COMP 1406E – Introduction to Computer Science II
School of Computer Science, Carleton University
Course Outline

Main course details

People
- *Course instructor*: Nadine Marie Moacdieh (nadine.moacdieh@carleton.ca)
  - *Office hours*: Tuesdays and Wednesdays at 12-1 pm in HP 5135 or on Zoom (link will be posted to Brightspace)
- *Lab coordinator*: Farah Chanchary (farahchanchary@cunet.carleton.ca)
- *Teaching assistants*: a list of teaching assistants and their email/office hours will be posted to Brightspace. Office hours will be a combination of in-person and online.

Time and place
- *Main classroom*: Room location is posted on Carleton Central
  - *Lecture times*: MW 8:35 – 9:55 am
- *Tutorial classrooms*: Room locations are posted on Carleton Central (*tutorials start January 15*)
  - *Tutorial time* (E1): M 1:05-2:25 pm
  - *Tutorial time* (E2): M 2:35-3:55 pm

Description
A second course in programming for BCS students, emphasizing problem solving and computational thinking in an object-oriented language. Topics include abstraction, mutable data structures, methods, inheritance, polymorphism, recursion, program efficiency, testing and debugging. Precludes additional credit for BIT 2400, BUSI 2402, COMP 1006, ITEC 2400, ITEC 2401, SYSC 2004. Prerequisite(s): COMP 1005 or COMP 1405.

Materials
- *Course website*: On Brightspace
- *Textbook*: we will be using the notes by Dr. Mark Lanthier
- *Other course resources:* Lecture slides and classroom recordings will be posted to Brightspace throughout the term.
- Note that all materials created for this course (including, but not limited to, lecture notes, in-class examples, assignments, and exams) remain the intellectual property of the instructor. These materials are intended for the personal and non-transferable use of students registered in the current offering of the course. Reposting, reproducing, or redistributing any course materials, in part or in whole, without the written consent of the instructor, is prohibited.

Learning modality and approach
This is primarily an in-person course, although lecture recordings will be provided. In case of instructor illness, class will be carried out synchronously on Zoom. There will be no attendance

taken in class or in tutorials. The tutorial sessions on Monday will be drop-in sessions during which time you can get help with your assignments and ask questions about the course material.

Learning outcomes

Upon successful completion of COMP 1406, students should be able to:

- Implement object-oriented computer programs using the Java programming language
- Understand and effectively apply the key principles of object-oriented programming: encapsulation, abstraction, inheritance, and polymorphism
- Understand the basic memory model of Java programs
- Work with abstract data types to solve problems
- Apply exception handling to build fault-tolerant programs
- Create basic graphical user interfaces
- Save data to and load data from files

Assessment scheme

Item	Notes
Assignments (60%)	- Weekly individual assignments to be completed by Friday at 11:59 pm on Brightspace (total of 11) - The best 10 assignment grades will be considered. - You have a 48-hour grace period to submit assignments (until Sunday at 11:59 pm); however, you cannot ask for help on assignments whose due date has passed. Other than this, no late assignments will be accepted – submit often and early (poor connection cannot be used as an excuse) - You have one week after an assignment grade is posted to email your TA with any questions or concerns about your assignment grade; after one week, no requests can be made and all grades are final - More information on assignments will be given at the start of the term
Quizzes (10%)	- There will be a quiz to be completed individually on Brightspace by Friday at 11:59 pm (total of 11) - The best 10 quiz grades will be considered in the calculation of your grade - You can repeat the quiz as many times as needed before the deadline - You have a 48-hour grace period to submit quizzes (until Sunday at 11:59 pm); however, you cannot ask for help on quizzes whose due date has passed. Other than that, no late quiz submissions will be accepted
Final exam (30%)	- Date will be determined by the university - If you are planning to travel, please check the schedule first. Travel plans are not an excuse to miss a final exam. *Double pass rule* will be implemented: **you have to pass both the assignments/quizzes portion of the course AND the final exam in order to pass the course**

You are expected to bring your laptops to classes and to tutorials (see Laptop Policy below). Attendance is not mandatory in classes or tutorials, but assignment bonus points can be collected during select class activities (no bonus points during tutorials).

