COMP 1001A

Introduction to Computational Thinking

Course Outline for Winter 2025

Course Details

Instructor: Leila Chinaei < leilachinaei@cunet.carleton.ca>
Office: HP5349 (Herberg Laboratory)
Best ways to be in touch: via email
Course Website: https://brightspace.carleton.ca/
Lecture Times: <u>Mondays</u> and <u>Wednesdays</u> 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 discussions of posted pre-recorded lectures or live coding examples.

Communication

Most 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 <mark>in-class</mark> quizzes (15% each): Wednesday Feb. 12 and Wednesday March 12th. 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 Jan. 24th, A2 due Feb. 7th, A3 due Feb.28th, A4 due Mar. 21st and A5 due Apr.4th.

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, <mark>in person</mark>, 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 one week, all marks are considered final and will not be changed under any circumstances.

Final Exam Scheduling

The final exam will be written <mark>in person</mark>. The examination period is April 11th – 26th. The time for our exam will be announced by the University. Be sure that you are not in transit during this period. 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	5.	6.	Admin and Introduction	7.	8. Data	9.	10.	11.
	12.	13. Data		14.	15. Data & Intro to Python (A1)	16.	17.	18.
Week 3	19.	20. Python Type		21.	22. Python type Decisions (Part1)	23.	**24.** **A1 Due**	25.
	26.	27. Decisions (Part2)		28.	29. Loops	30.	31.	1.
Week 5	2.	3. Loops (for)		4.	5. Functions	6.	**7.** **A2 Due**	8.
	9.	10. Functions		11.	**12.** **Quiz 1**	13.	14.	15.
Week 7	16.	17. Family day		18.	19.	20.	21.	22.

<p align="center" style="font-size:2em">Winter Break – No Classes</p>

			Monday		Wednesday		Friday	
Week 8	23.	24. Functions		25.	26. Functions & Strings	27.	**28.** **A3 Due**	1.
Week 9	2.	3. Strings		4.	5. Lists and Dictionaries	6.	**7.**	8.
	9.	10. Dictionaries		11.	**12.** **Quiz 2**	13.	14.	15.
Week 11	16.	17. Searching		18.	19. Sorting	20.	**21.** **A4 Due**	22.
	23.	24. Excel		25.	**26.** Excel	27.	28.	29.
Week 13	30.	31. Excel		1.	2. File I/O	3.	**4.** **A5 Due**	5.
	1.	2. Review		3.	4.	**5.**	6.	7.

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 Accommodations for Students with Disabilities
If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. For more details, visit the Paul Menton Centre website. For more information, visit:
https://carleton.ca/pmc

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).](#)

Misconduct in scholarly activity will not be tolerated and will result in consequences as outlined in [Carleton University's Academic Integrity Policy.](#) A list of standard sanctions in the Faculty of Science can be found [here.](#)

All of the activities in this course were designed to be completed individually and without the use of any artificial intelligence-based tools. Unless it is explicitly stated otherwise, the use of any artificial-intelligence based tools 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.

Additional details about this process can be found on . Students are expected to familiarize themselves with and abide by [Carleton University's Academic Integrity Policy.](#)

Pregnancy Obligation
Please contact your instructor with 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:
https://carleton.ca/womensstudies/resources-and-links/equity-services/

Religious Obligation
Please contact your instructor with 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:
https://carleton.ca/equity/focus/discrimination-harassment/religious-spiritual-observances

Survivors of Sexual Violence
As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support:

https://carleton.ca/sexual-violence-support

Accommodation for Student Activities
Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with 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, see the policy at:
https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf

Student Rights & 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 behavior 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.

Additional links:

https://wellness.carleton.ca/