange so I can wrap them into the next lecture if appropriate (we'll have paper forms in class).

CS3000	MTWR 11:40am-1:20pm RI 236
CS3001-01	T 1:30-2:35pm CG 094
CS3001-02 & -03 (combined)	T 3:20-4:25pm SH 420

TEACHING ASSISTANTS & OFFICE HOURS

Teaching Assistants

Temiloluwa Akinyoade	 Renee Cai	Honglin Chen	Noah Jacobson	Sheena Kaw	Tarif Khan
Nolan Lemery	Althea Masetti Zannini	Naman Singhal	 Akshar Varma	Neha Joshi	

TA Office Hours

TA office hours begin Tuesday, May 7th. There are no office hours on university holidays.

TA office hours will be held in person and online (on the Khoury Office Hours app). The different locations will be indicated on the OH calendar below.

For online office hours, we will be using the queuing system in the Khoury Office Hours app. Have a question ready and add yourself to the queue. When a TA is available, they'll call you on Teams. To make this all work, you'll need:

- Microsoft Teams app (better than using it in a browser): <https://www.microsoft.com/en-us/microsoft-teams/download-app> (<https://www.microsoft.com/en-us/microsoft-teams/download-app>)
- A Khoury account (separate from your Northeastern Husky account): <https://my.khoury.northeastern.edu/account/apply> (<https://my.khoury.northeastern.edu/account/apply>)
- Access to the Office Hours app. Login from the admin portal (look for “Office Hours Login” on the left side of your screen): <https://admin.khoury.northeastern.edu/> (<https://admin.khoury.northeastern.edu/>)
- Watch this helpful demo: <https://www.youtube.com/watch?v=9h8ZpSrKErs> (<https://www.youtube.com/watch?v=9h8ZpSrKErs>).

For in-person office hours, please go to the room listed and write your name at the bottom of the list on the whiteboard. A TA will call your name when it's your turn, so please keep an ear out!

For both in-person and online, it'll be important that you come to office hours having already made an attempt on the homework. TAs will be happy to help guide you on concepts and provide clarification on concepts. They cannot provide you with answers to problems.

TA Office Hours Calendar

SUN 30	MON 31	TUE 1 Apr	WED 2	THU 3	FRI 4	SAT 5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	1 May	2	3

CS 3000 Office Hours

Events shown in time zone: (GMT-04:00) Eastern Time - New York

[Add to Google Calendar](#)

Google Calendar

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