Tentative course schedule

Week	Lectures	Topic (Chapters to read)	Assignments due
1	M Jan 8 W Jan 10	**Introduction to programming in Java** (Ch. 1)	-
2	M Jan 15 W Jan 17	**Introduction to Object-Oriented Programming (OOP)** (Ch. 2, 3.1-3.5)	A1
3	M Jan 22 W Jan 24	**Abstraction and encapsulation** (Ch. 3.6-3.8)	A2
4	M Jan 29 W Jan 31	**Inheritance and interfaces** (Ch. 4.1-4.4)	A3
5	M Feb 5 W Feb 7	**Polymorphism** (Ch. 4.5)	A4
6	M Feb 12 W Feb 14	**Linear abstract data types** (Ch. 8.1-8.5)	A5
Winter break	*No class*		
7	M Feb 26 W Feb 28	**Non-linear abstract data types** (Ch. 8.6-8.8)	A6
8	M March 4 W March 6	**Exceptions and file input/output** (Ch. 10, 11)	A7
9	M March 11 W March 13	**Graphical user interfaces and JavaFX** (Ch. 5)	A8
10	M March 18 W March 20	**Model View Controller (MVC)** (Ch. 6)	A9
11	M March 25 W March 27	**Recursion** (Ch. 9)	A10
12	M April 1 W April 3	**Recursion and other topics** (Ch. 9)	A11
13	M April 8 *Classes end*	Course review and questions	-

Course policies

Communication
- There will be a weekly discussion forum available on Brightspace. Any questions about course material or assignments can be posted to that week's forum. You can also attach images, as needed. The forum will be monitored Mondays to Fridays until 7 pm. There is no forum help during the weekends.
- Tutorials are available for you to drop in at any time on Mondays. You can attend either session, as long as there are no space issues.
- Office hours are available for further questions. You can attend instructor office hours in person or on Zoom, and you can select from any TA office hours to attend (again, these will be either in person or on Zoom)
- You should only email the course instructor or TAs if you have a personal issue or if you are appealing your grade. In that case, please include COMP 1406 in your subject line.
- Announcements will be posted to Brightspace as needed. It is your responsibility to check Brightspace for any updates or announcements. It is recommended that you check your email at least once a day.

Deferral
If you would like to request a deferral for a missed deadline, please fill in the self-declaration form and contact the course instructor within three working days of the deadline. If you have more long-term concerns that are affecting your semester, or if you are experiencing chronic, ongoing challenges, please reach out to your instructor and to the Paul Menton Centre and/or the Care Support team (see the University Policies section).

Collaboration
- Assignments and quizzes 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 of tutorials. However, you cannot share code with classmates or submit anything except what is your own work.
- Cheating during an exam is strictly prohibited, where cheating includes copying another person's work during the exam, sharing your work with another person during the exam, or in any way conspiring to get a grade in a dishonest way.
- You cannot post questions/answers online (to sites like Chegg, CourseHero, etc.). You are never permitted to share or upload course materials without explicit permission from your instructor.
- All cases of plagiarism or cheating will be pursued through official university channels. Academic integrity offences are reported to the office of the Dean of Science. Penalties for such offences can be found on the academic integrity webpage. If you are unsure of the expectations regarding academic integrity, please ask your TAs or instructor
- Use of any AI system to generate assignment code 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.

Respect and inclusion

The course instructor and TAs in this course are committed to fostering a learning environment that is inclusive for everyone. All students in the class, the instructor, TAs, and any guests should be treated with respect during all interactions, including any communications in class, through email, during office hours, or on any forum. Please feel free to contact your instructor via email or in person if you have any experiences in this class that made you feel uncomfortable.

School of Computer Science policies

Laptop policy

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 [SCS Laptop Requirement - School of Computer Science](#).

Undergraduate academic advisor

The Undergraduate Advisor for the School of Computer Science is available in HP 5302 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.

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

Land acknowledgement

The land on which we gather is the traditional and unceded territory of the Algonquin nation.

University dates and deadlines

For information about Carleton's academic year, including registration and withdrawal dates, see [Carleton's Academic Calendar](#).

Grading

In accordance with the Carleton University Undergraduate Calendar Regulations, the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100   B+ = 77-79   C+ = 67-69   D+ = 57-59
A = 85-89   B = 73-76   C = 63-66   D = 53-56
A- = 80-84   B- = 70-72   C- = 60-62   D- = 50-52
F = <50
WDN = Withdrawn from the course; DEF = Deferred ; FND = (Failed, no Deferred)

Academic integrity

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: https://carleton.ca/registrar/academic-integrity/.

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/.

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".

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/.