COMP 1005A/1405A (S25)

Introduction to Computer Science II

Preliminary Version

Instructor: Jason Hinek

Email: JasonHinek <at> cunet.carleton.ca

Office Location: 5332 Herzberg Building

Best Ways to be in Touch: During student hours, Brightspace forum.

Teaching Assistant: A list of teaching assistants and their contact/office hours information will be posted once the course starts.

Class Location: Please check Carleton Central for the room location.

Lecture Times: This is an asynchronous class with no set lecture times.

Tutorial Times: Wednesdays, 11:35am - 14:25pm (check Carleton Central for location).

Course Website: Brightspace

Important dates and deadlines can be found here: https://calendar.carleton.ca/academicyear/#summer2025, including class suspension for fall, winter breaks, and statutory holidays.

Course Calendar Description

Introduction to computer science and programming. 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.

Precludes additional credit or BIT 1400, CGSC 1005, COMP 1405, ECOR 1041, ECOR 1042, ECOR 1051, ECOR 1606, ITEC 1400, ITEC 1401, SYSC 1005.

Learning Material(s) and Other Course/Lab-Related Resources

Learning Material	Options for Purchasing	Cost
How to Think Like a Computer Scientist: Interactive Edition	Link to book	No cost
Python 3.13	https://www.python.org/	No Cost
VS Code	https://code.visualstudio.com	No Cost

Students are not required to purchase textbooks or other learning materials for this course.

A Runestone account is optional, but can provide note taking and progress logging with the course textbook. You should Expect to spend at least sixteen (16) hours per week on this course in addition to the lectures.

Topics Covered and Learning Outcomes

A more details outline will be provided when the course starts

Week	Topic/Content	Readings/Prep for Class
	Introduction	Read outline and policies
	Problem Solving	Install Python (and VS Code) in Tutorial 1
	…	

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 algorithm 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, multidimensional, and associative collections,
- Implement and discuss the efficiency of some basic sorting and searching algorithms.

I believe that all students can reach these goals. This content can be challenging and if you feel you are alone in falling behind, please know that many different people are facing the same challenges and you are encouraged to reach out for support during student hours for help getting back on track. Even for experienced professionals, a lot of programming can involve things *not* working, confusing and frustrating errors, and unexpected gaps in knowledge. Ask questions in student hours, in tutorials, in the class forum, and try to use each error as a learning opportunity.

There will likely be multiple anonymous surveys throughout the semester that I will encourage you to fill out. I do my best to review these to understand how everyone is doing and to identify areas the course can be improved. My goal is to help you learn the material and feel prepared for your future courses and careers.

Assessment Scheme

Grade Breakdown

COMPONENT	GRADE VALUE	DATE
Tutorials	8 %	1-2 each week
Assignment 1	6 %	May 16 (Friday)
Assignment 2	7 %	May 23 (Friday)
Assignment 3	8 %	May 30 (Friday)
Assignment 4	9 %	June 6 (Friday) [updated!]
Assignment 5	10 %	June 17 (Tuesday)
Midterm Study Proof	2 %	May 28 (Wednesday)
Midterm	15 %	May 28 (Wednesday)
Final Exam	35 %	TBD (IN-PERSON)

Quiz Submission

- Tutorial will be cancelled during the week of the midterm.
- Quizzes will be written online asynchronously on Brightspace.
- Quizzes are closed-book, must be worked on individually, and without the use of AI.
- Support for content relating to quizzes will not be provided during the period that the quiz is open.
- It is your responsibility to ensure that you have a stable internet connection and at least two up-to-date web browsers installed to deal with any technical issues that might occur.
- It is your responsibility to follow the procedures in the quiz instructions to immediately report any technical issues with the quiz to receive support.
- Reminder that the final exam is written in-person.

Late and Missed Work Policies

Late Work

Don't submit late. (To be updated when the course starts.)

Missed Work

Short-term (5 days or less): contact instructor immediately.

Long-term (> 5 days): contact instructor immediately. (longer-term accommodation) .

Note: This is a condensed course. Each week is equivalent to two weeks during the Fall/Winter semester. Missing two weeks due to illness in this course is like missing an entire month in the Fall/Winter semester. It is very difficult to catch up when you fall behind in a condensed course.

School of Computer Science Laptop Requirement (only applies to on-campus courses)
Every student that has been enrolled in a 1000-level (i.e., first year) course offered by the School of Computer Science after the 2020/2021 school year is required to have a laptop. This includes COMP1001, COMP1005, and COMP1006. 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/.

Undergraduate Academic Advisors

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

Mental Health and Wellness

The Carleton Wellness Website is a wonderful resource link to include in the course outline for students.

Academic Accommodations and Regulations

Academic Accommodation

Carleton is committed to providing academic accessibility for all individuals. You may need special arrangements to meet your academic obligations during the term. The accommodation request processes are outlined on the Academic Accommodations website (https://students.carleton.ca/course-outline/).

Chat GPT/Generative AI Usage

Don't do it. We'll discuss this much further in the first lectures.

Academic Integrity

Don't cheat. Again, we'll discuss this further in the first lectures.

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.

Additional details about this process can be found on the Faculty of Science Academic Integrity website.

Students are expected to familiarize themselves with and abide by Carleton University's Academic Integrity Policy.

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 behaviour 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.

Student Concerns

If you have any concerns regarding this course, your first point of contact is me. Please email me or visit during my student hours, and I will do my best to address your concerns. If I cannot resolve the issue, the next point of contact is the School of Computer Science at studentconcerns@scs.carleton.ca. If the concern remains unresolved, the final point of contact is the Office of the Dean of Science at ODScience@carleton.ca. Please follow this order of contact.

Note: You can also bring your concerns to Ombuds services.