Introduction to Theory of Computation (COMP 3803)

Fall 2023

Instructor: Michiel Smid
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Course webpage: http://cglab.ca/~michiel/3803.html

Lectures:

- Monday and Wednesday, 16:05 - 17:25am, Southam Hall 520.
- All lectures will be in-person.

Course objectives: Theoretical aspects of computer science. Topics include: formal languages and automata theory, computability theory.

Prerequisites: COMP 2804.

Topics covered include: Formal languages and automata theory (regular languages, finite automata, context-free languages, pushdown automata), computability theory (Turing machines, Church-Turing Thesis, decidability, Halting Problem).

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/`

- Many of the assessed activities in this course were designed to be completed by an individual working alone. Unless it is explicitly stated otherwise, the use of any will be considered academic misconduct. This includes, but is not limited to, chatbots (e.g., ChatGPT, Google Bard, Bing Chart), research assistants (e.g., Elicit), and image generators (e.g., Stable Diffusion, Dall-E), etc.

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 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.

University Policies: Carleton University is committed to providing access to the educational experience in order to promote academic accessibility for all individuals. Information on how to apply for academic accommodation can be found at
`https://students.carleton.ca/course-outline/`