

Carleton University School of Computer Science  
**COMP 1005/1405 Sections A and C – Introduction to  
Computer Science I**

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### **Course Information:**

**Lecture:** Section A: Monday & Wednesday, 10:05 - 11:25

Section C: Tuesday & Thursday, 11:35 - 12:55

**Tutorial:** Please check on Carleton Central for the tutorial session schedule

**Location:** Please check on Carleton Central for the room location

**Course Website:** Please check on Brightspace for more details.

**Date Range:** September 04, 2024 - December 18, 2024

**Section Type:** In-Person

**Instructor:** Yanan Mao (She/Her/Hers)

**Email:** [yananmao@cunet.carleton.ca](mailto:yananmao@cunet.carleton.ca)

**Lab/Course Coordinator:** Farah Chanchary

**Email:** [farahchanchary@cunet.carleton.ca](mailto:farahchanchary@cunet.carleton.ca)

### **Teaching Assistants:**

Once available, TAs' contact information and office hours will be posted on Brightspace.

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### **Course Description:**

The first course in programming emphasizes problem-solving and computational thinking. Topics include: algorithm design; control structures; variables and types; linear collections; functions; debugging, and testing. Special attention is given to procedural programming in a modern language, computational thinking skills, and problem decomposition.

**Prerequisite(s):** A laptop is required for all first-year in-person courses

**Postrequisite(s):** Earn a C- or better is a must to take some required 2<sup>nd</sup>/ 3<sup>rd</sup> year courses.

**Required Textbook:**

**Sweigart, A. (2017). Automate the Boring Stuff with Python, 2nd Edition.**

Available to read for free online: <https://automatetheboringstuff.com/>

## **Topics Covered**

If a student attends every lecture and completes every assignment and tutorial, then by the end of this course, that student should be able to:

- Design and express simple algorithms using flowcharts and pseudocode.
- Implement simple algorithms using the Python 3 programming language.
- Create expressions with arithmetic, logical, and comparative operations.
- Create branching and repeating control structures, with and without nesting.
- Explain variable assignment, primitive data types, and the basics of computer memory.
- Design and implement functions and explain function scope and recursion.
- Create, access, and manipulate linear, multi-dimensional, and associative collections.
- Implement and discuss the efficiency of some basic sorting and searching algorithms.

## **Laptop Requirement (School of Computer Science):**

A **laptop** is required for every student enrolled in a 1000-level (i.e., first-year) course offered by the School of Computer Science after the 2020/2021 school year. For more information, please visit <https://carleton.ca/scs/scs-laptop-requirement/> and then review the requirements at <https://carleton.ca/scs/scslaptop-requirement/laptop-specs/>.

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## **Course Evaluation**

Component	Weight	Details	Due Date (EST)
Tutorials	20%	Take the best 8 out of 10	Weekly, graded during tutorials
Assignments	30%	Take the best 4 out of 5 Refer to the BrightSpace calendar for tentative assignment dates.	Due on Fridays at 23h59, and a grace period until Sunday 23h59. No grade deductions during the grace period.
Quiz	30%	15% each, In person during the class time	Quiz 1: October 16th/17th. Quiz 2: November 13th/14th.
Final Exam	20%	Formal Exam	To Be Announced

### **Assignments:**

Assignments will be announced and available on Brightspace. They must be submitted electronically before the due date. Make sure you submit your assignment ahead of the deadline in case of a problem with Brightspace. You have multiple chances to resubmit the work, and the latest one will be for marks.

For each assignment/tutorial, you will be submitting files containing source code, which must have the correct filenames and the specified format. **If any source code files you submit do not run, they will receive a mark of 0.** Consequently, after you upload your submission, you are required to re-download it immediately and ensure that:

- Your submission was the correct type of file (file extension) and had the correct filename
- Each of your source code files can be executed in Python 3.11

**An assignment submitted even one second after the grace period is late and will receive a mark of 0. 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 0.** Consequently, you are advised to periodically upload your progress and/or attempt to submit your final submission at least one hour in advance of the due date and time.

### **Tutorials:**

The tutorials provide you with time to gain experience with the material learned in class (ask questions if you need help understanding the material). You are required to attend the tutorial session and stay to complete the tasks. Attendance and submission all matter to the marks for tutorials.

### **Quizzes:**

The quizzes will examine your understanding of the tutorial, assignment, and lecture material. You are required to attend the quizzes in person. The quizzes will be held during class hours. Refer to the quiz dates in the course evaluation table.

