

Course Outline
COMP 3804: Design and Analysis of Algorithms
(Listed also as MATH 3804/ISYS 5802/Math 5802)
School of Computer Science
Carleton University
Winter 2020

Course Schedule

Classroom	Steacie Building, Room 103.
Time	Wednesdays/Fridays, from 8:35am to 9:55am.
Website	The course material will be posted on CU Learn.

Instructor Information

Professor	Office	Email	Office Hours
Saeed Mehrabi	HP 5270	saeed.mehrabi@carleton.ca	Wednesdays and Fridays from 10:00am to 11:00am.

Teaching Assistants

TA	Office Hours	Location	Email
Tyler Tuttle	TBA	HP 5336	tylertuttle@cmail.carleton.ca
Guillermo Esteban	TBA	HP 5336	guillermoesteban@cmail.carleton.ca

Course Description

An introduction to the design and analysis of algorithms. Topics include: divide-and-conquer, dynamic programming, linear programming, greedy algorithms, graph algorithms, NP-completeness. Also, listed as MATH 3804.

Prerequisites. One of COMP 2402 or SYSC 2100, and either COMP 2804 or both of MATH 2007 and MATH 2108 or equivalents.

To help students achieve their individual objectives in this course, we will do an initial assessment test (anonymous) and provide students with three 30-minutes background review sessions. Each session will be offered two times for your convenience. They are not mandatory.

Background Review Sessions (attendance not mandatory, but highly recommended). Due to the traditional high failure rate, I will organize three different sessions, each offered twice (same material in each of the two). The sessions will get you ready for the course (as much as possible).

Textbook

Introduction to Algorithms (3rd Edition) by Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest and Clifford Stein (2009). ISBN 0-262-03384-4. Published by MIT Press.

Evaluation

Students will be evaluated in this course according to the following measures.

Component	Weight	Due Date (tentative – final dates as per announcements)
1st Test	15%	February 5th, in-class (and a different room; TBA).
Assignment 1	10%	Sunday, February 9th at 23:59.
Assignment 2	10%	Sunday, March 8th at 23:59.
2nd Test	15%	March 18th, in-class (and a different room; TBA).
Assignment 3	10%	Sunday, April 5th at 23:59.
Final Exam	40%	Scheduled by the university.

Assignments will be submitted online in .PDF via CU Learn (details to be provided by me or TAs). Typed assignments are preferred. Figures may be drawn and scanned in. It is your responsibility to ensure that the quality of the PDF is good so that the TAs can read them easily. Scanners are accessible in many locations on Campus. Pictures taken with mobile devices must be of top quality.

Important Dates

Students must review the full list of important dates for Winter 2020 available at <https://calendar.carleton.ca/academicyear>; students are responsible for the consequences of the failure to do so. The most relevant dates to this course are as follows.

Date	Activity
January 6, 2020	Winter term classes begin.
January 17, 2020	Last day for registration for winter term courses. Last day to change courses or sections (including auditing) for winter term courses.
January 31, 2020	Last day for withdrawal from winter term and winter portion of fall/winter courses with full fee adjustment. Withdrawals after this date will result in a permanent notation of WDN on the official transcript.
February 14, 2020	April examination schedule available online.

Date	Activity
February 17–21, 2020	Winter Break, no classes.
March 13, 2020	Last day to request Formal Examination Accommodation Forms for April examinations to the Paul Menton Centre for Students with Disabilities. Note that it may not be possible to fulfil accommodation requests received after the specified deadlines.
March 24, 2020	Last day for summative tests or examinations - or for formative and/or practical tests or examinations totaling more than 15% of the final grade - before the official examination period (see Examination regulations in the Academic Regulations of the University section of the Undergraduate Calendar/General Regulations of the Graduate Calendar).
April 7, 2020	Winter term ends.
April 13-25, 2020	Final examinations in winter term and fall/winter courses may be held. Examinations are normally held all seven days of the week.

Final Exam

The final exam will be scheduled by the University.

Assignments

Late assignments will not be accepted. An assignment is “late” if it is submitted after the assignment’s deadline as specified above. All assignments must be submitted online in .PDF format via CU Learn; assignments submitted in any other form (e.g., by email) are not accepted.

Collaboration Policy

Students are encouraged to collaborate on assignments, but at the level of discussion only. When writing down the solutions, students must do so in their own words.

Undergraduate Academic Advisor

The Undergraduate Advisor for the School of Computer Science is available in Room 5302C HP, by telephone at 520-2600, ext. 4364 or by email at undergraduate_advisor@scs.carleton.ca. The undergraduate advisor can assist with information about prerequisites and preclusions, course substitutions/equivalencies, understanding your academic audit and the remaining requirements for graduation. The undergraduate advisor will also refer students to appropriate resources such as the Science Student Success Centre, Learning Support Services and the Writing Tutorial Services.

Academic Integrity

The minimum penalties for offences starting 6 January 2020 are as follows.

- First offence, first-year students (<4.0 cr): Final grade reduction of one full grade (e.g., A- becomes a B-, if that results in an F, so be it).

- First offence (everyone else): F in the course.
- Second offence: One-year suspension from program.
- Third offence: Expulsion from the University.

Note: these are minimum penalties. More severe penalties will be applied in cases of egregious offences (e.g., a first-year student accessing CU Learn from their phone during an exam will be given an F in the course; bribing a faculty member for a better grade would be grounds for suspension, etc).

University Policies

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 awarded penalties which range from a reprimand to receiving a grade of F in the course or even being expelled from the program or University. Some examples of offences are: plagiarism and unauthorized co-operation or collaboration. Information on this policy may be found in the Undergraduate Calendar.

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.

Unauthorized Co-operation or 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”.

Students with Disabilities Requiring Academic Accommodations. Register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Documented disabilities could include but are not limited to mobility/physical impairments, specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic medical conditions. Registered PMC students are required to contact the PMC, 613-520-6608, every term to ensure that I receive your Letter of Accommodation, no later than two weeks before the first assignment is due or the first in-class test/midterm requiring accommodations. If you only require accommodations for your formally scheduled exam(s) in this course, please submit your request for accommodations to PMC by the deadlines published on the PMC website: <https://carleton.ca/pmc/students-registered-with-pmc/important-dates-and-deadlines>.

Religious Obligation. Write to me concerning any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website <http://www.carleton.ca/equity/accommodation>.

Pregnancy Obligation. Write to me concerning any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to

exist. For more details visit the Equity Services website <http://www.carleton.ca/equity/accommodation>.

Medical Certificate. The following is a link to the official medical certificate accepted by Carleton University for the deferral of final examinations or assignments in undergraduate courses. To access the form, please go to <http://www.carleton.ca/registrar/forms>.