

COMP 1001A

Introduction to Computational Thinking

Course Outline for Fall2024

Course Details

Instructor: Leila Chinaei <leilachinaei@cunet.carleton.ca>

Lectures: Mondays and Wednesdays 10:05 am – 11:25 am See Carleton Central for the location.

Teaching Assistants and Office hours: Information will be posted on Brightspace once the course starts.

Course Calendar Description

An introduction to computational thinking and its applications to the arts and social sciences. Students will gain computational thinking skills by exploring data representation, basic programming concepts, a selection of algorithms, and advanced usage of software packages for the arts and social sciences.

Precludes additional credit for COMP 1004 (no longer offered). This course cannot be taken for credit by students in Business, Engineering, Computer Science, Mathematics or Science Lectures three hours a week.

Learning Modality

All classes will be held synchronous and in person. Most classes will be live lectures. Other classes might be discussion of posted pre-recorded lectures or live coding examples.

Communication

The majority of communication will be using our class discord server. All questions about the course should be posted there.

You should only email the instructor or a teaching assistant if the contents of the email are personal. Do not send private direct messages to the course teaching team on discord unless asked to do so. All emails must be sent from your university **cmail** account. Any email should have "COMP1001" in the subject along with something related to the content of the email.

Territory Acknowledgment: Carleton university acknowledges the location of its campus on the traditional unceded territories of the Algonquin nation.

Assessment

Assignments: 5 main assignments (8% each)	40%
Quizzes: two in-class quizzes (15% each): Wednesday October 9 th and Wednesday November 20 th . These will be written in-person in the classroom.	30%
Final Exam (Date TBA by university)	30%

Your performance in this course is assessed using several components. These include five (5) assignments, two (2) quizzes, and a final examination (scheduled by the registrar). Final grades will be determined using the scheme described above, and no extra credit assignments will be provided under any circumstances.

Assignments

Assignments are **mandatory** and will be submitted electronically (details will be given in class). The assignment component of your final grade is computed from the score you receive on each assignment. You are expected to work on your assignments consistently once they are released (uploading your progress at least daily).

All assignments (except assignment 5 which is due on Thursday) are due on **Friday at 11:59pm**. There will be a 48-hour grace period for each assignment, and you are allowed to submit during the grace period as described on the assignment.

Submission after the grace period will receive zero.

Assignments tentative due dates are as follows: A1 due on Sept. 20th, A2 due Oct. 4th, A3 due Nov. 1st, A4 due Nov. 15th and A5 due Dec. 5th.

Technical problems do not exempt you from this requirement, so if you wait until the last minute and then have issues with your connection, you will still receive a mark of zero. Consequently, you are advised to (i) periodically upload your progress (i.e., upload partially completed submissions), (ii) attempt to submit your final submission at least 1 hour in advance of the due date and time, and (iii) download your submission and verify the contents after submitting.

You may speak with TA's or the instructor if you need help and are encouraged to discuss things with other classmates. But, **you must write your own responses and code**. Do not post or share solutions or partial solutions with anyone. A breakdown of each assignment (due date) is provided in the timetable in Brightspace.

Quizzes

Quizzes are **mandatory** and will be written, **in person**, during the regular scheduled class times.

Appeals

It is your responsibility to ensure that your quiz and assignment marks posted to Brightspace are correct **within one week** of the date the marks were released. Concerns or complaints about the grading must be communicated (first to the teaching assistant, then, if the result is unsatisfactory, to the instructor) within that time. After those two weeks, all marks are considered final and will not be changed under any circumstances.

Final Exam Scheduling

The final exam will be written **in person**. The examination period is December 9th – 21st. The time for our exam will be announced by the University. Be sure that you are not in transit during this period of time.

Travel plans are not an excuse to miss the final exam.

Software Requirements

We will be using Python (version 3.x) as our programming language. You can download and install the latest version of python from <https://www.python.org/>. We will also be using VS Code as our Integrated Development Environment (IDE) in class. You are free to use whichever IDE you prefer but the TAs will only help with VS Code. Instructions for installing can be found in our Brightspace page (<https://brightspace.carleton.ca/d2l/home/143719>).

We will be using Microsoft Excel in the course. As a Carleton student you can download this for free. See <https://carleton.ca/its/help-centre/get-microsoft-office-for-students/> for instructions.

Important Dates & Deadlines: Tentative Calendar

		Monday		Wednesday		Friday		
Week 1	1.	2. Labour day Holiday	3.	4. Admin and Introduction	5.	6.	7.	
Week 2	8.	9. Data	10.	11. Data	12.	13.	14.	
Week 3	15.	16. Data & Intro to Python(A1)	17.	18. Python type	19.	20. A1 Due	21.	
Week 4	22.	23. Python type Decisions (Part1)	24.	25. Decisions (Part2)	26.	27.	28.	
Week 5	29.	30. Loops	1.	2. Loops (for) & debugging	3.	4. A2 Due	5.	
Week 6	6.	7. Loops & Functions	8.	9. Quiz 1	10.	11.	12.	
Week 7	13.	14. Thanksgiving Holiday	15.	16. Functions	17.	18.	19.	
Week 8	20.	Fall Break – No Classes					25.	26.
Week 9	27.	28. Functions	29.	30. Functions & Strings	31.	1. A3 Due	2.	
Week 10	3.	4. Strings	5.	6. Lists and Dictionaries	7.	8.	9.	
Week 11	10.	11. Dictionaries & Searching	12.	13. Searching	14.	15. A2 Due	16.	
Week 12	17.	18. Searching & Sorting	19.	20. Quiz 2	21.	22.	23.	
Week 13	24.	25. Excel	26.	27. Excel	28.	29.	1.	
Week 14	2.	3. Excel	4.	5. File I/O & Review	6. A5 Due	7. Monday Schedule	8.	

Textbook

There are no official textbooks for this class. As a resource you may use the following online textbook: [How to Think Like a Computer Scientist](#). Another great resource is [w3schools Python section](#).

Additional notes/videos may be posted to Brightspace.

SCS Laptop Requirement

Everyone enrolled in a 1st year COMP course after the 2020/21 school year is required to have a laptop. This applies to students enrolled in a 1st year COMP course, which includes COMP1001, 1005 and 1006. For more information, please visit <https://carleton.ca/scs/scs-laptop-requirement/> and then review the requirements at <https://carleton.ca/scs/scs-laptop-requirement/laptop-specs/>.

As a student at Carleton, you will have access to several lab spaces with computers and software applications. Please visit the following for the lab information:

<https://carleton.ca/its/all-services/computers/student-computer-labs/>

Undergraduate Academic Advisors

The Undergraduate Advisors for the School of Computer Science are available in Room 5302C HP; 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.

SCS Computer Laboratory

Students taking a COMP course can access the SCS computer labs. The lab schedule and location can be found at: <https://carleton.ca/scs/tech-support/computer-laboratories/>. All SCS computer lab and technical support information can be found at: <https://carleton.ca/scs/tech-support/>. Technical support staff may be contacted in-person or virtually, see this page for details: <https://carleton.ca/scs/tech-support/contact-it-support/>.

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/>.

- **Academic Integrity**

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: [Academic Integrity | Faculty of Science \(carleton.ca\)](#).

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/>. Please note that content generated by an unauthorized A.I.-based tool *is* considered plagiarized material.

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".