

COMP/MATH 3804, Sections A and B

Design and Analysis of Algorithms I

Winter 2025

Instructor: Michiel Smid

Office: Herzberg Building 5125C.

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Course webpage: <http://cglab.ca/~michiel/3804.html>

- Section A:
 - Lectures: Tuesday and Thursday, 8:35 – 9:55
 - Tutorials: Friday, 10:05 – 11:25
 - Classrooms: Check Carleton Central
- Section B:
 - Lectures: Monday and Wednesday, 10:05 – 11:25
 - Tutorials: Friday, 10:05 – 11:25
 - Classrooms: Check Carleton Central
- All lectures and tutorials will be in-person, they will not be video-recorded.

Teaching assistants: The list of teaching assistants will be posted on the course webpage once the course starts.

Office hours: Will be posted on the course webpage once the course starts.

Prerequisites: COMP 2402 and either COMP 2804 or (MATH 2007 and MATH 2108)

Department/Unit: School of Computer Science

Topics covered:

- An introduction to the design and analysis of algorithms. Topics include: divide-and-conquer, dynamic programming, linear programming, greedy algorithms, graph algorithms, NP-completeness.
- A tentative week-by-week schedule will be posted on the course webpage.

Learning Materials:

- Handwritten lecture notes.
- Algorithms, by Sanjoy Dasgupta, Christos Papadimitriou, and Umesh Vazirani.
- Students are not required to purchase textbooks or other learning materials for this course.

Important dates and deadlines, including class suspension for fall, winter breaks, and statutory holidays, can be found here

<https://carleton.ca/registrar/registration/dates/academic-dates/>

Grading scheme:

- Assignment 1: 6.25%, due date: Thursday January 30
- Assignment 2: 6.25%, due date: Thursday February 13
- Assignment 3: 6.25%, due date: Thursday March 20
- Assignment 4: 6.25%, due date: Thursday April 3
- Midterm: 25%, Friday February 28
- Final exam: 50%

Late and Missed Work Policies: Late assignments will not be accepted. If you do not submit an assignment by the due date, you will receive zero marks for it.

Undergraduate Academic Advisors: The Undergraduate Advisors for the School of Computer Science are available in Room 5302HP; or by email at

scs.ug.advisor@cunet.carleton.ca

The undergraduate advisors can assist with information about prerequisites and preclusions, course substitutions/equivalencies, understanding your academic audit and the remaining requirements for graduation. The undergraduate advisors will also refer students to appropriate resources such as the Science Student Success Centre, Learning Support Services and Writing Tutorial Services.

Academic Accommodations and Regulations: Carleton is committed to providing academic accessibility for all individuals. You may need special arrangements to meet your academic obligations during the term. The accommodation request processes are outlined on the Academic Accommodations website

<https://students.carleton.ca/course-outline/>

Statement on Chat GPT/Generative AI usage: As our understanding of the uses of AI and its relationship to student work and academic integrity continue to evolve, students are required to discuss their use of AI in any circumstance not described here with the course instructor to ensure it supports the learning goals for the course.

Statement on Academic Integrity: Misconduct in scholarly activity will not be tolerated and will result in consequences as outlined in Carleton Universitys Academic Integrity Policy, see

<https://carleton.ca/registrar/academic-integrity/>

A list of standard sanctions in the Faculty of Science can be found at

<https://science.carleton.ca/students/academic-integrity/>

Additional details about this process can be found on the Faculty of Science Academic Integrity website. Students are expected to familiarize themselves with and abide by Carleton Universitys Academic Integrity Policy.

Student Rights and Responsibilities: Students are expected to act responsibly and engage respectfully with other students and members of the Carleton and the broader community. See the 7 Rights and Responsibilities Policy for details regarding the expectations of non-academic behaviour of students. Those who participate with another student in the commission of an infraction of this Policy will also be held liable for their actions.