

# Design and Analysis of Algorithms I (COMP 3804)

## Sections A and B

Winter 2024

**Instructor:** Michiel Smid

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

### Lectures:

- Lecture and tutorial times: see course webpage
- All lectures and tutorials will be in-person.

**Course objectives:** An introduction to the design and analysis of algorithms.

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

**Topics covered include:** Divide-and-conquer algorithms and their analysis using recurrence relations, graph algorithms, dynamic programming, the theory of NP-completeness.

### Grading scheme:

- 4 assignments: 25%
- midterm: 25%
- final exam: 50%

### Important dates (assignments due dates, midterm format and final exam format):

These will be posted on the course web page.

**Academic Integrity:** If you are unsure of the expectations regarding academic integrity (how to use and cite references, if unauthorized collaboration with lab- or classmates is permitted (and, if so, to what degree), then you must ASK your instructor. Sharing assignment or quiz specifications or posting them online (to sites like Chegg, CourseHero, OneClass, etc.) is ALWAYS considered academic misconduct. You are NEVER permitted to post, share,

or upload course materials without explicit permission from your instructor. Academic integrity offences are reported to the office of the Dean of Science. Information, process and penalties for such offences can be found on the ODS webpage:

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

**Undergraduate Academic Advisor:** The Undergraduate Advisors for the School of Computer Science are available in Room 5302HP; or by email at [scs.ug.advisor@cunet.carleton.ca](mailto: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.

### University Policies:

- Academic Accommodations. Carleton is committed to providing academic accessibility for all individuals. Please review the academic accommodation available to students here:

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

- Student Academic Integrity Policy. Every student should be familiar with the Carleton University Student Academic Integrity policy. A student found in violation of academic integrity standards may be sanctioned with penalties which range from a reprimand to receiving a grade of F in the course, or even being suspended or expelled from the University. Examples of punishable offences include plagiarism and unauthorized collaboration. Any such reported offences will be reviewed by the office of the Dean of Science. More information on this policy may be found on the ODS Academic Integrity page:

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

- Plagiarism. As defined by Senate, “plagiarism is presenting, whether intentional or not, the ideas, expression of ideas or work of others as one’s own”. Such reported offences will be reviewed by the office of the Dean of Science. More information and standard sanction guidelines can be found here:

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

- Unauthorized Collaboration. Senate policy states that “to ensure fairness and equity in assessment of term work, students shall not co-operate or collaborate in the completion of an academic assignment, in whole or in part, when the instructor has indicated that the assignment is to be completed on an individual basis”.