### **Marking Issues:**

**It is your responsibility to ensure that your quiz, tutorial, and assignment marks posted to Brightspace are correct**, and you must do so within **one week** of the date the marks were released. Appealing your grading must be communicated within a week after the release of the grade:

1. First, contact the teaching assistant who graded your tutorial, assignment and/or quiz.
2. If there is still an issue, contact the lab coordinator with the student's and TA's documented email history.
3. If you still have a grading dispute, please contact the instructor with the communication history between the student, TA, and lab coordinator. Note that if the instructor needs to regrade your work, the grade may increase or decrease.

**After that one week**, no further consideration will be offered, and any student requests to correct or revise marks will not be accepted.

## **AI Usage:**

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 AI system will be considered academic misconduct. This includes but is not limited to, chatbots or code generators (e.g., ChatGPT, Google Gemini, Microsoft Copilot), research assistants (e.g., Elicit), and image generators (e.g., Stable Diffusion, Dall-E), etc. An exception to the above rule is made for automated grammar and punctuation-checking tools (such as Grammarly).

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## **Important Considerations**

As the course is conducted in person, no recordings will be posted to Brightspace.

**The grading scheme will remain unchanged under any circumstances, which means I cannot shift the weights of quizzes, tutorials, or assignments. No make-up assignments or tests will be provided.** Students are invited to **discuss any concerns with the instructor at the earliest opportunity.**

You are expected to demonstrate good programming practices at all times. You are always required to observe file name and format requirements, use meaningful variable names and type-hinting, and thoroughly comment on your code. Please also note that your code will be penalized if poorly written, and a functional but poorly designed solution will not receive full marks.

You are also expected to do the necessary preparatory work before you begin programming. You may be asked to present either pseudocode or a flowchart before you receive assistance from the instructor or a teaching assistant. **Students can expect to spend at least 5 more hours per week on this course, excluding the lectures and tutorials.**

**Students are responsible for all course materials.** All materials created for this course (including, but not limited to, lecture notes, in-class examples, tutorial exercises, assignments, examinations, and posted solutions) remain the intellectual property of the instructor. These materials are intended for the personal and non-transferable use of students registered in the current course offering. Reposting, reproducing, or redistributing any course materials, in part or in whole, without the written consent of the instructor is strictly prohibited.

Students are asked to pose all questions related to course content using the official discussion boards; students must avoid emailing the instructor directly unless the question contains confidential or personal information. The instructor will attempt to answer every student's email received **within three business days** of receiving the message unless the email requests information already posted on the official discussion boards or as an announcement or in the course outline. To ensure that all announcements are received, **students are expected to check their email on a daily basis.**

**Students are still responsible for reading the course announcement even if they have turned off the announcement forwarding in BrightSpace.**

If you need clarification on the expectations regarding academic integrity (e.g., how to use and cite references, whether lab collaboration or classmates is permitted (and, if so, to what degree), 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 (at any time, even after the course has concluded). You are only permitted to post, share, or upload course materials (even for portfolio purposes) if you receive explicit permission from your instructor.** Academic integrity offenses are reported to the office of the Dean of Science. Information, processes, and penalties for such offenses can be found on the ODS webpage: <https://science.carleton.ca/students/academic-integrity/>

## **Land Acknowledgement**

Here at Carleton University, it is important that we acknowledge that the land on which we gather is the traditional and unceded territory of the Algonquin nation.

## **University Policies:**

**Collaboration: Assignments and tutorials must be done individually** and should be your own work. For assignments, you are encouraged to discuss your thoughts and ideas with classmates during and outside tutorials. However, you cannot share code with classmates or submit anything except your own work.

**Cheating:** Cheating is strictly prohibited during an exam. It includes copying another person's work, sharing your work with another person, or in any way conspiring to dishonestly get a grade.

**Plagiarism: All cases of plagiarism or cheating** will be pursued through official university channels. Academic integrity offenses are reported to the office of the Dean of Science. Penalties for such offenses can be found on the academic integrity webpage. If you need clarification on the expectations regarding academic integrity, please ask your TAs or instructor. For more details, please visit: <https://science.carleton.ca/students/academic-integrity/>

**Peer Assisted Study Sessions (PASS):** This course will be supported by Peer Assisted Study Sessions (PASS). Further information here: <https://carleton.ca/csas/pass/>

**Academic Calendar:** Carleton's academic year, including registration and withdrawal dates, see Carleton's Academic Calendar at: <https://calendar.carleton.ca/academicyear/>

**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](mailto: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: <https://carleton.ca/pmc>

**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, please visit:

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

**Student Academic Integrity Policy**

Every student should be familiar with the Carleton University student academic integrity policy. A student in violation of academic integrity standards may be awarded penalties ranging from a reprimand to receiving an F grade in the course or even being expelled from the program or university. For more information, please visit: <https://carleton.ca/registrar/academic-integrity/>

**University Policies Accommodation for Student Activities**

Carleton University recognizes the substantial benefits to the individual student and the university resulting from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform nationally or internationally. 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>.